

# 2015 - 2016 Catalog



## CLARK COLLEGE Catalog 2015-2016

### **VISION:**

Clark College inspires learners to excel, transforms lives, and strengthens our increasingly diverse community.

# Section A

## Enrollment Services

**360-992-2107**

Our Welcome Center is your first step whether you are a new, transfer or returning student. We provide information on how to become a student at Clark College. Our services include assistance with admissions procedures, residency information, campus tours, student orientation and referral to other services and programs.

All students intending to enroll at Clark College are required to submit an application for admission and pay a non-refundable application fee at least two (2) weeks prior to the start of the term. Refer to the campus calendar for application deadline dates. Application for admission is available on the Clark College website at [www.clark.edu/quickstep](http://www.clark.edu/quickstep).

Clark College admits anyone who is eighteen (18) years of age or a graduate of an accredited high school or the equivalent. Applicants who are under the age of eighteen (18) and without a high school diploma or equivalent may be considered for admission. Refer to the [Exception to Admission](#) (Underage Policy) section for further details. Admission to the college does not guarantee admission to a specific area of study. Some programs require additional applications and are limited or competitive-entry programs. See additional information under [Health Occupations Programs](#).

The Running Start program has its own set of admission policies and procedures. Please refer to [www.clark.edu/runningstart](http://www.clark.edu/runningstart) for more information.

Residency classifications for the purpose of tuition rates are determined by length of time a student has been permanently living in the state of Washington. Please refer to the [Residency Classifications](#) section for detailed information.

## New Student Admission

Students with no previous college experience need to submit an admissions application, provide a non-refundable application fee, and complete the COMPASS placement test. The placement test is available on a walk-in basis and is a non-timed, computer-based test. For further information, see the Placement Testing section. New students are also required to participate in Student Orientation before they are allowed to register for classes. For more information on orientation, refer to the Student Orientation section.

## Transfer Student Admission

Students transferring from other colleges are required to submit an admissions application, provide a non-refundable application fee and complete the COMPASS placement exam if math and/or English was not completed at a previous college or university. Transfer students are required to participate in orientation before they may register for classes.

If a student intends to use previously earned credits towards a program at Clark College, an official transcript of their college records must be sent to Enrollment Services at the time of application for admission. All admission materials become the property of the college and will not be returned to the student or forwarded to another institution.

Transfer credits are usually accepted by Clark College if such credits were earned at an institution accredited by a regional association recognized by the Council on Postsecondary Accreditation. Students should refer to section B of this catalog for information about non-traditional credits and the process for transcript evaluation.

## Returning Student Admission

Returning Clark College students who are returning to Clark College after an absence of four (4) or more quarters must provide an updated application for admission prior to registration.

If a student has attended another college since their last enrollment at Clark College and wants to apply those credits to a Clark College program, an official transcript needs to be sent to Enrollment Services. All admission materials become the property of the college and will not be returned to the student or forwarded to another institution.

## Health Occupations Programs

The following programs are limited and/or competitive-entry and require completion of specific entrance requirements as well as submission of separate applications and application fees:

Dental Hygiene

Medical Assistant

Medical Radiography

Nursing

Pharmacy Technician

Phlebotomy

Refer to the Clark College website at [www.clark.edu](http://www.clark.edu) or section C of this catalog for further information. Because selection criteria are subject to change, the Clark College website is the most current source of information.

## Exception to Admission (Underage Policy)

Clark College admits anyone who is at least 18 years of age, who is a graduate of an accredited high school or the equivalent, is a participant in Running Start, or participant in other approved programs designed for age-specific groups. Exception to this policy may be granted by the college for special consideration of underage individuals not participating in one of the above-mentioned programs. The college reserves the ultimate right to determine admission to the college and/or to enroll in certain classes.

## Deadlines

Admission-application deadlines will generally be two weeks prior to the start of a new term. For the most up-to-date application information and other resources to begin the enrollment process at Clark College, please visit <http://www.clark.edu/enroll/registration/dates/index.php>

## International Student Admission

**360-992-2390**

Clark College accepts qualified international students from around the world who wish to study in the U.S. using an F-1 student visa.

To be eligible for admission, applicants submit the international student application form, application fee and supplemental documents. International student admission information can be found on the International Programs Web page at: [www.clark.edu/international](http://www.clark.edu/international).

Applicants must submit financial documentation with their application to prove that sufficient funds are available for their first year of study. Resources must cover cost of tuition, fees, books, medical insurance, living expenses and transportation. Medical insurance while in the U.S. is mandatory and will be added to the student's bill each quarter.

## Residency Classifications

To qualify for any of the residency classifications listed below, students must be U.S. citizens, resident aliens, refugees or non-immigrant aliens with visa classifications of A, E, G, H, I, K or L.

## Residency Classification Definitions

**Washington In-State Resident:** a person who meets the qualifications of citizenship, has been living in the state of Washington for a minimum of 12 months prior to the beginning of the quarter and has taken actions to declare Washington as their state of permanent residence.

**Washington Non-Resident Waiver:** a person who meets the qualifications of citizenship and who has been living in the state of Washington for less than 12 months prior to the beginning of the quarter.

**Non-Resident:** a person who resides outside of the state of Washington and does not qualify for the Oregon Border Waiver; a person who does not submit the required documents for the Washington Non-Resident Waiver, Oregon Border Waiver or Oregon Border Opportunity Waiver.

**Non-Resident Refugee:** a person who holds Refugee-Parolee status and has established a domicile in Washington before the first day of the quarter.

**Non-Citizen:** a person who does not meet the qualifications of citizenship, regardless of their length of time domiciled in the state of Washington.

**Oregon Border Waiver:** a person who meets the qualifications of citizenship and who has been living in one of the 13 qualifying Oregon border counties for a minimum of 90 days prior to the beginning of the quarter.

**Oregon Border Opportunity Waiver (HB1474):** a person who meets the qualifications of citizenship, was living in a qualifying Oregon border county for at least 90 days immediately prior to moving to Washington state, has been living in Washington for less than 12 months and has taken all steps to declare Washington as their state of permanent residence.

**Qualifying Oregon Border Counties:** Columbia, Gilliam, Hood River, Multnomah, Clatsop, Clackamas, Morrow, Sherman, Umatilla, Union, Wallowa, Wasco or Washington.

## Applying for Residency Reclassification

Students are granted residency classification based on the information provided on the initial admissions application. The student is responsible for submitting the appropriate application and supporting documentation to have residency reviewed for a reclassification to a new category. Applicants who are not U.S. citizens are required to submit a copy of their permanent resident card or I-94 for reclassification consideration. All residency reclassification requests and documentation are accepted until the 30th calendar day of the quarter. The college has ten (10) business days to review a completed application before making a decision on the reclassification request. If the application is approved, adjustments to the tuition will be applied to the quarter for which the reclassification was submitted. If the application materials are incomplete or received after the 30th

calendar date, the request will be reviewed for the following quarter. Residency changes are not retroactive.

Supporting documentation is defined in two categories: proof of physical presence and proof of intent to remain in the state of Washington. Students applying for reclassification will be asked to provide these documents as part of their application materials. Acceptable types of documents are listed below.

- Proof of Physical Presence (one document required, showing at least 12 months)
- Copy of mortgage closing statement for the home in which the student resides;
- Copy of a rental/lease agreement for the home in which the student resides; or
- Copy of rental receipts or mortgage payment receipts for the home in which the student resides.
- Proof of Intent to Remain (three documents required, each showing at least 12 months)
- Valid Washington driver's license;
- Valid Washington voter registration;
- Valid Washington vehicle registration (not title);
- Proof of permanent full-time employment; or
- Verification of checking, savings or safe deposit box accounts located at a bank in Washington

\* Note that the Oregon Border Opportunity Waiver also requires proof of Oregon Border county residency in addition to the documents listed above. The Washington Non-Resident Waiver requires one piece of documentation from the list above, while the Oregon Border Waiver requires one piece of documentation from the list above from Oregon rather than from Washington. For additional details, refer to the directions on the application forms.

The forms are available online at [http://www.clark.edu/enroll/admissions/admission\\_forms.php](http://www.clark.edu/enroll/admissions/admission_forms.php) or by visiting the Welcome Center in Gaiser Hall room 127.

- **Washington Residency Reclassification Form:** used to apply for in-state status by those who did not reside in Washington state for at least 12 months prior to enrolling at Clark College.
- **Border County Opportunity Application HB1474:** used to apply for in-state status by those who qualify under the Oregon Border Opportunity Waiver guidelines.
- **Washington Non-Resident Waiver:** used to apply for the waiver by those who originally applied for admissions with a non-Washington state address and who have since moved to Washington and established a residency.
- **Oregon Border Waiver:** use to apply for the waiver by those who are residing in a qualifying Oregon border county.

Washington residency is governed by RCW.28B-15, RCW 46.16.028, RCW 46.20.021, WAC 250-18 and WAC 208-104-006. Contact the Admissions Office at 360-992-2107 with any questions you have regarding your residency status or how to apply for a reclassification. You can also visit our office in the Welcome Center, located in room 127 of Gaiser Hall.

## HB 1079 (Undocumented Person) Waiver

Effective July 1, 2003, Washington state law (HB1079) was changed to qualify certain students who are not permanent residents or citizens of the United States as eligible to pay resident tuition rates. To qualify, students must complete an affidavit declaring they have:

- Resided in Washington state for the three (3) years immediately prior to receiving a high school diploma, and completed the full senior year at a Washington high school, OR completed the equivalent of a high school diploma and resided in Washington state for the three (3) years

- immediately before receiving the equivalent of the diploma, AND
- Continuously resided in the state since earning the high school diploma or its equivalent AND
- Certify that they will file an application to become a permanent resident of the United States as soon as they are eligible to apply.

## **Active Duty Military**

Active duty military stationed in the state of Washington, as well as their spouses and dependents, qualify as residents for tuition purposes. At the time spouses or dependent family members apply for admission, documentation such as a copy of the military ID card or other appropriate documents must be presented.

## **Washington National Guard**

Washington National Guard members, as well as their spouses and dependents, qualify for resident tuition as long as they are domiciled in Washington.

## **Veterans Tuition Exemption**

Contact the Veterans Affairs Office at 360-992-2112 for information regarding eligibility criteria for the Veterans Tuition Waiver. You must provide the original or certified copy of form DD214.

## **Tuition Waivers**

Most tuition waiver guidelines and charges are set by the Washington state legislature and may change on an annual basis. Those eligible for waiver are listed below, under the departments that serve them.

- Registration Office
  - Clark College employee
  - Classified state employee or Washington Public Higher Education employee
  - Senior Citizen Gold Card
- Admissions Office
  - Children of Deceased Law Enforcement Officer or Firefighter
  - Children and spouse of totally disabled or POW/MIA or deceased eligible veterans or National Guard members
  - Native American Waiver
  - Washington Non-Resident Waiver
  - Oregon Border County Waiver
  - Non-Resident Refugee Waiver
  - Apprentice
  - Vocational 18+ credits
  - Dislocated forest products workers or their unemployed spouses
  - Wrongfully convicted individual, their children & stepchildren
- High School Completion Office
  - High school completion
- Veterans Affairs Office
  - Military personnel
- Running Start Office
  - Running Start

## **Placement Testing**

**360-992-2648**

Placement testing is the first step toward student success. As a community college, Clark serves a very diverse population with classes ranging from adult basic education to university transfer programs. Prior to taking the placement test, students must complete an application for admission and have paid the admissions application fee. Placement results from other institutions may be utilized to meet course prerequisites. A copy of the placement report or test transcript must be provided to Enrollment Services for interpretation of appropriate level. Clark utilizes other methods of course placement including CASAS, high school coursework and other options. Please visit [www.clark.edu/assessment](http://www.clark.edu/assessment) to determine which option may best fit your placement requirements.

## Placement Testing Retest Policy

All students are allowed an initial COMPASS placement test at no additional cost. COMPASS and ASSET scores are accepted and considered valid for two (2) years from the placement test date. After receiving the results, students have the following options:

1. Enroll in the courses into which they were placed.
2. Students may retest in any or all of the three (3) modules (writing, reading, or mathematics). Each module requires a separate fee. Students will then be placed into classes using the higher of the two (2) scores.

## Retesting

After the initial retest, students do have the right to retest periodically. Individual modules may be taken once every three (3) months. Each module retest requires a separate fee. Once a letter grade is received, a student may not retest without the explicit permission of the Dean of that area. COMPASS and ASSET scores are considered valid for two (2) years from the placement test date.

## COMPASS

Individual modules may be taken once every three (3) months. Each module retest requires a separate fee. Once a student has taken a mathematics, reading, or English class and received a grade of record (A - F, not W), a retest will not be allowed in that subject area.

## Distance Learning Proctoring

The Assessment Center provides proctoring services for students taking distance learning or correspondence courses. There is a fee for this service. Contact the Assessment Center at 360-992-2588 to discuss available proctoring options or visit <http://www.clark.edu/enroll/admissions/assessment/proctoring.php> to download a proctor request form.

## Foreign Language Placement

The Assessment Center offers placement into foreign language courses for students who already have a background in French, Spanish or German languages. The foreign language placement exams are computer-based and offered on a walk-in basis in the Assessment Center, located in the Penguin Union Building, room 015.

## High School 21+

360-992-2741

Begun in 2015, High School 21+ is a program that helps students 21 years or older earn their high school diplomas in a more timely and convenient way than was previously available. The High School 21+ curriculum combines basic skills coursework with more-rigorous academic education and training so that students can upgrade their skills while working toward a high school credential. The coursework is listed in the schedule as College and Academic Preparation (CAP). CAP is designed both to help students earn their high school diploma and/or prepare for the GED exam. In addition, the coursework can help students who have already completed high school or the GED but who need to improve their academic skills prior to entering into their program of study at Clark College.

Adults interested in participating in the High School 21+ program will need to apply for admission, submit their official high school transcripts, take the CASAS test, and meet with the High School Completion Advisor prior to beginning their classes. While adults aged 19 and older are welcome to enroll in the program, diplomas will be issued only to adults aged 21 and over.

## **General Educational Development (GED) Testing**

Clark College is an official General Educational Development (GED) testing site. The GED tests provide a high school credential to adults who have not graduated from a traditional high school. Participants in GED testing may go on to further their education at Clark College following the examination process or can participate in traditional college classes while completing the GED tests. Refer to page A3 for further information on the Admissions process.

The GED test is designed for adults who are 19 years old or above and who have not received a traditional high school diploma. Examinees who are 16 to 18 years old and wish to take the GED test must provide a high school release form from the school district in which they live.

The GED examinations are given in the following four (4) subject areas:

Social Studies

Science

Mathematics

Language Arts

Successful completion of each of these examinations leads to the issuance of a GED certificate.

The GED test is now offered in a computer-based format. In order to begin the process of obtaining a GED, participants may register online at [www.GEDcomputer.com](http://www.GEDcomputer.com). The GED® test must still be taken in person, at an official GED® testing center. Examinees under the age of 19 must provide a high school release form to the Assessment Center to enable the online scheduling feature.

GED preparation classes are available through Clark College. Contact 360-992-2107 for further information.

## **Student Orientation**

All new, transfer and returning students are required to complete a Student Orientation session before they are granted access to registration services. Students will gain valuable information about support resources, critical dates and policies, online tools and academic advising. For specific orientation requirements visit <http://www.clark.edu/enroll/admissions/orientation/index.php>

## **Financial Aid**

360-992-2153

[www.clark.edu/cc/finaid](http://www.clark.edu/cc/finaid)



The Financial Aid Office helps eligible degree and certificate seeking students obtain funding to meet their educational expenses at Clark College. Last year more than 10,700 students were awarded over \$53 million in federal, state and institutional financial aid.

## Types of Financial Aid Available

Financial aid includes grants, tuition waivers, work study, and student loans. The financial aid programs available to students at Clark College include:

**Federal Pell Grant:** Awarded based on financial need. Students may receive the Pell Grant for a maximum of three (3) full-time (12 credits or more) quarters per academic year. The grant is prorated for less than full-time enrollment. Eligibility is limited to a lifetime maximum of 18 full-time quarters.

**Federal Supplemental Educational Opportunity Grant:** Awarded based on exceptional financial need. The grant is available to students enrolled in six (6) credits or more per quarter.

**Washington State Need Grant:** Awarded to eligible Washington State residents up to the cost of tuition. The grant is prorated for less than full-time enrollment. Students may also receive funding to cover a small portion of child care expenses. Eligibility at Clark College is limited to eight (8) full-time quarters. Students who have earned an AA or AAS/AAT/AFA degree in the past five (5) years are not eligible to receive the State Need Grant.

**College Bound Scholarship:** Awarded in combination with other state financial aid to cover the average cost of tuition, fees, and a partial book allowance. The scholarship is available to students who sign up in the seventh or eighth grade and meet specific eligibility requirements. Information is available online at [www.wsac.wa.gov](http://www.wsac.wa.gov).

**Clark College Grants and Waivers** Clark College reserves a percentage of tuition revenue and offers these funds to Washington resident students in the form of institutional grants and tuition waivers. Clark College offers the following institutional grants and waivers:

**Clark College Grant:** Awarded to eligible Washington State residents based on financial need. The grant is available to students enrolled in three (3) credits or more per quarter.

**Clark College Need-Based Tuition Waiver:** Awarded to eligible Washington State residents based on financial need to reduce the amount of tuition costs. The waiver is available to students enrolled in three (3) credits or more per quarter.

**Clark College Non-Need Based Tuition Waiver:** May be awarded to Washington State residents and non-residents with unusual circumstances who do not have sufficient resources to pay the cost of tuition. Eligibility is determined on a case-by-case basis by the Financial Aid Director and the Director's designees.

**Federal and State Work Study:** Awarded to Washington State residents based on financial need. Funds are earned through employment on and off campus. Students must be enrolled in at least six (6) credits per quarter.

**Federal Student Loans:** Educational loans are a form of financial aid that must be repaid with interest. Money borrowed must be used to pay for the cost of education. Students should review their educational costs and household budget before applying for loans so they know how much they need to borrow for the academic year. Students must be enrolled in at least six (6) program required credits per quarter to maintain eligibility.

There are two types of federal student loans: subsidized and unsubsidized. Students that are eligible for a subsidized loan are not charged interest while they remain in school. Interest starts accruing on subsidized loans after a student leaves school. With an unsubsidized loan, interest starts accruing at the time loan funds are disbursed. Students can choose to make interest payments while in school or delay interest payments until after they leave school.

Subsidized loan eligibility for new borrowers entering college on or after July 1, 2013 is limited. Eligibility for subsidized loans will be lost when students receive subsidized loans for 150% of the published time for program completion if they:

- Do not complete their program, or
- Continue in the same program, or
- Enroll in another program of equal or shorter length

New students borrowing a loan for the first time receive their first loan disbursement on the 31st day of the quarter. If the disbursement date falls on a weekend or holiday, the disbursement will be available on the following business day. All students borrowing a loan for a single quarter will receive their disbursements in two installments. The first disbursement will be on the 31st day of the quarter and the second at the mid-point of the quarter. If the disbursement dates fall on a weekend or holiday, the disbursement will be available on the following business day. Students must be in good academic standing, as defined by the Financial Aid Satisfactory Academic Progress Policy, at the time funds are disbursed.

## **Application Process**

Students begin the annual application process by completing the Free Application for Federal Student Aid (FAFSA) online at [www.fafsa.gov](http://www.fafsa.gov). The FAFSA is available each year in January and must be completed for the upcoming academic year that begins in July. Completing the FAFSA is the first step of the application process: Additional documents will be requested by the Financial Aid Office via student email. The student's financial aid file will be considered complete and ready for processing when all requested documents are submitted to the Financial Aid Office. Students planning to attend summer and/or fall quarter 2015 should complete their financial aid file by May 6 to allow sufficient time for processing and know what types of aid they are eligible to receive. Priority dates for the quarters of winter and spring 2016 will be published online at [www.clark.edu/cc/finaid](http://www.clark.edu/cc/finaid).

## **Financial Aid Awards and Disbursements**

The Clark College Financial Aid Office processes the student's financial aid file and determines eligibility for grants, work study, and loans. Students are notified of their eligibility with an award letter to their student email account. All grants and tuition waivers included on the award letter are based on full-time (12 credits or more) enrollment. Grants and tuition waivers are prorated down prior to the start of the quarter for less than full-time enrollment. Loans included on the award letter are estimates. Because loans must be repaid with interest, an additional application is required, which can be completed after the award letter is received.

All financial aid awards are automatically used to pay tuition and fees. If the financial aid award is not sufficient to pay the tuition and fees in full, the student is responsible for payment of any remaining balance. If the financial aid award exceeds the cost of tuition and fees, the student will receive a disbursement. With the exception of summer quarter, financial aid disbursements are issued 1-2 business days before the start of the quarter. Summer quarter disbursements begin after July 1, 2015. To avoid delays in financial aid disbursements, students should finalize their academic schedule at least one week before the start of the quarter.

# The Clark Debit Card

Through a partnership with HigherOne, Clark Debit Cards are issued to all Clark College students receiving financial aid. The debit card is mailed by HigherOne after the student has completed their financial aid file. The debit card should be activated upon receipt at [www.clarkdebitcard.com](http://www.clarkdebitcard.com) to select how they wish to receive their quarterly financial aid disbursements.

## Census Date

A student's enrollment level for the quarter is established at the time funds are sent to HigherOne for disbursement. On the census date (the fifth day of the quarter), the student's enrollment level is finalized and compared to the original enrollment level. No funding adjustments can be made after the census date.

If a student adds classes during the first week of the quarter and is entitled to additional funds, the Financial Aid Office will disburse the additional funds to the student's HigherOne option. Students who are eligible to receive additional funds will receive notification of refund disbursements from HigherOne.

A student that drops to a lower enrollment level or does not start attendance in all classes after their refund disbursement is released to HigherOne, will be billed based on their change in enrollment. Money owed is identified as a Pell Grant overpayment. Students in an overpayment status will receive a bill by the end of the third week of the quarter at their Clark College student email address. If a tuition refund resulted from a drop in credits, it will be applied to the Pell Grant overpayment to help pay back any amount owed.

## Late Start or Module Classes

A student may enroll in a class that begins after the official quarter start date. Financial aid will include late start or module classes in the enrollment level at the time funds are sent to HigherOne. If a student does not start attendance or drops a late start or module class prior to its start date, they will be billed based on their change in enrollment. Money owed is identified as a Pell Grant overpayment. Students in an overpayment status will receive a bill at their Clark College student email address. If a tuition refund resulted from a drop in credits, it will be applied to the Pell Grant overpayment to help pay back any amount owed.

Students who owe a Pell Grant overpayment will have 45 days to pay their debt in full or make arrangements to pay their debt. If, within 45 days, the student fails to pay in full or make arrangements to pay, the debt will be referred to ED Debt Resolution Services  
<http://www.myeddebt.com/borrower/>

Students whose debt has been referred will no longer be eligible for financial aid, including grants, loans, and work study. Even though students repay their debt, they will still be held responsible for their original enrollment level and could face financial aid warning or suspension based on finalized quarter enrollment level. The Clark College Census Date policy is available at  
[http://www.clark.edu/enroll/paying-for-college/documents/Census\\_Date\\_Disbursement\\_Policy.pdf](http://www.clark.edu/enroll/paying-for-college/documents/Census_Date_Disbursement_Policy.pdf)

## Financial Aid Satisfactory Academic Progress

Students must meet the Financial Aid Satisfactory Academic Progress (SAP) Policy requirements to remain eligible for federal, state, and institutional financial aid.

There are three standards of Satisfactory Academic Progress that are evaluated at the end of each quarter:

I. Grade Point Average (GPA) if both the quarterly and cumulative GPA fall below 2.0 the student will not have met the GPA requirement to remain in good standing. In addition, a student must have a minimum 2.0 cumulative GPA at the end of their sixth quarter of attendance.

II. Maximum Timeframe is measured to ensure students are taking required courses to complete their certificate or degree within 125% of the credits required for the program of study. All credits attempted at Clark College and accepted in transfer, regardless of whether or not financial aid was received, are included. Remedial coursework needed to reach program-required classes is counted toward maximum timeframe. Eligibility for remedial coursework is limited to 45 attempted credits.

III. Pace of Progression Students must complete all credits funded each quarter within their enrollment level (see chart below) and 67% of their attempted cumulative credits. All program credits, including transfer and remedial credits, will be taken into consideration whether or not aid was received. Grades F (Failed), I (Incomplete), U (Unsatisfactory), W (Withdrawal), Y (In Progress), N (audit), and R (repeat) will count as attempted credits.

### Registered Credits at

Time of Disbursement	Good Standing	Warning	Suspension
Full Time (12 -19 credits)	12 credits per quarter	6 - 11 credits	5 credits or fewer
3/4 Time (9-11 credits)	9 credits per quarter	6 - 8 credits	5 credits per quarter
1/2 Time (6-8 credits)	6 credits per quarter	N/A	5 credits per quarter
Less Than 1/2 Time (1-5 credits)	All attempted credits per quarter	N/A	Less than all per quarter attempted credits

Students who do not meet Satisfactory Academic Progress can be placed on Financial Aid Warning or immediate Financial Aid Suspension. Students will be notified through their Clark College student email at the end of the quarter after grades have been posted.

### Financial Aid Warning

Students will be placed on Financial Aid Warning for one quarter if:

- They do not complete the number of quarterly credits in their enrollment (see chart above), or
- They complete less than 67% of the cumulative credits attempted for their program, or
- Both quarterly and cumulative GPA's fall below 2.00 at the end of a quarter.

Students on Financial Aid warning are eligible for funding the following quarter of attendance. All Satisfactory Academic Progress Policy requirements must be met the following quarter to avoid financial aid suspension.

### Financial Aid Suspension

Students will be placed on suspension if they:

- Are on Financial Aid Warning or Probation and
  - Do not complete the number of credits in their enrollment level and/or
  - Do not meet 67% pace of progression and/or

- Both quarterly and cumulative GPA fall below 2.0 at the end of the quarter
- Have a cumulative GPA below 2.0 at the end of the sixth (6th) quarter
- Have attempted 125% of the credits required for the program
- Have changed their degree more than two times
- Have failed to meet the requirements of an Educational Plan agreement
- Not all attempted credits are completed (as noted on the enrollment chart)

Students placed on suspension are not eligible for future financial aid which includes grants, loans and work-study.

## Regaining Financial Aid Eligibility

When students lose eligibility due to lack of academic progress, there are two options to regain eligibility.

I. Satisfactory Academic Progress Appeal: Failure to maintain good academic standing may be the result of circumstances beyond the student's control. If extenuating circumstances prevented the student from successfully meeting Satisfactory Academic Progress requirements, they may submit an appeal.

Appeals must include the following:

1. Satisfactory Academic Progress Appeal Form.
2. Typed and signed statement explaining the circumstances, what has changed and the steps taken to ensure future academic success.
3. Supporting documentation confirming the extenuating circumstances presented in the statement.
4. A current degree worksheet completed and signed by the student and program advisor.

Students are limited to two appeals at Clark College. Appeals are reviewed by the Financial Aid Advisory Committee bimonthly and students are notified of their decision through student email. The Committee's decision is final. If the appeal is approved, the Committee has the authority to restrict students to specific academic conditions. If approved, aid is reactivated based on available funding at the time the appeal is approved and may not reflect the original award. An approved appeal does not negate any repayment owed to the financial aid programs or Clark College.

II. Request for Reinstatement: If a student chooses not to appeal or has exhausted the two-appeal limit, they may submit a Request for Reinstatement when they have met all of the following conditions:

1. Cumulative GPA is 2.0 or higher
2. Enrolled in and completed a minimum of five (5) program-required credits
3. Pace of progression is 67% or higher

When attempting to reinstate, all credits in the reinstatement quarter must be completed. Grade of F (Failed), W (Withdraw), Y (In Progress), N (Audit), and R (Repeat) will hinder eligibility for reinstatement and may increase the number of credits needed to reinstate. If the reinstatement is approved, aid is reactivated based on the availability of funding at the time the reinstatement is approved. Students may be restricted to specific academic conditions and must remain in good academic standing to maintain continued eligibility. An approved reinstatement does not negate any repayment owed to the financial aid programs or to Clark College.

## Financial Aid Probation

If a student's appeal is approved by the Financial Aid Advisory Committee, their financial aid will be reinstated on a probationary status. The Committee may specify an education plan or other academic restrictions. To avoid losing eligibility while on Probation students must meet all Satisfactory Academic Progress Policy requirements and all conditions of the approved appeal.

## **Title IV Repayment Policy**

Students who receive financial aid are subject to the Federal Return of Title IV Policy. This policy is effective when a student withdraws or fails all credits. Students who attend through the 60% point of the quarter earn 100% of their aid and will not owe a repayment. Students who do not attend through the 60% point in the quarter may owe a repayment to the financial aid programs. The student's withdrawal date is used to calculate repayment and is determined as follows:

**Official Withdrawal:** The date the student began the institution's withdrawal process by officially notifying the institution in writing of their intent to withdraw.

**Unofficial Withdrawal:** The last date of attendance, defined as the last date of participation in an academic related activity, reported to the Financial Aid Office by the instructor or the midpoint of the period of enrollment. The latest date will be used to calculate the repayment.

## **Return of Funds**

Funds are returned to the following Federal sources in order of priority, as established by Congress:

1. Unsubsidized Direct Loans
2. Subsidized Direct Loans
3. Direct PLUS Loans
4. Pell Grants
5. Supplemental Educational Opportunity Grants
6. Other Federal, State, Private, or Institutional financial assistance

There are six (6) basic steps to the formula for calculating the amount of funds that must be returned to the Title IV programs:

1. Determine the date of withdrawal and percentage of payment period attended by the student
2. Calculate the amount of Title IV aid earned by the student
3. Compare the amount earned and amounts disbursed to determine amount unearned
4. If amount earned is greater than amount disbursed, determine late disbursement
5. If amount earned is less than amount disbursed, determine amount of Title IV aid that must be returned
6. Calculate portion of funds to be returned by the institution and student

Both Clark College and the student have specific responsibilities under this policy. Students who owe a repayment will have 45 days to pay their debt in full or make arrangements to pay their debt. If, within 45 days, the student fails to pay in full or make arrangements to pay, the debt will be referred to ED Debt Resolution Services ([www.myeddebt.com/borrower/](http://www.myeddebt.com/borrower/)). Students who fail to comply with the terms of their agreement to repay will immediately become ineligible for Title IV funds.

Requirements of 34 CFR 668.22 are available in the Clark College Financial Aid Office or the Clark College website at [http://www.clark.edu/enroll/paying-for-college/get-keep/refund\\_policy.php](http://www.clark.edu/enroll/paying-for-college/get-keep/refund_policy.php)

## **State Need Grant Repayment Policy**

Students receiving State Need Grant (SNG) are subject to the Washington State Need Grant repayment policy as defined by the Washington Student Achievement Council (WSAC). This policy is effective only if a student completely terminates enrollment by withdrawing or failing all credits. Students who remain enrolled through at least 50% of the quarter are considered to have earned 100% of the State Need Grant received and will not owe a repayment. Students who officially or unofficially withdraw before the 50% point of time will owe a repayment. The amount of the repayment is based on the date of official withdrawal or the last date of attendance as documented by the student's instructors. Students will be billed 50% of State Need Grant considered unearned. Any unpaid debt will be referred to WSAC at the end of the academic year, June 30. Students are not eligible for Washington State Need Grant until the repayment has been paid in full.

## **Other Educational Resources Available**

### **Scholarships**

**360-992-2582**

**[www.clark.edu/scholarships](http://www.clark.edu/scholarships)**

Funding for scholarships is made possible through the generous support of individuals and organizations. The Clark College Foundation is one of the largest community college foundations in the country and offers many scholarships to Clark College students each year.

The scholarship application is separate from the application for financial aid. The majority of scholarship applications are available in January through April, and funds are awarded for the following academic year.

### **Sponsored Programs**

**360-992-2307**

The Sponsored Programs office serves as a liaison between students and various governmental and community agencies that have authorized funding to pay for tuition, books, and supplies.

### **Workforce Education Services**

The Clark College Workforce Education Services administers a variety of programs that are designed to support students who are pursuing vocational or technical non-transfer degree programs and certificate programs. Students enrolled in Adult Basic Education, English as a Second Language, and General Education Development classes may also be eligible. Resources available include:

### **Opportunity Grant**

**360-992-2039**

The Opportunity Grant program serves low-income students who are pursuing professional/technical programs that lead to high wage, high-demand jobs. Eligible students must be Washington State residents, meet income guidelines, and be enrolled in an approved program. Financial assistance with tuition, books, and mandatory fees may be available for those who qualify.

### **Worker Retraining**

**360-992-2274**

The Worker Retraining program serves students who have experienced unemployment, or who are displaced homemakers, or have been discharged from the military, and are pursuing professional/technical programs that provide them with the ability to re-enter the work force. Eligible students must live in Washington State and be enrolled in an approved program. Financial assistance with tuition, books, and mandatory fees may be available for those who qualify.

## **WorkFirst Financial Aid and Work Study**

**360-992-2915**

The WorkFirst program serves students who are receiving Temporary Assistance for Needy Families (TANF) and are pursuing professional/technical programs. Eligible students must live in Washington State and be enrolled in an approved program. Financial assistance with tuition, books and mandatory fees may be available for those who qualify.

On-campus WorkFirst Work Study job opportunities may also be available for those who qualify.

## **Basic Food Employment and Training (BFET)**

**360-992-2038**

The BFET program serves students who are receiving of federal basic food benefits and are pursuing professional/technical programs. Eligible students must live in Washington State and be enrolled in an approved program. Students may be eligible to receive subsidized child care assistance through Working Connections/Department of Social and Health Services (DSHS). Financial assistance with tuition, books and mandatory fees may be available for those who qualify.

## **Veteran Education Resources**

**360-992-2711 or 360-992-2112**

Certifying officials located in the Veterans Resource Center (VRC) serve as a liaison between Clark College and the U.S. Department of Veterans Affairs. Clark College is approved for VA Education Benefits under Chapters 30, 31, 32, 33, 35, 1606, 1607, and Military Tuition Assistance (TA).

Eligible veterans and dependents must request quarterly certification for approved degree and certificate programs. Only courses required within the program will be funded. Audited courses are not eligible. Students are required to make satisfactory academic progress and should contact the Veterans Affairs Office prior to making any schedule changes. Visit [http://www.clark.edu/enroll/paying-for-college/VA/VA\\_CEBVA.pdf](http://www.clark.edu/enroll/paying-for-college/VA/VA_CEBVA.pdf) for a complete checklist of requirements.

Clark College joins with the Department of Defense (DOD) Voluntary Education Partnership Memorandum of Understanding (MOU) and conforms to Executive Order 13607 of April 27, 2012, establishing Principles of Excellence for Educational Institutions Serving Service Members, Veteran Spouses, and other family members. Credit for military experience may be granted toward general elective and specific vocational program coursework. Veterans are required to submit military and all other school transcripts, to be applied toward their intended program of study, no later than the start of their second term of enrollment. Military training and experience granted for credit recommendations are based on the American Council of Education (ACE) guidelines for military training. Military experience is a non-traditional credit program. Students should refer to the Non-Traditional Credit Policy section of this catalog and contact the Veterans Affairs Office for additional information.

## **Career Services**

**360-992-2902**

**[www.clark.edu/cc/careerservices](http://www.clark.edu/cc/careerservices)**

**online job database system: [www.clark.edu/cc/penguinjobs](http://www.clark.edu/cc/penguinjobs)**

Career Services provides the resources and strategies for choosing a college major; developing career plans; finding jobs, internships and volunteer opportunities; and making successful career transitions. Resources include a computer lab, an extensive library of books and videos, and one-on-



one appointments with career and employment specialists. Services are free and open to students, former students and the general public.

### **Career Center resources:**

- Assistance in assessing personal skills and interests to explore career options or select a course of study.
- Detailed descriptions of more than 1,000 occupations and industries.
- Information about employment outlooks, labor trends, wages and job preparation.
- Databases of universities, technical training programs and scholarships in Washington, Oregon and the United States.
- Strong Interest Inventory and Myers-Briggs Type Indicator assessments including a career report and 90-minute small group interpretation of results.

### **Employment services and work experience opportunities for students:**

- An online job database system, Penguin Jobs, on the Career Services website:  
[www.clark.edu/cc/penguinjobs](http://www.clark.edu/cc/penguinjobs)
- Institutional hire job referrals for on- and off-campus student employment opportunities.
- Local and statewide full- and part-time job listings.

### **Job search and employment preparation services:**

- Assistance with resume writing, cover letters and interviewing skills.
- Job- and career-related workshops and resources.

### **Employer services:**

- On-campus recruiting table, free of charge.
- Free advertisement of job and internship vacancies.
- Multiple career events each year, including targeted job fairs and employer guest speakers discussing various career fields.
- Opportunities to serve on college advisory board

## **Advising**

**360-992-2345**

**[www.clark.edu/advising](http://www.clark.edu/advising)**

The mission statement for Clark College advising is:

By providing accurate, timely and consistent information, Advising personnel at Clark College, in collaboration with faculty: guide, support, and help students develop lifelong learning skills; assist students as they plan and achieve their educational and career goals; and work with students to establish a lasting relationship with Clark College.

As a result of working with advising personnel, students will:

- Develop an understanding of their own educational pathway so that remaining classes and timeliness of completion are clear and accurate.
- Develop an educational plan that addresses academic, career, and life goals.
- Develop an awareness of their own personal responsibility within the advising process.
- Develop skills to successfully navigate and use campus services and tools.
- To ensure the communication of accurate program information to all Clark students, advising is required for all new degree and certificate students to Clark and at certain checkpoints during degree or certificate progress.

The advising system at Clark College is an educational process that assists students as they pursue educational, career, and life goals. It is expected that students will build relationships with advisors during their time at Clark College and, over the course of their degree or certificate, will attain the objectives listed above.

## **eLearning**

**360-992-2654 or 877-748-2654**

**[eLearning@clark.edu](mailto:eLearning@clark.edu)**

**[www.clark.edu/eLearning](http://www.clark.edu/eLearning)**

### **What is eLearning?**

eLearning at Clark College provides alternative options to students that give them the opportunity to attend classes beyond the traditional on-campus experience.

### **What type of classes and programs are offered?**

eLearning offers a variety of classes that go towards many of the degrees and certificates available at Clark College. Currently eLearning offers the following program and degrees completely through eLearning:

1. AA General Transfer DTA: Fully online (AA Online), and a combination of online, hybrid, and weekend hybrid
2. Business Administration DTA/MRP: Fully online and combination of online, hybrid, and weekend hybrid

For information regarding any of these degrees or programs see [www.clark.edu/eLearning](http://www.clark.edu/eLearning) or contact the eLearning department.

eLearning classes are offered in the following formats: online, hybrid, and weekend hybrid. To learn more about eLearning class formats, please go to [www.clark.edu/eLearning/whatis.php](http://www.clark.edu/eLearning/whatis.php).

### **How do I start an eLearning class?**

*eLearning classes follow the same campus policies and procedures as face-to-face classes; therefore, they have the same start and end dates, unless otherwise noted. This means students are expected to log into the Learning Management System (LMS) the first day of the quarter for class instruction.*

Please visit the eLearning Getting Started page at [www.clark.edu/academics/eLearning/begin.php](http://www.clark.edu/academics/eLearning/begin.php) for information about starting an eLearning class.

### **Technical Requirements and Support**

To see if you have appropriate technology for eLearning courses go to: [http://www.clark.edu/academics/eLearning/tech\\_reqs.php](http://www.clark.edu/academics/eLearning/tech_reqs.php)

Technical support is offered at the TechHub for the following:

- LMS login and troubleshooting
- Computer lab and student wireless login and troubleshooting
- Mobile device connectivity
- Course-specific software and e-books
- eTutoring login
- Online student services
- Computer usage and troubleshooting

- Student Gmail

For information on TechHub's location and hours, please visit <http://library.clark.edu/?q=content/techhub-0>

## Registration

### 360-992-2183

You've submitted your application. You're ready to take The Next Step and register for classes. At Clark College, we offer registration online, and in person at Enrollment Services located in Gaiser Hall. If you are a new or transfer student, you will be emailed information regarding orientation, meeting with an advisor and registering for classes after completing an application for admission and submitting it to Enrollment Services.

After your first quarter of attendance at Clark College, your registration access date/time can be found online prior to the beginning of the registration period for each quarter. A notification will be emailed to your Clark College email address to let you know when registration access dates/times will be posted online each quarter.

Continuing student registration access dates/times are based on cumulative credits earned.

Priority registration access is given to eligible veterans under HB 1109. Qualifying students will receive access to registration services approximately one week prior to the continuing student population. Students approved for registration accommodation due to disability will also register during this time period.

Specific information on dates, deadlines, and hours of service can be found on the Clark College website at [www.clark.edu](http://www.clark.edu).

## Online Registration Services

The following services are available online for current Clark College students:

- Enrollment verification
- Change of address
- Registration access date/time
- Schedule Planner
- Student Global PIN change
- Student schedule
- Unofficial transcript
- Waitlist inquiry
- Degree Audit (online degree audit)
- Online Registration

You may conveniently enroll online each quarter by taking advantage of online registration. You will need your SID (student identification number) and your global PIN. By using online services you can also use our Schedule Planner tool to plan your class schedule. Schedule Planner allows you to select the most convenient times available for you to take classes and view available options at those times. Schedule Planner also offers a list of alternative classes and verifies your eligibility for classes requiring a prerequisite. Printing your class schedule and changing your address, phone, or e-mail are other convenient options available online at [www.clark.edu](http://www.clark.edu).

## Registration Policies

### Credit Maximum

Students may register online or in person for 0-20 credits. Students who wish to add excess credits (i.e., 21 or more) must make an appointment and obtain written permission from an advisor or counselor to register over the credit maximum.

### **Late Registration Policy**

Beginning the third day of the quarter instructor permission is required to enroll into any regular starting class. Beginning the tenth day of the quarter (eighth day in summer), students are also required to submit a late registration petition with the instructor's signature to enroll. The Late Registration Petition form is available at the Registration Office. Exception: Late starting classes, section changes and level changes.

Students who register after the tenth (10th) day of the quarter (eighth day in summer) will be charged a \$50 per-class Late Registration Fee. A student whose enrollment change falls under the following circumstances will not be charged:

- Students who need to make a level change. Example: Moving from MATH 095 to MATH 089.
- Students who need to make a section change. Example: Moving from an online course to a face-to-face course.
- Students who wish to enroll in classes that are set up as continuous enrollment as opposed to sequential.
- Students who are enrolling in late-starting classes that start after the tenth (10th) day of the quarter.
- Students enrolled in ABE/GED/ESL courses.
- Students utilizing the Clark College employee tuition waiver.
- Students who enroll in zero (0) credit courses.
- Students who feel their situation warrants an exception to this fee may request to have this fee waived by completing an Exception to the Late Registration Fee request form. The final decision on any exceptions will be made at the discretion of the Registrar.

### **First Day Attendance Policy**

It is essential that students attend the first class meeting of their courses. If a student is unable to attend due to an emergency or conflict of a serious nature, he or she should contact the instructor. If the instructor is not designated in the class schedule, the student should contact either the Division Office or the Office of Instruction who will direct the student appropriately. Students who fail to attend one (1) or more sessions during the first five (5) days of the quarter may be dropped from the class. Students who miss any classes during the first five (5) days are responsible for verifying their enrollment status.

Note: Students dropped by the college during the first five (5) days of the quarter will receive a full refund of tuition and fees, if due.

### **Dropping a Class and Withdrawal from the College**

Students who find it necessary to withdraw from classes must do so formally. The withdrawal is effective on the date a Change of Registration form is processed at the Registration Office. The dates for dropping and/or withdrawing from classes are listed online.

- A class officially dropped before the tenth day (eighth day in summer) of the quarter will not be entered on the student's transcript.
- After the tenth day and through the eighth week of the quarter, regular starting classes formally dropped at the Registration Office will be posted to the student's transcript with a withdrawal grade of "W" assigned to the class.
- No withdrawals will be accepted after the last day of the eighth week of the quarter.
- For courses with unusual start and end dates, no withdrawals will be accepted after 80% of

the class meetings have occurred.

- o If the student decides not to attend, it is his/her responsibility to withdraw from all classes.
- o No withdrawals will be accepted for a class that has ended.

### **Administrative Withdrawal:**

Students unable to withdraw by the end of the quarter due to extenuating circumstances should contact the Registration Office for information on requesting an Administrative Withdrawal.

### **Auditing a Class**

Any student may enroll in a course on an audit basis with instructor's written consent and upon payment of the regular tuition and fees. Audit students will be exempt from examinations and will not receive college credit; however, the instructor may require reasonable attendance and class participation. To change from credit to audit or audit to credit, the student must complete a Change of Registration form at the Registration Office. Such changes may be made only with the written consent of the instructor and must be processed by the end of the tenth day of the quarter (eighth day in summer).

### **Student Attendance Status**

Clark College considers twelve (12) or more credits to be a full-time student. The definition of "full-time student," however, may vary for certain agencies, such as Veterans Services, Financial Aid, Social Security, and insurance companies. Student attendance status for Financial Aid and MGIB GI Bill Chapters 30, 31, 35, 1606, 1607, is as follows:

#### **Financial Aid**

Full-time student	12 credit hours
Three-quarter-time student	9-11 credit hours
Half-time student	6-8 credit hours
Less than half-time student	1-5 credit hours

#### **GI Bill attendance status for fall, winter and spring quarters**

Full-time student	12 credit hours
Three-quarter-time student	9-11 credit hours
Half-time student	6-8 credit hours

#### **GI Bill attendance status for summer quarter**

Full-time student	8 credit hours
Three-quarter-time student	6-7 credit hours
Half-time student	4-5 credit hours
Less than half-time	3 credits or less

#### **Post 9/11 GI Bill Student Attendance Statud**

Post 9/11 GI Bill calculated at Rate of Pursuit. Students must be enrolled at more than half-time to receive their expected BAH.

- o 12 credits or more is considered full-time training for Post 9/11 GI Bill for Fall, Winter, and

- Spring quarters. (7 or more credits is required for BAH payment)
- 8 credits or more is considered full-time training for Post 9/11 GI Bill during Summer quarter only. (5 or more credits is required for BAH payment)

## Absence

Students are expected to attend classes in which they are enrolled. Attendance may be a factor in grading for a course. When unavoidable absence occurs, it is the obligation of the student to notify the instructor and arrange for the make-up work deemed necessary by the instructor.

A member of the Washington National Guard or any other military reserve component, who misses any form of participation/attendance in a class due to being ordered to service for 30 days or less or requiring medical treatment for that service, is entitled to make up academic assignments without prejudice to the final course grade or evaluation. Documentation must be submitted prior to absence. Contact the Veterans Affairs Office for information.

## Change of Address

In order to ensure receipt of important information, students must notify the college of any change of address. Offices that should be informed include Admissions, Financial Aid and Registration. Student Update forms are available at the Registration Office and online at [www.clark.edu](http://www.clark.edu).

## Tuition and Fees

The first payment due date is four (4) weeks prior to the quarter start date. Students who register Saturday through Friday must pay tuition and fees on the following Monday by 5:00 p.m. If a holiday falls on Monday, payment is due that Tuesday by 5:00 p.m. Students who register after the 10th day of the quarter must pay tuition by the end of the business day. Students receiving financial aid, scholarship, agency, or veterans benefits are responsible for paying outstanding tuition and fees by the tuition due date when aid is insufficient to cover the total cost. The Business Office will send email notification to students who owe tuition and fees. The amount due is also listed on the student's registration schedule.

Students who do not pay tuition and fees will be dropped from their classes unless:

- The outstanding balance is \$100 or less.
- A signed agreement to participate in the STEPP deferred payment plan has been submitted and payments are up to date.
- Registration for classes occurs after the 10th day of the quarter.

It is the responsibility of the student to officially withdraw from classes if they are unable to pay tuition and fees. A 100% refund will be issued through the fifth (5th) business day of each quarter.

Students with any outstanding debt owed to the college will:

- Be blocked from future registration.
- Denied the request for official transcripts.
- Any tuition and/or fees outstanding at the end of the quarter will be sent to Collections and a collection fee will be added.

## Matriculation and Facilities/On-Campus Parking Fee\*

Students are charged per credit hour to a maximum of twenty (20) hours for matriculation and facilities/on-campus parking.

## **Technology Fee\***

Students are charged per credit hour to a maximum of twenty (20) hours for technology such as computer software, computer replacement, and technical lab assistance to maintain open computer labs. Other examples of technology available to students are online registration and student kiosks, and online services featured on the Clark College website.

\*These fees are refundable on the same basis as tuition.

## **Additional Fees**

Some courses may require payment of lab or course fees in addition to or instead of tuition. These fees help the college defray expenses not funded by the state. Fees are used for specific course expenses such as breakage, hazardous waste management, consumable supplies, special materials, minor repairs, and materials that become the property of the student.

## **Textbooks and Supplies**

The Clark College Bookstore stocks required textbooks and supplies as requested by classroom instructors. Also available are many supportive suggested materials to assist in the student's class preparation and participation. The store staff understands the financial impact of class materials, thus provides the lowest prices for new textbooks of any college in this region and diligently pursues and stocks as many used textbooks as possible, partly supplied from a quarterly student book buyback program. In addition, the store offers a number of other affordability services for Clark students, such as textbook and calculator rentals, hold services, peer-to-peer exchange and much more. To obtain current book and supply lists and receive assistance in cost estimating, please visit the Clark College Bookstore on the main Clark College campus or visit their website at [www.clarkbookstore.com](http://www.clarkbookstore.com).

## **Financial Obligations of the Student**

Students are expected to meet their financial obligations to the college. Clark College staff will act in accordance with adopted procedures and, if necessary, initiate legal action to ensure that collection matters are brought to a timely and satisfactory conclusion. Collection fees will be added to debts owed the college.

Admission to or registration with Clark College, or issuance of academic transcripts, and other college services, will be withheld for failure to meet financial obligations.

## **Refund Policy**

A student who officially withdraws through the Registration Office may receive a refund of tuition and certain fees. The complete Refund Policy is printed in the college information section of this catalog and is available online at [www.clark.edu/cc/FApolicies](http://www.clark.edu/cc/FApolicies).

Students who believe extenuating circumstances justify an exception to the policy may make a formal request at the Registration Office. Exceptions may be granted for extreme, extenuating, urgent and unavoidable circumstances that prevent a student from withdrawing within the established guidelines. Students receiving Financial Aid may not qualify for exceptions to the refund policy due to federal financial aid guidelines.

A separate refund policy applies to classes offered by Transitional Studies (ABE, GED and ESL), Community Education and Mature Learning classes. For more information see the Adult Basic Education, GED, English as a Second Language, Community Education or Mature Learning sections of the class schedule.

# Grades and Records

## Grade Legend

Clark College uses the grading symbols listed below. The grades A, B, C, and D may include pluses (+) and minuses (-).

A	4.0
A-	3.7
B+	3.3
B	3.0
B-	2.7
C+	2.3
C	2.0
C-	1.7
D+	1.3
D	1.0
D-	0.7
F	0.0
I	Incomplete
N	Audit
P	Pass
S	Satisfactory (credit only, no grade points)
U	Unsatisfactory (no credit, no grade points)
W	Official withdrawal
Y	In process/re-register

## Transfer of Grades

The grades assigned in transferable courses by the sending institution shall not be altered by the receiving institution. Courses completed with a grade of 'D' or above shall normally be accepted in transfer (except at The Evergreen State College, where a minimum of 2.0 or 'C' is required for transfer). Nontraditional grading practices require special handling, depending on the nature and circumstances of the program from which and to which a student is transferring, but receiving institutions shall take steps to assure all students equitable treatment.

## Grade Information

Students enrolled in credit classes may obtain grade information approximately eight (8) days after the end of each quarter. Students may access grades at a college student information kiosk or through the Clark College website: [www.clark.edu](http://www.clark.edu).

## Grade Point Average (GPA)



Grade points are calculated by multiplying the number of credit hours for each course by the decimal grade appropriate for the grade earned. The quarterly GPA is computed by adding the total number of grade points for the quarter and dividing by the total number of credits attempted in courses that received a letter grade.

Credit Hrs Attempted	Grade	Grade Points Earned
5	B+ = 3.3	16.5
3	C = 2.0	6.0
<b>8 Total Credits</b>		<b>22.5 Total Grade Points</b>

Dividing 22.5 by 8 computes to a grade point average of 2.81.

The student's cumulative grade point average may be obtained by adding the total number of grade points for all quarters and dividing by the total number of credits attempted in the courses that received a letter grade.

### **Incomplete Grades**

An incomplete grade indicates that the student performed at a passing level, completed most of the course requirements, and intends to make up the missing work. Incomplete grades may be assigned at the discretion of the instructor if the student is unable to complete the work because of illness or other circumstances beyond the student's control. When assigning an incomplete grade, the instructor must provide a date for which the work must be completed, and the grade that will be entered on the student's transcript if the work is not finished on time. The incomplete grade remains on the student's transcript until the specified date or until the student completes the required work and the instructor submits an amended grade to the Registration Office.

### **In Process/Re-register**

Students enrolled in variable credit or continuous enrollment courses may be given a "Y" grade if their effort is not sufficient to grant one (1) credit. Students must re-register and pay tuition to continue the course. A "Y" grade may also be used for courses which last more than one (1) quarter.

### **Pass/No Pass**

Students may request to enroll in certain courses on a pass/no pass [PNP] basis. Students must contact the Registration Office for information about courses approved for this option. No more than sixty (60) credits taken for pass/no pass will be allowed toward the associate in arts degree, associate in science degree, the associate in applied science degree, or the associate in applied technology degree. Students must earn a grade of "C" or better (2.00 GPA) to be given a "Satisfactory" grade in a pass/no pass course. An "Unsatisfactory" grade will be posted for students earning less than a "C" grade. Students planning to transfer to a university should contact that institution to determine their policy for acceptance of pass/no pass courses.

### **Repeating a Course**

Some courses may be repeated to improve a grade earned, but credit will be granted only once. When students notify the Registration Office that a course has been repeated, the symbol "R" will be placed next to the first grade, and only the last grade earned will be used in calculating the grade point average. No courses may be repeated more than twice (defined as two repeats in addition to the original enrollment). The Clark College repeat policy does not apply to transfer coursework. Transfer coursework is not included in the Clark College GPA calculation and is not included in honors designation.

Students who plan to transfer to another institution should be aware that their GPA might be recomputed. Repeated courses will be received in accordance with the institution's own requirements and policies. Students receiving financial aid or Veterans benefits, or those participating in athletics, should consult those offices prior to repeating a course. Benefits or eligibility may be reduced or lost due to course repetition.

### **Setting Aside Past Record**

Qualified students may set aside a previous substandard academic record that does not reflect their true ability at Clark College. Setting aside does not expunge the previous record, but places a "set aside" notation on the student's transcript, marking the term from which the college will calculate a new GPA for determining probation, eligibility, or honors at graduation. Students may not count credits set aside to fulfill credit requirements for graduation. Students should understand that the record to be set aside includes all courses taken before the date selected by the student, and those courses may not be used to satisfy future course prerequisites.

Students may set aside a previous record if:

- They have earned fifteen (15) credits at Clark College beyond the quarter to be set aside.
- They have a 2.50 GPA at Clark College for these credits.
- The work to be set aside is at least one (1) year old.

Petition forms are available at the Registration Office in Gaiser Hall.

Caution: Although Clark College makes provisions for setting aside past records, students should not assume that other colleges to which they transfer will compute the GPA in the same manner. Only the Clark College record can be set aside; the college cannot set aside records from other colleges. Financial aid students will still be subject to federal regulations that require that all attempted credits be counted toward completion of an initial degree.

### **Grade Change/Error**

Students who believe an error has been made in recording their grades should contact the Registration Office. If a recording error has been made, it will be corrected. If an error was not made when grades were posted, the student should contact the instructor. Grade changes are made at the discretion of the instructor. A "Change of Grade Form" must be signed and submitted to the Registration Office by the instructor. Grade changes and corrections made for Veterans and Financial Aid recipients must also be reported to the Office of Veterans Affairs and/or the Financial Aid Office.

Grade changes must be made no later than the end of the second quarter following the quarter the student attended the class.

### **Grade Change/Academic Appeal Policy**

An academic appeal refers to a claim by a student that a specific grade assigned to the student by an instructor is the result of an arbitrary or capricious application of otherwise valid standards of academic evaluation or to a student's claim that the instructor has made an arbitrary or capricious decision or taken an arbitrary or capricious action which adversely affects the student's academic standing.

The student must file a written complaint within ninety (90) calendar days after termination of the course. The appropriate instructional dean or supervisor may suspend this rule only under exceptional circumstances such as extended illness, sabbatical leave, or absence of one or both parties involved in the complaint. Grade appeal process forms are available through the

instructional deans' offices or the Office of Instruction.

Students having complaints relative to academic performance evaluation should follow the steps below:

Step 1: The student should complete a grade appeal process form and discuss the complaint with the instructor. If the complaint is not resolved, proceed to Step 2.

Step 2: The student should speak to the appropriate division chair. The division chair must notify the student within fifteen (15) working days of the resolution after the meeting with the student. If the student is not satisfied with the resolution, the student should proceed to Step 3.

Step 3: The student will provide a written statement describing the nature of the appeal to the instructional dean or supervisor. A meeting will then be scheduled with the student, the instructional dean or supervisor, and the instructor to discuss the appeal. The instructor will receive a copy of the student's written material prior to the meeting. A decision by the dean or supervisor will be made within fifteen (15) days of the meeting. The decision by the dean or supervisor will be final and cannot be appealed further.

## **Confidentiality of Records**

Clark College has adopted procedures in compliance with the Family Educational Rights and Privacy Act (FERPA) as amended, and maintains confidentiality of student records. College employees are trained to comply with information release guidelines.

With few exceptions, parties outside of school officials will not have access to student records without the written consent of the student. Clark College will not release a student's record to a parent/ guardian without the student's written request. This policy is in effect regardless of the student's age or financial dependency upon the parent or guardian. The college may release student directory information without student consent. Directory information includes student name, student address, student e-mail, date of birth, major field of study, quarters of attendance, degrees and awards received, participation in activities and sports, and weight and height of members of athletic teams. Additional information regarding FERPA is found in section G of this catalog. In compliance with state law (SB5509) Clark College no longer uses the student's Social Security Number for the purpose of student identification. This law is intended to add additional protection to the student's identity.

The college will assign all students a Student Identification Number (SID). Students are required to use their assigned SID to access their records, register for classes, pay tuition, etc. For a copy of SB5509 or for additional information regarding this process, you may contact the Registration or Admissions Office.

## **Transcripts**

A transcript of each student's educational record is maintained in the Registration Office. An official transcript is signed by the Registrar, has the college seal attached and is provided in a sealed envelope. To obtain an official transcript, students should go online to [www.studentclearinghouse.org](http://www.studentclearinghouse.org) to place an order. Transcripts will be mailed to any college, university or other agency upon receipt of the request within seven (7) business days. There is also a rush transcript option available. There is a fee for all official transcripts. For current fee information please go to our website or call 360-992-2287. Transcripts will not be faxed.

Students may obtain an unofficial transcript through the Clark College website, [www.clark.edu](http://www.clark.edu); at student information kiosks; or by visiting the Registration Office in Gaiser Hall.

## **Vice President's List**

A Vice President's List will be compiled at the end of each academic quarter to recognize outstanding student achievement at Clark College. In order to qualify for the list a student must earn at least twelve (12) credits of graded course work and a GPA of 3.75 or higher. The credits from courses in which a student receives an "I," "S," or "Y" will not count toward the twelve (12) credit minimum. Students who qualify for the list will receive a congratulatory letter from the Vice President of Instruction and a notation will be made on the student's transcript.

## **Credential Evaluations**

The Credential Evaluations Department provides assistance for students seeking an evaluation of their progress towards completion. Evaluators will review and evaluate official transcripts sent to Clark College, process applications for program completion and respond to Credit for Prior Learning inquiries. For more detailed information about what Credential Evaluations is responsible for, please visit our website or call 360-992-2805.

## **Cooperative Work Experience**

**360-992-2239 or 360-992-2964**

Clark College recognizes the value to students of actual experience in a work environment. Credits earned through this program may meet general elective requirements and/or core program requirements.

Cooperative Education Work Experience is an applicable credit option and is subject to the guidelines listed under the Other Applicable Credit Options section in this catalog.

## **Credential Evaluation Policies**

### **Academic Standards Petition**

Students who believe an error has been made, or would like to request an exception to, the established degree requirements should contact the Credential Evaluations Office to inquire about an Academic Standards Petition.

### **Catalog Lifespan**

Students may complete their degree(s) or certificate(s) under the requirements set forth in any catalog issued during their attendance at Clark College. However, no catalog will be valid for more than seven (7) years. Any student not in attendance at Clark College for two (2) or more calendar years is required to complete the program requirements of the catalog in effect at the time of their re-entry to the college. (WAC 132N-160-080).

### **Diplomas**

Diplomas will be mailed 6-8 weeks following the completion of a student's degree or certificate requirements. Diplomas that are lost or misplaced may not be available for reprint. Contact the Credential Evaluations Office for more information.

## **Graduation Application Deadlines**

Students must submit a graduation application to the Credential Evaluations Department in order to be awarded a degree or certificate upon the fulfillment of the completion requirements. Students are encouraged to submit the graduation application one quarter before they plan to complete all of their requirements. If students do not complete their degree or certificate requirements in the quarter of application, they must reapply.

The priority processing deadline for graduation applications is the tenth (10th) day of the quarter in which the student plans to finish degree or certificate requirements. Graduation applications submitted by the priority deadline will be processed first and assured the awarding of the degree or certificate for the requested quarter.

Graduation applications received after the priority deadline and through the eighth (8th) week of the quarter will be accepted; however, applications received during this non-priority period will be processed after all priority graduation applications have been reviewed and processed. Applications received during this period are not guaranteed to be processed in time to award the degree or certificate in that quarter, provided all degree or certificate requirements have been fulfilled.

Graduation applications received after the eighth (8th) week of the quarter will not be processed for that quarter and will be moved to the subsequent quarter for review. The awarding of degree or certificate will be posted to the student's transcript in the subsequent quarter.

## **Credit for Prior Learning**

Have you dreamed of completing a degree you started long ago? Is it overwhelming to consider beginning or returning to school after being out of the educational system for several years? The process may not be as difficult as you may think! You may be able to earn college credit for knowledge and skills you have gained from prior education and training, military experience, volunteer and life and work experiences. Prior learning assessment is a process that enables individuals to demonstrate what they have learned--usually through life and work experiences--and have that learning assessed for college credit.

Granting college credit based on assessment of a student's prior learning in the workplace, military or through other life experiences can have positive impacts on college affordability, institutional capacity and student success. Legislation passed by the state of Washington, requires Clark College to collaborate with the State Board of Community and Technical Colleges in supporting the state goals for credit for prior learning. Clark College is committed to fostering an educated and skilled workforce, which is essential for economic prosperity and meaningful work for the citizens in Clark's service area. Further, Clark College is dedicated to awarding credit for applicable learning experiences that can help more students complete their training and degree programs sooner by evaluating an individual's existing knowledge and competencies for college credit. Students may be assessed through various processes that will determine the degree to which you have met the learning outcomes of the content in question. This could be a test, written assessment, oral interview, project, performance or another appropriate method by which the faculty member determines your understanding of the subject matter.

For more detailed information on Credit for Prior Learning please contact 360-992-2805.

## **Certification Crosswalk**

Credit may be awarded for documented experiential learning outside the college upon the recommendation of appropriately qualified teaching faculty. Documentation may be in the form of, but not limited to, a licensure or certification document, that demonstrates that learning outcomes have been accomplished.

## **College Level Examination Program (CLEP) 360-992-2805**

Clark College awards credit for successful CLEP examinations. An up to date list of subjects and required scores can be found on our website page. To be considered for credit, a student must pass the examination with the equivalent of a "C" or better grade. The transcript will reflect the credit granted by listing the equivalent course number, title, and credits. Refer to the Other Applicable Credit Options section for further restrictions on the number of credits applicable toward specific programs. Not all institutions accept CLEP credits. Students intending to transfer to another institution should contact the transfer institution for information on their CLEP policy.

### **Procedure for Requesting CLEP Credits**

Students should have an official copy of their CLEP scores sent to:

Clark College  
Attn: Credential Evaluations/GHL108  
1933 Fort Vancouver Way  
Vancouver, WA 98663

Once scores are received and reviewed, an email will be sent to the student at the Clark College student email address regarding the credits to be awarded. CLEP credits are posted to the transcript at the end of the quarter in which the scores were submitted as long as the student is enrolled in that quarter.

### **Testing Facilities**

Although Clark College accepts CLEP, the college is not a testing site. The nearest CLEP testing facility is Mt. Hood Community College in Oregon. Please contact MHCC at 503-491-7591 for information on testing availability and cost.

### **Where to Get CLEP Scores**

CLEP Transcript Service  
PO Box 6600  
Princeton, NJ 08541-6600  
Phone: 1-800-257-9558  
[www.collegeboard.org](http://www.collegeboard.org)

### **Course Challenge**

Students who believe that previous experience has provided them with the competencies essential for passing a course may request to challenge that course. A course challenge process may be used when:

1. there is a specific Clark College course for which the student believes that the learning outcomes can be met, and
2. the course can be challenged (some courses may not be challengeable).

Students wishing to challenge a course may not be currently enrolled in the course they wish to challenge, nor may students challenge courses if they have completed a course with a higher degree of difficulty. Courses that have been successfully challenged will appear on the student's transcript with an "S" grade. There will be no transcript entry for an unsuccessful challenge. The successful challenge will appear on the student's transcript within the quarter

earned and does not count toward the Clark College residency requirement. Students should check with the Credentials and Evaluation Office for the current application process and course challenge fee.

## **Military Experience**

### **360-992-2711**

Students can receive academic credits for experience and knowledge gained through military participation. Credits will be conferred based on ACE credit recommendations, in consultation with academic departments. Academic credit for military experience will be limited to 25 percent of total credits required for degree/certificate completion. Students should consult with the Veterans Affairs Department to discuss applying military credits to their degree-plan. The Credential Evaluations Department will evaluate all incoming military credits upon receipt.

## **Degree Audit**

Clark College offers an online degree audit service to current Clark College students. By using Degree Audit, you are able to obtain an unofficial evaluation of credits you have earned at Clark College and credits you have transferred from other accredited institutions by submitting official transcripts during the admissions process. Degree Audit will evaluate your progress towards a Clark College degree and/or certificate.

## **Graduation Ceremony**

### **Participation in Commencement Ceremonies**

The June commencement is a ceremony for those students who have completed or plan to complete their degree or certificate during the current academic year. Participation is not required. Candidates must file their graduation application and cap-and-gown order by the appropriate deadline to be eligible. Ceremony participation does not guarantee degree completion. Students completing their degree in the 2016 summer quarter may participate in Commencement of the previous academic year.

### **Caps & Gowns**

Only students who submit a Cap and Gown Order Form and Graduation Application will be allowed to participate in the Commencement ceremony. The Cap and Gown Order Form is available in the Advising Department and is given to students once they have submitted the graduation (program completion) application. The Cap and Gown Order Form deadline for submission will be published on the website. There is a fee for caps and gowns; please refer to the order form for current pricing. If you have received Honors, honors regalia will be available in the Bookstore at the time you pick up your Cap and Gown packet. Students who have submitted the Cap and Gown Order Form will receive detailed information in May regarding the process for ceremony participation and cap-and-gown disbursement.

### **Special Projects (Independent Study)**

To provide for challenging learning experiences beyond regular coursework, more-advanced students may arrange to undertake Special Projects. With the approval of the division chair and under instructor supervision, students are given the opportunity to plan, organize, and complete independent study projects.

Special Projects are listed in the department course description section of the catalog as course number 290. No more than fifteen (15) credits in Special Projects will be allowed toward the Associate in Arts degree. Students are responsible for ensuring that the credits earned do not exceed this limit and that credits earned will be accepted for transfer. Students should contact the instructor to register for a Special Projects course.

Special Projects coursework is an applicable credit option under the Other Applicable Credit Options section in this catalog.

## **Tech Prep/Direct Credit**

Tech Prep/Direct Credit is a dual-credit program that allows high school students to earn college and high school credits simultaneously in selected high school career and technical education courses. These courses have been identified and approved through formal articulation agreements created between Clark College and local high schools.

Students must earn a grade of "B" or better to qualify. Students interested in the Tech Prep/Direct Credit program should contact their high school career counselor to learn more about the program and which classes qualify.

High School Articulation/Tech Prep is an applicable credit option under the Other Applicable Credit Options section in this catalog.

## **Transfer Credit**

### **Transfer Institution Accreditation Requirements**

Clark College accepts credits from regionally accredited institutions of higher education. Recognized accrediting bodies are as follows:

- Middle States Association of Colleges and Schools (MSA)
- New England Association of Schools and Colleges, Inc./Commission on Institutions of Higher Education (NEASC-CIHE)
- North Central Association of Colleges and Schools (NCA-HLC)
- Northwest Commission on Colleges and Universities (NWCCU)
- Southern Association of Colleges and Schools/Commission on Colleges (SACS-CC)
- Western Association of Schools and Colleges/Accrediting Commission for Community and Junior Colleges (WASC-ACCJC)
- Western Association of Schools and Colleges/Accrediting Commission for Senior Colleges and Universities (WASC-ACSCU)

### **Domestic Institution Transfer Policy**

Students who have attended other regionally accredited institutions of higher education may choose to transfer credit to Clark College to meet course prerequisites and degree requirements. All coursework, including courses earned as part of prior degrees, will be evaluated on a course-by-course basis for transferability to Clark College. The Credential Evaluations Office will review the content of each course transferred and determine the appropriate course equivalency.

Official copies of transcripts are required for evaluation. Transcripts are considered official if issued directly from the prior institution or delivered in the original sealed envelope. Course descriptions and/or syllabi may be required to complete evaluations in some instances. It is the student's responsibility to request courses and catalog information from an outside institution and provide them to Clark College. Once transcripts from other institutions are received, they



become part of a student's permanent educational record and cannot be released by Clark College.

Although there is no limit on the number of credits that can transfer into the college, students must meet the Academic Residency requirements for their program. Any Health Occupation competitive-entry program student MUST provide all transfer institution transcripts.

## **International Institution Transfer Policy**

Students with credits from international institutions of education may submit their academic records for credit consideration. The amount of credit awarded will vary, based on the individual record of the student. Clark College does not recognize English coursework completed in countries outside of the United States, with the exception of Australia, Canada (except Quebec province), Ireland, New Zealand, and the United Kingdom.

Clark College requires translation and evaluation of the student's academic record from an agency that is a member of the National Association of Credential Evaluation Services. A current list of members is available online at [www.naces.org](http://www.naces.org). The costs of agency services are the responsibility of the student.

## **Distribution Reciprocity**

The Washington State Community and Technical College Inter-College Reciprocity Policy (Distribution Reciprocity) provides guidelines for transfer credit treatment among the Washington state community colleges. If a student transfers an individual course that meets a Communication Skills, Quantitative Skills or Distribution Requirement at the sending college for a specific transfer degree, that course is considered to have met that requirement at the receiving college for a similar transfer degree, even if this course does not have an exact equivalent. The receiving institution will accept a specific course's distribution area for a transfer degree if that student:

1. Has met the sending institution's residency credit and meets the receiving institution's policy on continuous enrollment (enrollment pattern needed to complete under the catalog at entrance)
2. Has met the entire Communication Skills, Quantitative Skills or Distribution Requirement of a transfer degree, according to the sending institution's degree criteria
3. Has maintained a cumulative college-level grade-point average (GPA) of 2.0 or better at the sending institution.

Students who believe they may qualify from the Distribution Reciprocity agreement should contact the Credential Evaluations Office.

# Academic Standards Policy

[www.clark.edu/clark-and-community/about/policies-procedures/academic\\_standards/index.php](http://www.clark.edu/clark-and-community/about/policies-procedures/academic_standards/index.php)

Clark College is committed to the academic success of its students. The primary purpose of the Academic Standards Policy is to quickly identify and alert students with low academic achievement and provide those students with assistance to improve their academic performance. This policy applies to all students. Some individual college programs or funding sources may have additional requirements. Students in these programs should contact the appropriate program advisor for information regarding these requirements or check with an academic advisor if they have questions.

Visit Clark's Academic Standards Policy website for up-to-date information on the policy, procedures, and flowchart.

## Academic Standards Procedure

### Academic Concern

If your cumulative GPA falls below 2.0 AND you did not achieve a quarterly GPA of 2.0 or better, you will be placed on Academic Concern.

- You will be sent an e-mail to your Clark student e-mail address that offers information about the Academic Standards process and tells you what happens at each stage.
- You will also receive a listing of college resources and a recommendation to take advantage of support and services available to you.

### Academic Intervention

If your cumulative GPA remains below 2.0 for the second consecutive quarter AND you did not achieve a quarterly GPA of 2.0 or better, you will be placed on Academic Intervention.

- You will be required to attend either a group workshop or register for a specific Human Development class.
- You will be required to complete an academic success plan that outlines steps for improving your academic performance.
- You may lose the ability to carry a full course load.

### One (1) Quarter Academic Dismissal

If your cumulative GPA remains below 2.0 for the third consecutive quarter AND you did not achieve a quarterly GPA of 2.0 or better, you will be placed on One (1) Quarter Academic Dismissal.

- You will be blocked from registering for classes while on One (1) Quarter Academic Dismissal.
- You will be sent an e-mail to your Clark student e-mail address that outlines the Appeal Process for One (1) quarter Academic Dismissal. To have a successful appeal, you must submit all documents requested including documentation of circumstances over which you did not have control. Decisions will be made and communicated to you before the first day of classes.

- If you do not appeal or if your appeal is denied, you will be administratively withdrawn and tuition will be refunded.
- You will also receive information about how to Return from One (1) Quarter Academic Dismissal. You must complete a Request to Return to College Form no later than six (6) weeks before the first day of classes for the quarter in which you plan to return. You will be notified about the process, expectations and time deadline to make an appointment to see a designated staff member. You must prepare a written plan in advance that includes the following items for your discussion with the staff member:
  - Your short-term educational goals
  - Specific plans to overcome barriers and improve your academic progress
  - Proposed course schedule

The designated staff member will review the plan with you and outline specific conditions you must meet for return from One (1) Quarter Academic Dismissal. Once the plan is finalized, you will return to Academic Intervention status.

#### **Four (4) Quarter Academic Dismissal**

If your cumulative GPA remains below 2.0 for the fourth consecutive quarter AND you did not achieve a quarterly GPA of 2.0 or better, you will be placed on Four (4) Quarter Academic Dismissal.

- You will be blocked from registering for classes while on Four (4) Quarter Academic Dismissal.
- If you enrolled for classes before academic dismissal status, you will be administratively withdrawn and tuition will be refunded.
- There is no appeal process.
- You will receive information about how to Return from Four (4) Quarter Academic Dismissal. You must complete a Request to Return to College Form no later than six (6) weeks before the first day of classes for the quarter in which you plan to return. You will be notified about the process, expectations and time deadline to make an appointment to see a designated staff member. You must prepare a written plan in advance that includes the following items for your discussion with the staff member:
  - Your short-term educational goals
  - Specific plans to overcome barriers and improve your academic progress
  - Proposed course schedule

The designated staff member will review the plan with you and outline specific conditions you must meet for return from Four (4) Quarter Academic Dismissal. Once the plan is finalized, you will return to Academic Intervention status.

### **Academic Standards for Professional/Technical Programs**

Students in certain professional/technical programs must receive grades of "C" or better in program core courses to advance in the program class sequences. Students should refer to the department description in section C of the catalog for further information.

### **Student Success Programs**

360-992-2830

[studentsuccess@clark.edu](mailto:studentsuccess@clark.edu)

[http://www.clark.edu/campus-life/student-support/student\\_success/index.php](http://www.clark.edu/campus-life/student-support/student_success/index.php)

The goal of Student Success Programs is to support the retention and success of all Clark College students, from the point of college entry to program completion. We provide targeted outreach and support for students facing challenges with academic progress; first-quarter students; and students transitioning from ABE, GED, and ESL to college-level coursework. We use proactive, reactive, and data-informed strategies to provide intensive, targeted outreach and intervention designed to meet students at their points of need. Student Success Programs staff and peer mentors assist students with accessing and navigating the various spaces, resources, and strategies available at Clark and the surrounding community that are key for students to establish and achieve their academic goals.

Key Services:

- Assistance to students with developing key critical thinking and problem-solving skills that will allow them to appropriately evaluate and respond to difficult academic, career, and life situations
- Targeted outreach and support related to Academic Early Warning (AEW) and Academic Standards Policy (ASP)
- Assistance to struggling students with locating appropriate academic resources and making informed enrollment decisions
- Peer mentoring to help students navigate and access appropriate support resources and strategies that meet their unique needs
- Reinstatement advising and support for students returning to the college
- Goal setting, course selections, and degree/certificate program planning
- Training and support for students, staff, and faculty on the Academic Standards Policy (ASP)

## **Academic Early Warning (AEW)**

[http://www.clark.edu/campus-life/student-support/student\\_success/aew/index.php](http://www.clark.edu/campus-life/student-support/student_success/aew/index.php)

AEW is a resource that enables instructors to communicate with their students early in the quarter about any behaviors that are interfering with their success in class. The warning is intended to provide students with sufficient time to: 1) identify and correct problematic behaviors that are hindering success in class, 2) access appropriate campus resources, and 3) if necessary, withdraw from classes if circumstances prohibit successful completion of coursework.

Students who receive an Academic Early Warning are encouraged to contact their instructors, trained AEW staff and peer mentors, and financial sources for strategies to improve course grades and guidance on course withdrawals.

## **Archer Gallery**

**360-992-2246**

<http://www.clark.edu/campus-life/arts-events/archer/index.php>

Archer Gallery has been exhibiting fine art in Southwest Washington since 1978, consistently presenting an impressive list of artists and exhibits. Focusing on Northwest and Washington artists, the gallery also exhibits works by national artists. Featuring both established and emerging talents, the cultural, social, and ethnic diversity of the region is expressed in the exhibition schedule.

Archer Gallery is located on the lower level at the south entrance of the Penguin Union Building and features 2,000 square feet of exhibition space. All exhibits are free and open to students and

the community. Support for the Archer Gallery is provided by the Associated Students of Clark College (ASCC), the Clark College Foundation, the college and donations from individuals. Archer Gallery is wheelchair accessible.

## **Athletics**

### **Clark College Penguins**

**360-992-2691**

**<http://www.clarkpenguins.com/index.aspx>**

Clark College is a member of the Northwest Athletic Association of Community Colleges (NWAACC), which coordinates and regulates both men's and women's athletics in Washington and Oregon. Clark sponsors intercollegiate teams for women in volleyball, cross country, basketball, track and field, softball, and soccer; and for men in soccer, cross country, basketball, baseball, and track and field. Students interested in intercollegiate sports should contact the Athletics Department.

### **Penguin Athletic Club**

**360-992-2301**

Through individual, family, and corporate memberships, the Clark College Penguin Athletic Club (PAC) provides funding for athletic scholarships, special events and recognition for student athletes, coaching enhancements, and general support for all eleven (11) Clark teams competing for the Penguins. Membership in the PAC provides special discounts on both alumni and PAC events, free admission to all home regular season games, and the opportunity to utilize the Clark College Thompson Fitness Center for a nominal fee per quarter or per year. For more information, please contact the PAC office.

## **Bookstore**

**360-992-2149 Fax: 360-992-2862**

**bookstore@clark.edu**

**[www.clarkbookstore.com](http://www.clarkbookstore.com)**

The Clark College Bookstore, owned and operated by the college, is located in Gaiser Hall and stocks required textbooks and supplies as requested by classroom instructors. The staff vigorously supports student interests by maintaining the lowest possible price for textbooks of any college in this region; by diligently stocking as many used textbooks as possible; and by providing e-book and rental options whenever feasible. The store also sponsors a book buyback each quarter during finals week, allowing students to recover cash for textbooks that they no longer wish to keep.

The Bookstore strives to support the interests of the entire community by selling computer accessories, software (special student pricing on many items), logo items, apparel, gifts, cards, convenience food items, various reading (both for class and for relaxation) and reference materials including many test preparation items, and an extensive health reference and supply section. Reloadable Bookstore gift cards are available for purchase for student shopping convenience. Services provided include personal faxing, personal package shipment, notary public, special orders, sale of Clark College theatre tickets, USPS stamps, C-Tran bus passes, payment for parking and student ID tags, and an e-commerce site which fulfills student orders and holds.

Payment options at the store include Bookstore gift cards, cash, check with appropriate identification, and Visa, MasterCard or Discover charge cards. Refunds are granted with the required documentation and within a specified time frame. Returns require a receipt and the

length of time allowed for a return is determined by the type of item being returned (specifics available in the Bookstore).

## **Bulletin Boards**

**360-992-2336**

The majority of college bulletin boards are used for college or departmental information only. All bulletin boards are identified with the assigned posting monitor. The posting monitor is responsible for postings. The complete bulletin board guidelines and a listing of campus bulletin boards and their classification may be obtained from the Facilities Services Office located in the Facilities Services building (FST).

Signs or posters may not be placed on wood, glass, painted, plastered or metal surfaces. Only thumbtacks may be used on bulletin boards. Staples are not permitted. Materials placed improperly will be removed by college personnel.

## **Child and Family Services**

**360-992-2393**

### **Toddler and preschool childcare services, summer school-age program**

The Child and Family Studies program is located at the north end of the Clark College main campus. Child care and early education services with family support options are available to Clark College students, faculty, staff and the local community. Child care services are available for children twelve (12) months and walking through five (5) years of age. During the summer, services are available for children up to ten (10) years of age. Contact the program for more information or to arrange a tour. Services are available from 7:30 a.m. through 6:00 p.m. Monday – Friday.

## **Event Scheduling**

**360-992-2713**

The hub of campus life is the Student Center in Gaiser Hall. This facility provides space for dances, concerts, dinner theater, lectures, and other college/community events. College rooms are available for small and large meetings of students, staff, and community groups. A use agreement will be sent to those contracting for college facilities outlining responsibilities and privileges. Space utilization cannot conflict with regularly scheduled classes or activities, and space is assigned on a first-come, first-served basis. There is a charge for use of college facilities by off-campus groups. To arrange for the use of any college space, contact the Event Scheduling Office.

## **Student Life**

**360-992-2441**

**<http://www.clark.edu/campus-life/student-life/index.php>**

The Office of Student Life (SL) coordinates programs, support services and activities that enhance the educational experience of a diverse student population and foster the intellectual and personal development of students on campus.

Student Life services and resources include:

- The Associated Students of Clark College (ASCC)
- The Activities Programming Board (APB)

- 80-plus events and activities each year including Welcome Week, Involvement Fair and Spring Thing – see our [our online events calendar](#) for more information
- Clubs, programs, committees and other student involvement opportunities
- Free coffee, Monday-Friday mornings
- Quick-stop computer lab
- Student-use kitchen including refrigerator and microwave
- Relaxing Game Room where you can enjoy massage chairs, board games, movies and more
- FREE Student Planner
- Water Bottle Filling Stations

For more information on any of these services, contact the Office of Student Life, located in the Penguin Union Building room 160, visit us online at <http://www.clark.edu/campus-life/student-life/index.php> or connect with us on Facebook at Clark College Student Life.

## **Student Clubs and Programs**

<http://www.clark.edu/campus-life/student-life/clubs/index.php>

Student clubs and programs provide students with an opportunity to combine various aspects of academic, vocational and/or personal learning and allow students to apply the skills and responsibilities of leadership by becoming involved in the campus and community. With more than 50 student clubs and programs to choose from, you are bound to find something to match your interests. Student organizations may have an educational, national, cultural, political, activity and/or religious focus.

For an up-to-date list of involvement opportunities, visit our website at <http://www.clark.edu/campus-life/student-life/index.php>

## **Student Government – Associated Students of Clark College (ASCC)**

[http://www.clark.edu/campus-life/student-life/ascc/ascc\\_student\\_government.php](http://www.clark.edu/campus-life/student-life/ascc/ascc_student_government.php)

Recognized by the Board of Trustees as the representative body of Clark College students, ASCC consists of a seven-member Executive Council that acts as a liaison between students, faculty, staff, administration and the community. They are charged with review and implementation of the ASCC Constitution and Bylaws, committee appointments, club promotion and approval, recruitment for student involvement, keeping students informed about legislative policies that directly affect them and oversight of the Services and Activities (S&A) fees. All enrolled students are members of ASCC and are thus eligible to participate in events and to serve as officers.

## **Activities Programming Board (APB)**

<http://www.clark.edu/campus-life/student-life/ascc/APB-Activities%20Programming%20Board.php>

With the group motto, “We run the fun!” this four-member group is charged with the creation of a comprehensive events calendar to include cultural, educational, family and social events for Clark students. Hosting 30+ events each year, including the annual Spring Thing event, it is easy to find an opportunity to relax, learn, and connect at Clark. To find out more about upcoming events visit our [online events calendar](#).

## **Student Publications**

The  
Independent

<http://www.clarkcollegeindependent.com/>

Working at The Independent offers students hands-on journalism experience. Working with one or more aspects of the newspaper (writing, editing, photography, layout, advertising, and business management) provides an introduction to the journalism profession as well as a means of earning credit. Some staff positions are paid. The Independent serves as a major communication link between students, student government, the faculty, staff and administration.

## Phoenix

<http://www.clark.edu/academics/programs/english/phoenix.php>

Phoenix, Clark College's literary and arts magazine, is funded by ASCC to encourage the creative efforts of Clark College students. All Clark College students registered in the immediate spring, summer, fall or winter quarters prior to publication may submit fiction, poetry, flat artwork and photographs of three-dimensional work. Under the direction of the faculty advisors from English and from Art, staff members practice budgeting, marketing, writing, editing, judging and layout skills. Volunteer student staff members are welcome; some paid student staff positions exist.

## Computer Services

### Computer Labs

Students enrolled in credit classes may use the open computer lab facilities at Clark College. Students are required to use their college-supplied network account to access computer resources in the labs. Open computer labs are available at the following locations:

- Anna Pechanec Hall, Rm. 102
- Cannell Library, Rm. 203
- Clark College at WSUV, Rm. 129
- Pathways Center, TBG, Rm. 226
- Bauer Hall, Rm. 101
- Scarpelli Hall, Rm. 135 and Rm. 023
- Clark College at Columbia Tech Center, Rm. 203 and Rm. 219

### Wireless Network Access

Students may use personal computers and mobile devices to access the Internet and online services available through the Clark College website using the college wireless network. Wireless access is available in most college facilities. A network account is required to use the wireless network.

### Computer Proficiency: A Statement to Students

Students at Clark College, in order to succeed here and in the communities outside the college, need to be familiar with and capable of using computers and computer software. Both upper division college work and the requirements of the workplace demand such skills. Many Clark College faculty will require students to access class materials on the Internet, use a word processor, e-mail and databases as part of regular course activities.

Students need to determine which computer skills are appropriate to their areas of study and take positive steps to acquire and use them early. In order to facilitate appropriate student access to computers and computer software, the college provides classrooms, labs, course work and library access where students can learn about and use these tools.

Students should contact their instructors, the college library, the Office of Student Affairs, the Associated Students of Clark College (ASCC), the Pathways Center, or the Advising and Counseling



offices to find out what computer resources are available and when they can be accessed. Advisors, counselors, and faculty can assist students in choosing appropriate courses to help them achieve computer proficiency.

## **Counseling and Health Center**

**360-992-2614**

**[chc@clark.edu](mailto:chc@clark.edu)**

**<http://www.clark.edu/campus-life/student-support/counseling/index.php>**

Located in the Health Sciences Building, the Counseling and Health Center supports student success by providing a range of professional counseling and medical services that are both affordable and conveniently available on campus. Counselors provide free, short-term, goal-focused counseling. They support students in self-development, goal-setting, and problem-solving to enhance student success. Career, academic, and personal counseling is available. Low-cost medical services are available on a limited basis. Services, pricing, and office hours are available on their website listed above. Self-care items (band aids, aspirin, ibuprofen, cough drops, etc.) are available free of charge.

## **Dental Hygiene Clinic**

**360-992-2158**

High-quality dental care is provided at a reduced fee by students under the direct supervision of licensed dental hygienists and dentists. Adults or children, five (5) years of age or older, are selected for care based on the educational needs of the students. Services provided may include exams, x-rays, scaling and polishing, sealants, fillings, tooth whitening, diet analysis, and personalized preventive education. Free screenings are available by appointment.

## **Disability Support Services**

**360-992-2314 - Voice 360-991-0901 - Video Phone**

**[www.clark.edu/DSS](http://www.clark.edu/DSS)**

Clark College and Disability Support Services (DSS) staff assist those with disabilities in pursuing their educational goals. DSS staff is committed to ensuring that Clark College, its services, programs, and activities are accessible to individuals with disabilities. The institution takes seriously its responsibility to follow both the spirit and the letter of all pertinent federal and state mandates.

Clark College recognizes that traditional methods, programs, and services may need to be altered to assure full accessibility to qualified persons with disabilities. DSS is the primary focus of efforts by Clark College to assure nondiscrimination on the basis of disability. Through DSS, qualified persons with disabilities can address their concerns regarding attitudinal or procedural barriers encountered, as well as any need for academic adjustments and/or auxiliary aids to ensure equal access. DSS will provide information and auxiliary aids or services, as well as serve as a resource to the campus community in striving to make Clark College both an accessible and hospitable place for persons with disabilities to enjoy full and equal participation.

## **Emergency Procedures**

**[www.clark.edu/emergency](http://www.clark.edu/emergency)**

The college's emergency procedures are posted in posters displayed in all classrooms and offices, as well as on the clark.edu website.

Depending on the type of incident, mass notification may be delivered via office and classroom phones, active computer screens, active Smart Classroom screens, and in some areas, loudspeakers. Emergency Building Coordinators are posted in every building to assist with emergency protocols.

Exercises (drills) will be conducted several times each year to insure general preparedness. All members of the college community are expected to participate. When possible, advance notification of planned exercises will be circulated.

## **Fitness Center**

**360-992-2808**

**[http://www.clark.edu/campus-life/student-life/fitness\\_center/index.php](http://www.clark.edu/campus-life/student-life/fitness_center/index.php)**

The Thompson Fitness Center, located in the O'Connell Sports Complex (OSC), is free to students currently enrolled in an HPE, fitness trainer or PE class. The following individuals are eligible to use the fitness center during open times for a quarterly or annual usage fee, which is payable at the Cashier's Office:

- Current full- and part-time Clark students;
- Clark employees, their spouses and children sixteen (16) years old and older;
- Penguin Athletic Club members, sixteen (16) years old and older; and
- Alumni Association members, sixteen (16) years old and older.

Completion of fitness center basics, circuit fitness and/or weight training class is recommended prior to using the fitness center.

## **Food Service**

The Clark College Culinary Arts-Food Service program is suspending service while the college is renovating facilities and revamping curriculum. However, the Culinary Arts-Baking program continues to operate and offers a variety of bakery items in Gaiser Hall adjacent to the Student Center. All items are prepared by Baking students who are training for jobs in the industry. These services are available during the normal academic quarter, except during final exam week. Additionally, food carts serving various cuisines are located in the center of campus between Foster/Hanna Halls and Cannell Library. Snacks, light meals and beverages are also available from vendors in Bauer Hall, Joan Stout Hall and the Foster/Hanna lobby during the academic year. The Bookstore maintains a wide variety of convenience food and beverage items. Vending machines and microwaves can also be found in many locations.

## **Health Insurance**

A low-cost private health insurance plan is available to all Washington state community college students through Summit America Insurance Company ([www.summitamerica-ins.com/wsc](http://www.summitamerica-ins.com/wsc)). Students must be taking at least six (6) credits to qualify and may enroll for injury or injury/sickness coverage. An option to enroll dependents is also available. Brochures are available at the Counseling and Health Center in the Health Sciences building or at the Cashier's Office in Gaiser Hall.

Health insurance is required for all international students and a separate plan is available. International students are advised to discuss their health insurance options with the Office of International Programs.

## **Housing**

Campus housing is not available. While the college does provide a housing referral bulletin board, located in central Gaiser Hall, it does not assume the responsibility for screening rentals.

Note: International Programs does work with international applicants to secure housing for them and to place them in one of the following options:

- An apartment building shared with domestic and international students from the International Air Academy (two- or four-bed apartments);
- An apartment with single or double rooms close to campus; or
- A host family arrangement.

Please contact International Programs for details.

## Legal Consultation

**360-992-2404**

Student Legal Services is a contracted program funded by ASCC that provides free, one-time legal consultation to students. A local, general-practice attorney provides multilingual legal counsel on family, criminal, and contract issues for students, as needed.

Thirty-minute consultation appointments are offered once a week through fall, winter and spring quarters, and can be arranged through the Student Life office, located in PUB 160. Please call 360-992-2404 to schedule an appointment.

## Library

**360-992-2151**

**<http://library.clark.edu/>**

Clark College Libraries provide resources to support the educational mission of Clark College. Located on the main campus, Cannell Library provides students, faculty and staff with books, movies and CDs. Cannell Library also has group study rooms and computer labs. Students attending classes at Columbia Tech Center can visit the Information Commons located on the second floor of the building in Room 219. Students are encouraged to ask librarians at either location for assistance using the wide range of in-print and online resources. Library faculty offer a variety of instruction sessions, research assistance and workshops.

Through Summit, a partnership that combines the holdings of academic libraries in Washington, Oregon and Idaho students also have access to books, DVDs, videotapes, government documents and more. Direct online borrowing and an efficient courier service allows students to obtain books quickly and easily.

From the Libraries' website ([library.clark.edu](http://library.clark.edu)), Clark College students, faculty and staff have 24/7 online access to thousands of resources, including electronic books, full-text journals and 64 electronic databases. Consult the library website or call 360-992-2151 for hours of service and other library information.

## Office of Diversity and Equity

**360-992-2355**

The Office of Diversity and Equity is a realignment of services at Clark that deal with issues of diversity and equity. The function of the Office of Diversity and Equity is to support the accomplishment of the goals set out in the Diversity Plan adopted by Clark College in 2009. In addition, the Office of Diversity and Equity is equally committed to serving historically

disadvantaged communities as they navigate Clark--as well as the entire Clark community as it engages in conversations around power, privilege, inequity, and diversity.

A Diversity Center has been established at Clark College. Its primary function is to be a welcoming and safe place for the entire Clark community—students, faculty, staff, and community members—to learn about and engage with issues of diversity, inclusion, power, privilege, inequity, and social justice. In addition, the Diversity Center serves as a resource on related issues, provides training and educational programs, hosts speakers and performers, and offers opportunities to connect with those who have felt disconnected in the past.

## **Parking and Traffic Rules**

### **360-992-2133**

Traffic and parking regulations at the college are authorized by the Board of Trustees and codified under the Washington Administrative Code. The enforcement of parking and traffic regulations is the responsibility of the Security/Safety Department.

Student parking on the Clark College campus is limited to open parking spaces. Open parking spaces are identified as lined spaces without any special labels. No permit is required to park in open parking. Restricted parking areas include faculty/staff (F/S) parking, visitor parking, and disabled person parking. No one may park in these areas without the proper permit or other authorization.

Drivers of vehicles on campus shall obey all regulatory signs, including stop signs and directional arrows, and shall comply with directions of campus security officers in the control of traffic and parking.

Any violations of the parking and traffic rules and regulations of the college may result in issuance of a monetary citation by the Security/Safety Department. Vehicle impounding, immobilization or transcript hold may result if vehicles are parked improperly or if fines are not paid.

The Security/Safety Department works continually toward safe and effective parking lot use. Concerns, suggestions and ideas for meeting the challenges of managing campus parking are always welcome. Students should contact the Security/Safety Department in Gaiser Hall for a complete copy of the Clark College Parking and Traffic Rules and Regulations, or for a copy of the Parking Survival Guide.

## **Public Transportation**

Clark College is served by C-Tran, the Clark County Community Transit System, at the main campus, Clark College at WSU Vancouver, and Clark College at Columbia Tech Center. The Clark College main campus is currently served by three (3) bus lines which link the college to all parts of the city of Vancouver, Clark County, and to Portland, Oregon.

To encourage and enable transit ridership, the college funds and supports the BackPASS program. Through the BackPASS program, all registered Clark College students can purchase a BackPASS endorsement for their student body identification cards. The BackPASS will afford the student unlimited access to C-Tran service in Clark County. Students may receive only one subsidized BackPass per quarter. To facilitate use of the BackPASS, bus schedules, maps and other transit information can be found in several locations. C-Tran regularly participates in student orientations and hosts information booths on the main campus.

Van service is now available at a reduced rate to students with disabilities. Check with C-Tran for

more details by calling 360-695-8918 (voice) or 360-695-2760 TTY.

Additional information about the BackPass program can be obtained from the Security/Safety Department in Gaiser Hall.

## **Security/Safety Department**

**360-992-2133**

Clark College Security/Safety works to provide a safe and secure environment in which members of the college community can pursue their educational goals and professional commitments. The department staff protects life and property, provides service and assistance to students, staff, and community members, provides fair and easy access to college facilities and assures compliance with campus regulations. The Security/Safety Department strives to offer proactive protection services to the college community. The department responds to the changing needs of the college by stressing prevention above response, planning above reaction, education above enforcement, and service above all.

The Security/Safety Department staffs a walk-up and phone-in service and information center, open extended hours during quarter sessions and for limited hours during breaks. Any time during open campus hours, security assistance may be contacted by coming to the Security-Information desk in Gaiser Hall, or by pressing the campus security number button.

The Security/Safety Department can provide informational and directional assistance, aid to stranded motorists, including jumpstarts and lockout service, security escorts across campus, crime prevention advice, and other general assistance to students and other members of the college community. The Security-Information Department also issues student body identification cards, and provides all information required by the Clery Act.

The Security/Safety Department works cooperatively with the Vancouver Police Department, the Clark County Sheriff's Office, and the Washington State Patrol in emergency, dangerous, or volatile situations and in criminal investigations.

## **Student Ambassadors and the Campus Visit Program**

**360-992-2078**

Student Ambassadors are current Clark College students who are here to assist you with the admissions and orientation process of starting at Clark. Student Ambassadors are also available to take you on a campus tour so you can begin to become familiar with campus. Taking a campus tour with a current student is a great way to hear the student perspective of being at Clark.

## **Student Discounts**

A list of merchants that offer discounts can be found at the Security/Information Office in Gaiser Hall.

## **Student ID Cards**

A student photo identification card is available to students for a minimal fee. The ID card provides free or discounted admission to events and may offer discounts at local businesses. ID cards may be purchased through the Clark College Bookstore or the Cashier's Office. Present receipt and valid picture identification to Security/Information Department to obtain ID. A student ID card is

required to gain access to the Fitness Center (either when access is for certain classes in which a student is currently enrolled, or when a student has purchased access to the Fitness Center through the Cashier's Office).

## **Tutoring Services**

Tutoring is designed to provide individualized attention that supports student learning and academic success. Our friendly, supportive, and encouraging tutors assist with most English, math, science, and general education classes offered at Clark College. Tutors will also help students develop skills and confidence to become a stronger, more independent learners. Students who come in for tutoring may also access computers, software, handouts, reference materials, and other resources.

Tutoring services are FREE to all registered Clark College students!

### **Student Learning Center 360-992-2750**

The Student Learning Center at TBG 228 supports ABE/GED and ESL students with tutoring and computer-based learning. One-on-one and small-group tutoring are available for adults learning English as a second language, as well as for native English speakers who want to improve basic reading, writing, and math skills. Available only for Transitional Studies students.

### **Language & Writing Center 360-992-2253**

Located in Hawkins Hall, room 102. Writing tutors are available to help students with all types of writing—essay assignments, journals, research papers, resumes, scholarship essays, and more. Assistance is available at all stages of the writing process, from generating ideas to reviewing completed drafts. Although tutors do not edit or proofread, they will help students determine what their tendencies are concerning grammar errors, explain general concepts, and offer strategies that can lead to more effective writing.

Language students can meet with a tutor for conversation practice and help with written and oral assignments in English, French, Japanese, Spanish, German, and ASL. All services are available on a drop-in or appointment basis.

### **STEM Help Center & Women In STEM 360-992-2694**

Located in Bauer Hall, room 101/102. Tutors provide assistance with most levels of math, chemistry, engineering, physics, biology, and other STEM subjects. Women in STEM is a separate space where women faculty and tutors provide assistance and promote the achievements of women in math and science. Help is available on a drop-in or appointment basis.

### **Accounting & Business Lab**

Located in Applied Arts 4, room 106. Tutoring assistance is available for all levels of accounting and in most business and economics courses. Help is available on a drop-in basis.

### **Tutoring Commons at Columbia Tech Center**

Located on the third floor at Columbia Tech Center in room 336. Tutoring assistance is available in a variety of subjects that varies by quarter. Help is available on a drop-in basis.

### **Online Tutoring**

Online assistance is available for currently enrolled Clark students. Using the Online Writing Lab, students can upload a draft of their paper and receive written feedback, usually within 24-72 hours.

Tutors are also available to assist via e-Chat (synchronous) or e-Questions (asynchronous) in various subjects, including physics, chemistry, biology, math, calculus, statistics, Spanish, accounting, and more.

To access online tutoring, go to the eTutoring website, click on the login icon, select "Western eTutoring Consortium," then "Clark College," and follow the instructions.

## **Veterans Resource Center**

**360-992-2073**

**[vetresources@clark.edu](mailto:vetresources@clark.edu)**

**[www.clark.edu/cc/veterans](http://www.clark.edu/cc/veterans)**

Located in Gaiser Hall room 216, the Veterans Resource Center houses GI Bill School certifying officials and friendly Vet Corps Navigators. It also provides computer stations, as well as advising and community space. Veterans are encouraged to visit the center to receive information and assistance regarding:

- Benefit Applications and Procedures
- GI Bill Certification
- Community Support
- Academic Coaching
- Transition Services
- Campus & Community Resources
- Campus-wide Training
- Veterans Club

Selected programs of study at Clark College are approved by the Workforce Training and Education Coordinating Board's State Approving Agency (WTECB/SAA) for enrollment of those eligible to receive benefits under Title 38 and Title 10, USC.

## **Special Instructional Programs and Locations**

### **Transitional Studies**

#### **Adult Basic Education**

**360-992-2741**

Adult Basic Education (ABE) classes are available for persons sixteen (16) years or older (16- to 18-year-olds must have a high school release). ABE offers classes in reading, writing, and math. There is a quarterly tuition charge. Classes are held on campus and other sites in the community.

#### **Student Learning Center**

**360-992-2750**

The Student Learning Center provides academic support for ABE/GED and ESL students. Refer to the Tutoring Services section for more information.

#### **English as a Second Language**

**360-992-2741**

Classes are for non-native speakers who want to communicate more effectively in English. Classes are held at various times during the day and evening. There is a quarterly tuition charge to students. Most classes are held on campus, but some are held at community sites.

### **GED Preparation** **360-992-2741**

GED preparation classes help prepare students to take all four (4) GED tests. Classes are available morning, afternoon and evening. (Evening classes are also available at other community sites.) Instruction includes timed practice testing. There is a quarterly tuition charge.

### **Pathways Center** **360-992-2747**

The Pathways Center supports Transitional Studies students as they transition to either professional/technical education or gainful employment. The center offers computer skills training; technology workshops; help with career and educational planning; and a staff of coaches for one-on-one support. Computers are also available for educational use to increase basic computer skills, basic academic skills and to gather career and educational information.

## **Department of Economic & Community Development**

### **360-992-2923**

The department of Economic & Community Development is the region's premier provider of customized training and community education programs, serving both the business community and individual residents of Southwest Washington. This department is dedicated to building community through community education, mature learning, and professional development, as well as participating in regional partnerships in support of economic development.

### **Community Education** **360-992-2939**

Community Education offers a wide variety of personal enrichment and lifelong learning opportunities designed to enhance quality of life and encourage the exploration of new interests. Non-credit courses, taught by talented instructors who are experts in their field, are offered for persons of all ages. New classes are offered quarterly, including topics such as world language, recreation and wellness, healthy living, home and gardening. The cooking school in the kitchen classroom at Columbia Tech Center offers demonstration and hands-on courses that educate about nutrition and world culture while building student skills. All Community Education courses reflect a commitment to building community and sustainability.

### **Corporate Education** **877-473-1600**

Clark College Corporate Education delivers high-quality, effective learning to public organizations and private businesses through customized training. The college is equipped with a large pool of talented, expert instructors and offers flexible, competitively priced training and consultation services.

Corporate Education staff works one-on-one with clients to identify specific needs and tailor training solutions accordingly. Classes can be delivered onsite at the workplace for optimal convenience and cost effectiveness. Or, if space or equipment is an issue, Corporate Education can provide training at on-campus classrooms and labs. The department also coordinates industry-wide consortia, seminars, certificate programs and grant-funded projects.



As Southwest Washington's premier training provider, Corporate Education delivers innovative learning experiences that produce exceptional results.

### **Customized Learning and Development** **360-992-2925**

Customized Learning and Development delivers high-quality workforce training that positively affects businesses' bottom lines and supports future success. Clark's expert team assesses business needs, analyzes human and technical resources available, and builds an individualized strategic plan to deliver the training and leadership needed to meet organizations' current objectives and future needs. Customized Learning and Development provides manufacturing, healthcare, businesses, nonprofit and government organizations with training, leadership development, and technical and business analysis tools, which directly affects the economy, employment opportunities and workforce development in Southwest Washington.

### **Mature Learning** **360-992-2213**

Mature Learning is an educational and cultural enrichment program for persons fifty-five (55) years of age and older. The program provides an opportunity to learn in a relaxed atmosphere with no tests, grades or homework. A wide variety of courses are offered including fitness, art, writing, computers, sciences, history, creative writing, health, humanities and others. Most classes meet two hours a week, either on the main Clark College campus, at Columbia Tech Center, at the Corporate Education location in downtown Vancouver, or at other locations in the community. Mature Learning also provides travel and excursions to places of cultural, scientific and natural interest.

### **Professional Development** **877-473-1600**

Professional Development offers workplace and technology classes, workshops and seminars that are designed for individuals to develop and strengthen their career in the current dynamic world of work. A wide range of topics--from accounting to health care, career building to graphic arts, small business to Adobe applications--are available to everyone. One-time learning sessions as well as certificate programs are also available. These courses, workshops and certificate programs support early and mid-career employees and provide experiences to increase knowledge, productivity and job satisfaction.

## **Workforce Education**

### **360-992-2780**

Workforce Education provides a variety of training and education services that assist individuals pursuing a career pathway starting from Basic Education through certificate- and degree-completion. Integrated learning for Basic Skills Students (IBEST) are available to help students gain basic skills while also learning the specific skills necessary for a professional career. Customized training opportunities sponsored under WorkFirst programming are available for individuals who are currently receiving Temporary Assistance for Needy Families (TANF) from the Washington State Department of Social and Health Services. Career and technical education, as well as customized training, is available in several career-focused areas, and new program options, based on strong employability factors, are introduced each year. Partnerships with the public and private sectors such as the Southwest Washington Workforce Development Council, WorkSource Center-Vancouver, and advisory committees composed of representatives from local

businesses, provide updated information that allow the college to offer training that is in demand and has wage and career growth potential. Apprenticeship programs provide tuition waivers for trainees participating in state-approved apprenticeship agreements.

# Degree and Certificate Requirements

## General Information

### Degrees & Certificates

Clark College awards six (6) degrees: the Associate in Arts degree, for completion of a program of study for transfer to a senior institution; the Associate in Science degree, for completion of a program of study in the sciences in preparation for transfer to a senior institution; the Associate in Fine Arts degree, for completion of a program in fine arts in preparation for transfer to a senior institution; the Associate in Applied Science degree for completion of a program of study in an occupational program; and the Associate in Applied Technology degree, for completion of a program of study in an occupational program; the Bachelor of Applied Science (BAS) in Dental Hygiene (DH) degree. BAS degrees require a minimum of one hundred eighty (180) credits and each associate degree requires a minimum of ninety (90) credits and a minimum Grade Point Average (GPA) of 2.00. Certificates of Proficiency are awarded upon completion of a minimum of forty-five (45) credits of specialized occupational training, including general education requirements and require a minimum GPA of 2.00. Certificates of Achievement are granted upon completion of a program of specialized occupational training of less than forty-five (45) credits and require a minimum GPA of 2.00. Individual departments offer certificates of completion with varying credit requirements.

The grades assigned in transferable courses by the sending institution shall not be altered by the receiving institution. Courses completed with a grade of 'D' or above shall normally be accepted in transfer (except at The Evergreen State College, where a minimum of 2.0 or 'C' is required for transfer). Nontraditional grading practices require special handling, depending on the nature and circumstances of the program from which and to which a student is transferring, but receiving institutions shall take steps to assure all students equitable treatment.

A student may earn more than one career-technical degree and /or certificate at Clark College, and a student may earn a combination of academic and career-technical degrees and/or certificates. A student can also earn a Direct Transfer Agreement degree and an additional MRP degree (for instance a student can earn a degree in both Business Administration - MRP and an Associate in Arts - Transfer).

### Academic Residency Requirements

In an effort to accommodate our mobile student population, Clark College has adopted a residency policy that recognizes the value of coursework completed from other institutions of higher learning.

To obtain a degree or certificate from Clark College, students are required to earn a minimum number of credits in residence at our institution. Clark College does allow students to transfer credits toward meeting degree or certificate program requirements. There is no restriction on the number of transfer credits allowed; however, students must meet the minimum in-residence credit at Clark College for their specific program.

Refer to the following information for specific requirements and restrictions for each type of program:

### Associate Degree

A minimum of thirty (30) credits, pre-college or college level must be completed at Clark College at any time to meet Academic Residency.

### **Certificate of Proficiency**

A minimum of fifteen (15) credits, pre-college or college level must be completed at Clark College at any time to meet Academic Residency.

### **Certificate of Achievement**

A minimum of ten (10) credits, pre-college or college level must be completed at Clark College at any time to meet Academic Residency.

Non-traditional credit, course waivers and credit earned through prior learning assessment may not be included within the minimum number of credits required.

## **Academic Residency Requirements for Veterans**

Clark College, in compliance with the Department of Defense (DOD) Voluntary Education Partnership Memorandum of Understanding (MOU) and Executive Order 13607 of April 27, 2012, limits academic residency requirements for active-duty servicemembers to no more than 25 percent of the degree program (22.5 credits); recognizes all credit course work offered by the institution as applicable in satisfying academic residency requirements; and allows servicemembers to satisfy academic residency requirements with courses taken from Clark College at any time during their program of study.

## **Academic Honors**

To be eligible for academic honors, students must have a minimum GPA of 3.40. Honors for the Associate in Arts degree and the Associate in Science-Transfer degree are based on the cumulative college-level GPA, while the Associate in Applied Science, Associate of Applied Technology and Certificate of Proficiency are based on the cumulative GPA. Students in the associate degree programs will earn the designation of “with honors” for a GPA of 3.40 to 3.89, and the designation of “with highest honors” for a GPA of 3.90 or higher. Certificates of Proficiency will be granted the designation of “with merit” for a GPA of 3.40 or higher (Certificates of Achievement are not eligible for honors designations). Those students participating in June ceremonies will receive recognition at the celebration based on their appropriate GPA on record at the end of winter quarter. If honor status changes once final grades are processed, adjustments will be made to the student record.

## **Distribution Coding**

The following codes may be included in some course descriptions and indicate the applicability of the course toward the general education requirements of Clark College degrees and certificates. Be sure to verify which courses have been approved to meet general education requirements for your particular degree or certificate program as Distribution Coding is not universally applied.

C	Communication Skills
CP	Computational Skills
GE	General Elective
HA	Humanities Academic (A list)

HB	Humanities Performance (B list)
HE	Health
HPE	Health & Physical Education
HR	Human Relations
NS	Natural Sciences
OC	Oral Communications
PE	Physical Education Activity
Q	Quantitative/Symbolic Reasoning
SE	Specified Elective
SS	Social Sciences

## Transfer Degrees

### Associate in Arts (AA)

### Associate in Arts – Major Related Program (MRP)

### Associate in Fine Arts (AFA)

### Associate in Science Transfer – Track 1 (AST 1)

### Associate in Science Transfer – Track 2 (AST 2)

### Associate in Science Transfer – Major Related Program (MRP)

### Associate in Applied Science – Transfer (AAS-T)

### Washington 45 – One Year Transfer Courses

## Associate in Arts (AA) Degree Intent

The Associate in Arts (AA) degree is designed for students planning to transfer to a four-year institution to pursue a bachelor's degree program. The degree, in most cases, meets the first two (2) years of general education requirements at the senior institution. There are exceptions; please check with the transfer institution for additional information. Most students transferring with the AA degree will be granted junior standing upon entry to the senior institution.

The standard Associate in Arts degree is also known as a Direct Transfer Agreement (DTA) Associate degree.

### AA – DTA Degree Options:

A student may not earn more than one (2) DTA degree at Clark College. Students are advised to carefully examine the differences in the degree requirements where there is more than one choice within a major field and be sure that their transfer intent is in line with the degree chosen. Please note that all AA – MRP listings above are Direct Transfer Agreements (DTA).

### AA – DTA

- General Transfer
- Addiction Counselor Education
- Dental Hygiene
- Elementary Education – Transfer to WSU Vancouver

- Nursing – Transfer to WSU Vancouver

## AA – MRP

- Biology
- Business Administration
- Math Education
- Pre-Nursing

## Transfer of Grades

The grades assigned in transferable courses by the sending institution shall not be altered by the receiving institution. They also are not used in calculating students' Clark GPA. Courses completed with a grade of 'D' or above shall normally be accepted in transfer (except at The Evergreen State College, where a minimum of 2.0 or 'C' is required for transfer). Nontraditional grading practices require special handling, depending on the nature and circumstances of the program from which and to which a student is transferring, but receiving institutions shall take steps to assure all students equitable treatment.

## General Requirements for All Associate in Arts Degrees

- Complete a minimum of ninety (90) college-level credits.
- Maintain a minimum cumulative college-level GPA of 2.00 or higher.
- Thirty (30) credits minimum must be completed at Clark College to meet Academic Residency.
- Submit a graduation application by the appropriate deadline.

## General Credit Restrictions

Credit by Department: Ten (10) credits maximum from any single department can be used to fulfill Humanities, Social Sciences and Natural Sciences distribution requirements.

World Language: Five (5) credits maximum in 100-level world language can be used to fulfill Humanities distribution requirements. Additional 100-level world language coursework can be used to meet Specified or General Elective requirements.

Debate Courses: Twelve (12) credits maximum in CMST 171, 172, 173, 271, 272, and 273 can apply toward the degree.

Physical Education Activity: Three (3) credits maximum in PE activity can apply toward the degree.

Other Applicable Credit Options:

- Advanced Placement (AP) and/or International Baccalaureate (IB): A maximum of sixty (60) credits from AP, IB or a combination of both, can be applied to a degree.
- College Level Examination Program (CLEP): Students may request up to fifteen (15) CLEP credits to be applied to a degree. Credits will be used to fulfill general elective requirements only.
- Course Challenge: Students may use credits earned from successful course challenges toward 25% of the degree or certificate. Credit by course challenge will meet academic residency requirements.
- Tech Prep/Direct Credit: Tech Prep/Direct Credit courses that are part of a professional program and fall into the restricted area in the DTA degree are limited to 15 credits. If Tech Prep/Direct Credit courses apply to a professional technical degree or certificate, there is no limit to the number of credits that can be applied.
- Cooperative Work Experience: No more than fifteen (15) credits may be applied to the associate

degree.

- Special Projects: No more than fifteen (15) credits in Special Projects will be allowed toward the Associate in Arts degree.
- Military Experience: Credits may earned by previous military experience. Please contact the Veterans Affairs Office at Clark College for further information. Credit awarded for military experience may be granted for up to 25% of the degree and/or certificate.

Pass/Fail Grading Option: Sixty (60) credits maximum in courses with Pass/Fail grading option can apply toward the degree, with the exception of the AA Nursing degree which exceeds this limit because of clinical requirements.

### **General Restrictions**

1. A course can apply toward only one (1) distribution requirement (i.e., Communication Skills, Quantitative Skills/Symbolic Reasoning Skills, Humanities, Social Sciences and Natural Sciences). The exception is for Oral Communications, which is a local degree requirement. When meeting the Oral Communications requirement, the same course can be applied to the degree requirement and to the distribution area.
2. Excess credits earned in distribution areas (i.e., Communication Skills, Quantitative Skills/Symbolic Reasoning Skills, Humanities, Social Sciences and Natural Sciences) can be used to fulfill the Elective requirements.
3. Credit by Challenge coursework will meet academic residency requirements.

## **Associate in Arts (AA) – General Transfer**

### **General Education Requirements**

Communication Skills [C] – 10 credits minimum

To fulfill the communications requirement for the AA general transfer degree, students must:

1. Take ENGL& 101 or PTWR 135 at five (5) credits;

AND EITHER:

- 2a. Take another five- (5) credit English composition course (ENGL& 102 or 235, or ENGL 109 or 110).

OR

- 2b. Take another three- (3) credit English composition course (ENGL 108, 109 or 110 (taken when three (3) credits) or ENGL 212/BUS 211); AND take a five- (5) credit communication studies course (CMST& 210, 220, or 230).

Quantitative Skills/Symbolic Reasoning Skills [Q] – 5 credits<sup>1</sup>

1. Five (5) credits of college level mathematics (a course with a Mathematics prefix numbered 100 or above<sup>2</sup>) that furnishes the quantitative skills/symbolic reasoning skills required in the commonly recognized educational transfer pathways toward a baccalaureate degree. Accepted courses in these pathways are: Precalculus or higher, Mathematics for Elementary Education<sup>3</sup>, Business Precalculus/Finite Mathematics, Statistics, and Math in Society; or

2. Five (5) credits of a symbolic logic course that focuses on (a) sentence logic with proofs and (b) predicate logic with quantifiers and proofs and/or Aristotelian logic with Venn Diagrams.

<sup>1</sup>For admission to the institution, the University of Washington requires completion of the course designated Algebra II (integrated Math III: Math 098) at either the high school or community college. However, UW recognizes the new QSR as fulfilling the DTA QSR requirement.

<sup>2</sup>To qualify for QSR, college level math and logic courses must require intermediate algebra course work (high school or college) with a grade of 2.0 or higher as a prerequisite.

<sup>3</sup>The University of Washington accepts Mathematics for Elementary Education for elective credit, but not as meeting its QSR requirement, since UW offers no degree pathway for which it is appropriate.

Health & Physical Education [HE, HPE, PE, PEDNC, PEMAR, PESPC] – 3 credits

Complete three (3) credits from either option one or option two:

Option One: Complete two (2) credits of Health from the list below AND one (1) credit of any college-level PE activity course:

- HLTH 100, 101, 103, 104, 108, 206, 207, 208, or 210
- PE activity

Option Two: Complete three (3) credits from one (1) of the courses listed below:

- HPE 258 or 266

Oral Communication [OC] – 5 credits

Clark students must complete a course in oral communication. Students may apply this course within the Humanities, Social Sciences (CMST& 230 only), or Communication Skills distribution area or count the course as a specified elective. At Clark the options are as follows:

- CMST&210, 220, or 230 (all 5 credits)

## **Distribution Requirements**

Humanities [HA, HB] – 15 credits

Select courses from at least two (2) subject areas for a minimum of fifteen (15) credits. You may include no more than 10 credits from any one subject area. A maximum of five (5) credits of “B” list coursework may be applied. A maximum of five (5) credits of 100-level world language can be applied.

Social Sciences [SS] – 15 credits

Select courses from at least three (3) subject areas for a minimum of fifteen (15) credits. You may include no more than ten (10) credits from any one subject area.

Natural Sciences [NS] – 15 credits



Select courses from at least two (2) subject areas for a minimum of fifteen (15) credits. You may include no more than ten (10) credits from one subject area. You must include at least one lab science.

### **Elective Requirements**

Complete a total of twenty-seven (27) credits from courses numbered 100 and above. The two areas of Electives are listed below. No more than 15 credits can be taken from the General Elective area.

Specified Electives [SE] – Approved courses that apply: [C, HA, HB, HE, HPE, NS, OC, Q, SE, SS] – 12 credits.

A maximum of two (2) credits in PE activity can apply toward this area. Courses coded as HPE count as one (1) credit of PE activity.

General Electives [GE] – 15 credits

Any additional courses of 100-level or higher may apply.

Note: Coursework in ESL or FLPC cannot apply to the AA degree program.

### **Distribution List for Associate in Arts Degree – General Transfer**

Note: Some distribution requirements may be met by major area courses. Please also note that this list is currently under review, check the catalog corrections page for updates.

Humanities [List A=HA, List B=HB] – 15 credits

Select courses from the list below. Select from at least two (2) subject areas for a minimum of fifteen (15) credits. You may include no more than ten (10) credits from any one subject area. A maximum of five (5) credits of “B” list coursework may be applied. A maximum of five (5) credits of 100-level world language can be applied.

Art (ART)

List A: 131, 151, 172, 220, 221, 222, 223, 225, 226, 250

List B: 103, 104, 105, 110, 115, 116, 117, 118, 140, 141, 142, 145, 146, 173, 174, 180, 181, 182, 189, 190, 191, 203, 204, 208, 257, 258, 259, 260, 261, 262, 270, 271, 273, 274, 278, 290, 295, 296, 297

Communication Studies (CMST/CMST&)

List A: CMST 216, 240; CMST& 102, 210, 220 or 230

List B: CMST171, 172, 173, 271, 272, 273

Drama (DRMA/DRMA&)

List A: DRMA& 101

List B: DRMA 140, 141, 142, 150, 152, 171, 172, 173, 240, 250, 271, 272, 273

## English (ENGL)

List A: ENGL 130, 131, 132, 133, 140, 143, 145, 150, 152, 156, 252, 254, 260, 261, 262, 264, 265, 266, 267, 268, 269, 270, 272

List B: ENGL 121, 125, 126, 127, 275, 276, 277, 290

## Humanities (HUM/HUM& – List A only)

HUM& 101; HUM 103, 105, 112, 152, 175, 180, 200, 201

## Journalism (JOUR)

List A: JOUR 101, 111

## Music (MUSC/MUSC&/MUSCA)

List A: MUSC 100, 116, 117, 118, 125, 127, 135; MUSC& 104, 128, 141, 142, 143, 231, 232, 233

List B: MUSC 101, 106, 110, 115, 121, 122, 123, 137, 138, 139, 150, 151, 152, 153, 154, 155, 170, 171, 172, 173, 174, 175, 176, 177, 178, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 193, 195, 196, 197, 201, 202, 210, 221, 222, 223, 239, 250, 251, 252, 253, 254, 255, 270, 271, 272, 273, 274, 275, 276, 277, 278, 280, 281, 282, 283, 284, 285, 287, 288, 289, 290, 295, 296, 297; MUSC& 121, 122, 123, 221, 222, 223; MUSCA 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286

## Philosophy (PHIL/PHIL& – List A only)

PHIL 215, 216, 217, 240, 250, 280, 290; PHIL& 101, 120

## Women's Studies (WS – List A only)

WS 101, 201, 210

## World Language (ASL&, CHIN&, FRCH/FRCH&, GERM&, JAPN&, SPAN/SPAN&)

List A: 121, 122, 123, 221, 222, 223 in ASL, FRCH, GERM, JAPN, SPAN; ASL 125; JAPN 171

List B: FRCH 141, SPAN 141

## Social Sciences [SS] – 15 credits

Select courses from at least three (3) subject areas for a minimum of fifteen (15) credits. You may include no more than ten (10) credits from any one subject area.

Addiction Counseling - ACED 101; HSSA& 101

Anthropology - ANTH& 204, 206, 215

Communication Studies - CMST& 230

Criminal Justice – CJ& 101, 105  
Economics - ECON 101, 110, 111, 112, 120; ECON& 201, 202  
Geography – GEOG& 100, 102, 200, 205, 207  
History – HIST 231, 251, 252; HIST& 126, 127, 128, 146, 147, 148, 215  
Humanities – HUM 175  
Political Science – POLS 111, 131, 141, 151, 152, 153, 231, 251, 252, 253; POLS& 203  
Psychology – PSYC 203; PSYC& 100, 200,  
Sociology – SOC 121, 131, 220; SOC& 101, 201  
Women’s Studies – WS 101, 201, 210, 220

#### Natural Sciences [NS] – 15 credits

Select courses from at least two (2) subject areas for a minimum of fifteen (15) credits. You may include no more than ten (10) credits from one subject area. You must include at least one lab science. Lab courses are denoted by the letter “L”.

1. Anthropology – ANTH& 215L, 245L
2. Astronomy – ASTR& 101L
3. Biology – BIOL& 100L, 160L, 221L, 222L, 223L, 251L, 252L, 253L, 260L; BIOL 101,105L, 139, 140, 141, 142, 143, 145, 146, 150L, 164, 165L, 167, 168L, 208L, 224L,
4. Chemistry – CHEM& 110L, 121L, 131L, 141, 142, 143, 151L, 152L, 153L, 241, 242, 243, 251L, 252L, 253L
5. Environmental Science – ENVS 109L, 211L, 218L, 221
6. Geology – GEOL& 101L, 103L, GEOL 102L, 218
7. Humanities – HUM 180
8. Math - MATH 135
9. Meteorology – METR 101L
10. Nutrition – NUTR 103
11. Oceanography – OCEA& 101L
12. Physical Science – PHSC 101L, 102L, 104L, 106, 110L
13. Physics – PHYS& 100, 101L, 124L, 125L, 126L, 134, 135, 136, 231L, 232L, 233L, 241, 242, 243

#### Specified Electives

All courses numbered 100 and above (except 199 and 290) in the departments listed below may be used to meet the Specified Elective portion of the degree (some departments have chosen specifically listed courses only or have excluded specific courses).

Accounting – ACCT& 201, 202, 203 only  
Addiction Counseling – ACED 101 only  
American Sign Language  
Anthropology  
Art  
Astronomy  
Biology  
Business – BUS& 101, 201, BUS 203, 204, 211 only  
Chemistry  
Chinese  
Communication Studies – excluding 280  
Computer Science & Engineering  
Computer Technology – CTEC 100, 120, 121 only  
Criminal Justice

Drama  
Early Childhood Education – ECED& 105, 120, and EDUC& 115 only  
Economics  
Education – EDUC& 201 only  
Engineering  
English  
Environmental Science  
Forensic Science  
French  
Geography  
Geology  
German  
Health – excluding HLTH 120, 121, 123  
Health & Physical Education –excluding HPE 220, 280, 290  
History  
Humanities  
Japanese  
Journalism – JOUR 101, 111 only  
Mathematics  
Meteorology  
Music  
Nutrition  
Oceanography  
Paralegal PRLE 212 only  
Philosophy  
Physical Education (2 credit maximum in activity courses for specified electives)  
Physical Science  
Physics  
Political Science  
Psychology  
Sociology  
Spanish  
Women’s Studies

## General Electives

Any additional courses of 100 level or higher may apply. Physical Education activity credits are limited to a maximum of three (3) credits regardless of distribution area in the DTA degree.

## **Associate in Arts – Major Related Programs (MRP)**

To help transfer students better prepare for their junior year, two-year and four-year institutions are working together to create transfer associate degrees outlining the appropriate courses in order for students to be well prepared to enter their chosen major upon transfer. The MRP degrees follow the Direct Transfer Agreement (DTA) format of the Associate in Arts degree.

The DTA/MRP pathway is applicable to students planning to prepare for the following majors at various universities in Washington. Clark College offers the following Associate in Arts – DTA/MRP in:

- Biology
- Business

- Math Education
- Pre-Nursing

The MRP degrees listed above have slightly different graduation requirements than other Clark transfer degrees because the curriculum was created via an articulation agreement between Washington two-year and four-year schools. Most notably, AA – MRP degrees do not share Clark’s requirement for HPE or Oral Communication (though some of these degrees do require a CMST class). Clark students are encouraged to take HPE or oral communication courses, where appropriate, in case their degree choice changes.

## **Associate in Arts – Option B (AAB)**

The Option B degree is designed for students who are certain of the specific four-year program to which they will transfer. Students can design a program to fulfill the senior institution’s general admission and program entry requirements. After completion of the program, the student will be awarded an Associate in Arts degree that fulfills the lower-division requirements for the department to which they are applying at the baccalaureate-granting institution. This degree is not a transferable DTA.

### **General Education Requirements**

- Complete a minimum of ninety (90) college-level credits as authorized for transfer by the four-year institution’s representative and/or the student’s faculty advisor.
- Maintain a minimum cumulative college-level GPA of 2.00 or higher.
- Thirty (30) credits minimum must be completed at Clark College to meet Academic Residency.
- Select courses that meet the senior institution’s general distribution requirements plus any special proficiency requirements for entrance. The student should be prepared to provide a copy of the senior institution’s current catalog to their Clark College advisor for assistance in program planning.
- Students must be aware that this degree program is NOT a program that adheres to the Direct Transfer Agreement. Students will be required to complete the senior institution’s general undergraduate degree requirements.
- Associate in Arts – Option B degree candidates must present to the Credential Evaluations Office, at least two (2) quarters prior to graduation, a copy of their Option B Plan that has been created with their advisor together with any supporting documentation.

### **AA – Option B Distribution Requirements**

Courses should be selected in order to fulfill the senior institution’s general education requirements (not Clark’s) as defined in the transfer institution’s catalog. Students need to meet the following requirements while fulfilling their Associate in Arts – Option B degree:

- Communication Skills: Five (5) credits
- Quantitative Skills/Symbolic Reasoning Skills: Five (5) credits
- Humanities: Ten (10) credits
- Social Sciences: Ten (10) credits
- Natural Sciences: Ten (10) credits, including one (1) laboratory science
- World language: World language proficiency is not required for every degree program.\*

\* Students should consult with their senior institution’s representative to confirm requirements. Clark College recommends that those students who did not fulfill world language proficiencies in high school take their world language while at Clark. Students must complete the 1st, 2nd and 3rd course sequence in a world language in order to fulfill world language requirements, where applicable. This means up to fifteen (15) credits of world language may need to be taken at Clark.

## Articulation Programs

Certain degree programs are offered at Clark College that have been set up in cooperation with four-year institutions. Program tracks that have been approved by Clark's Instructional Planning Team are eligible for Clark's Associate in Arts – Option B degree, even if they do not meet the core requirements. Intensive research, planning, and cooperation on the part of multiple institutions have gone into the development of these programs.

## Associate in Fine Arts (AFA)

### Degree Intent

This transfer preparation degree is designed for students planning to transfer to a senior institution to pursue a bachelor's degree program (BA or BFA) in fine arts. The degree programs focus on coursework specific to the intended major area of study at the senior institution. While coursework in general education, social sciences, and natural sciences is included, additional coursework in these areas will be required at the senior institution. It is important for students to meet with program-specific advisors to determine an appropriate educational plan. The AFA does NOT adhere to the direct-transfer agreement degree, so students need to be especially aware of requirements of the receiving senior institution.

Currently, Clark College offers two (2) Associate in Fine Arts degrees: one in Graphic Design and one in Studio Art. Please contact the Art department for advising information.

### General Requirements

- Complete a minimum of ninety (90) college-level credits in specified curriculum.
- Maintain a minimum cumulative college-level GPA of 2.00 or higher.
- Thirty (30) credits minimum must be completed at Clark College to meet Academic Residency.
- Submit a graduation application by the appropriate deadline.

### General Credit Restrictions

Credit by Department: Ten (10) credits maximum from any single department can be used to fulfill the Humanities, Natural Sciences, and Social Sciences distribution requirement.

World Language: Five (5) credits maximum in 100-level world language can be used to fulfill the Humanities distribution requirements. Additional 100-level world language coursework can be used to meet other electives or major requirements.

Debate: Twelve (12) credits maximum in CMST 171, 172, 173, 271, 272, and 273 can apply toward the degree.

Physical Education Activity: Three (3) credits maximum in PE activity can apply toward the degree.

Other Applicable Credit Options:

- Advanced Placement (AP) and/or International Baccalaureate (IB): A maximum of sixty (60) credits from AP, IB or a combination of both, can be applied to a degree.
- College Level Examination Program (CLEP): Students may request up to fifteen (15) CLEP credits to be applied to a degree. Credits will be used to fulfill general elective requirements only.
- Course Challenge: Students may use credits earned from successful course challenges toward 25% of the degree or certificate. Credit by course challenge will meet academic residency requirements.
- Tech Prep/Direct Credit: Tech Prep/Direct Credit courses that are part of a professional

program and fall into the restricted area in the DTA degree are limited to 15 credits. If Tech Prep/Direct Credit courses apply to a professional technical degree or certificate, there is no limit to the number of credits that can be applied.

- Cooperative Work Experience: No more than fifteen (15) credits may be applied to the associate degree.
- Special Projects: No more than fifteen (15) credits in Special Projects will be allowed toward the Associate in Arts degree.
- Military Experience: Credits may be earned by previous military experience. Please contact the Credentials Department at Clark College for further information. Credit awarded for military experience may be granted for up to 25% of the degree and/or certificate.

Pass/Fail Grading Option: Sixty (60) credits maximum in courses with Pass/Fail grading option.

## **General Restrictions**

A course can apply toward only one (1) distribution requirement (i.e., Communication Skills, Quantitative Skills/Symbolic Reasoning Skills, Humanities, Social Sciences, and Natural Sciences).

## **General Education Requirements**

Communication Skills [C] – 5 credits

- Complete ENGL& 101 or equivalents as determined by the AFA program department

Note: Students who have completed English 101 or its equivalent at less than five (5) credits may complete the communications requirement by completing any of the courses (or their appropriate transfer equivalents) in written or oral communications as defined within the Associate of Arts distribution requirements.

Quantitative Skills/Symbolic Reasoning Skills [Q] – 5 credits

- Complete a college-level course in quantitative skills/symbolic reasoning skills, computer science or technology, or symbolic logic as determined by the AFA program department.

Health & Physical Education [HE, HPE, PE, PEDNC, PEMAR, PESPC] – 3 credits

Complete three (3) credits from either option one or option two:

Option One: Complete two (2) credits of Health from the list below AND one (1) credit of any college-level

PE activity course:

- HLTH 100, 101, 103, 104, 108, 206, 207, 208, or 210
- PE activity

Option Two: Complete three (3) credits from one (1) of the courses listed below:

- HPE 258 or 266

Humanities [HA] – 5 credits

Select five (5) credits of coursework from the Humanities AA distribution list. Courses must be List A courses.

The course completed cannot be part of the AFA major requirements.

### Social Sciences [SS] – 5 credits

Select five (5) credits of coursework from the Social Sciences AA distribution list. The course completed cannot be part of the AFA major requirements.

### Natural Sciences [NS] – 5 credits

Select five (5) credits of coursework from the Natural Sciences AA distribution list. The course completed must include a lab, which are denoted by the letter "L." The course completed cannot be part of the AFA major requirements.

The balance of the program shall be defined by the major department and should be a minimum of 90 credits.

## **Associate in Science – Transfer**

### **Degree Intent**

The transfer preparation degrees are designed for students planning to transfer to a senior institution to pursue a bachelor's degree program in science and/or engineering. The degree programs focus on coursework specific to the intended major area of study at the senior institution. While coursework in general education, humanities, and Social Sciences is included, additional coursework in these areas will be required at the senior institution. It is important for students to meet with program-specific advisors to determine an appropriate educational plan.

### **General Requirements**

- Complete a minimum of ninety (90) college-level credits in specified curriculum.
- Maintain a minimum cumulative college-level GPA of 2.00 or higher.
- Thirty (30) credits minimum must be completed at Clark College to meet Academic Residency.

### **General Credit Restrictions**

Credit by Department: Ten (10) credits maximum from any single department can be used to fulfill the Humanities and Social Sciences distribution requirement.

World Language: Five (5) credits maximum in 100-level world language can be used to fulfill the Humanities distribution requirements.

Debate: Twelve (12) credits maximum in CMST 171, 172, 173, 271, 272, and 273 can apply toward the degree.

Physical Education Activity: Three (3) credits maximum in PE activity can apply toward the degree.

### **Other Applicable Credit Options:**

- Advanced Placement (AP) and/or International Baccalaureate (IB): A maximum of sixty (60) credits from AP, IB or a combination of both, can be applied to a degree.
- College Level Examination Program (CLEP): Students may request up to fifteen (15) CLEP credits to be applied to a degree. Credits will be used to fulfill other elective requirements only.
- Course Challenge: Students may use credits earned from successful course challenges toward 25% of the degree or certificate. Credit by course challenge will meet academic residency



requirements.

- Tech Prep/Direct Credit: Tech Prep/Direct Credit courses that are part of a professional program and fall into the restricted area in the DTA degree are limited to 15 credits. If Tech Prep/Direct Credit courses apply to a professional technical degree or certificate, there is no limit to the number of credits that can be applied.
- Cooperative Work Experience: No more than fifteen (15) credits may be applied to the associate degree.
- Special Projects: No more than fifteen (15) credits in Special Projects will be allowed toward the Associate in Arts degree.
- Military Experience: Credits may earned by previous military experience. Please contact the Veterans Affairs Office at Clark College for further information. Credit awarded for military experience may be granted for up to 25% of the degree and/or certificate.

Pass/Fail Grading Option: Sixty (60) credits maximum in courses with Pass/Fail grading option.

### **General Restrictions**

A course can apply toward only one (1) distribution requirement (i.e., Communication Skills, Quantitative Skills/Symbolic Reasoning Skills, Humanities, Social Sciences and Natural Sciences). Credit by Challenge coursework will meet Academic Residency requirements.

## **Associate in Science – Track 1 (AST1)**

Associate in Science – Track 1 is for students intending to transfer into programs in:

AST1 - Concentration Options:

- Biological Sciences
- Chemistry
- Earth Science
- Environmental/Resources Sciences
- Geology

### **General Education Requirements**

Communication Skills [C] – 5 credits

- Complete ENGL& 101.

Quantitative Skills/Symbolic Reasoning Skills – 10 credits

- Complete MATH&151 and 152, or Math courses that have MATH&152 as a prerequisite.

Note: MATH& 151 (Calculus I) requires the successful completion of both MATH 103 (trigonometry) and MATH 111 (college algebra), or recommending score on an approved placement test prior to registration. These prerequisite courses can be used to fulfill elective requirements within the Associate in Science (AS) degree program.

Health & Physical Education [HE, HPE, PE, PEDNC, PEMAR, PESPC] – 3 credits

Complete three (3) credits from either Option One or Option Two:

Option One: Complete two (2) credits of Health from the list below AND one (1) credit of any college-level PE activity course:

- HLTH 100, 101, 103, 104, 108, 206, 207, 208, 210
- PE activity

Option Two: Complete three (3) credits from one (1) of the courses listed below:

- HPE 258 or 266

Humanities & Social Sciences [HA, HB, SS] – 15 credits

Select five (5) credits of coursework from Humanities, five (5) credits of coursework from Social Sciences, and an additional five (5) credits of coursework from either area for a minimum of fifteen (15) credits. Humanities and Social Sciences courses must be selected from the Associate of Arts Distribution List. A maximum of five (5) credits of Humanities “B” list coursework may be applied.

Pre-Major Sequence – 45 to 52 credits

All students planning to earn the Associate in Science – Track 1 degree are required to complete the following course sequences. The sequences taken are dependent on the major of the student. Sequences should be started and finished at the same institution to ensure proper transfer. Students MUST consult with faculty or advising staff to pick the correct sequences.

1. Chemistry sequence (required of all) 16 credits

- CHEM& 141, 142, 143, 151L, 152L, 153L (16 credits)

2. Additional mathematics courses (required of all—be sure to consult advisor to identify correct path)—  
5 or 6 credits

- MATH& 153 or MATH 203 AND 204

3. One of the following sequence paths depending on the chosen major:

A. Biological Science

- BIOL& 221L, 222L, and 223L
- Students should then consult with the baccalaureate institution to see which of these sequences should be taken: CHEM&241, 242, 243, 251L, 252L, and 253L; OR PHYS& 124L, 125L, 126L, 134, 135, and 136.

B. Chemistry and Geology Majors

- PHYS& 231L, 232L, 233L, 241, 242, and 243.

C. Environmental/Resource Sciences & Earth Science Majors

Complete 15 credits in one of the following three-course sequences (consult the baccalaureate institution for best information):

- BIOL& 221L, 222L, and 223L, or
- PHYS& 124L, 125L, 126L, 134, 135, and 136, or
- PHYS& 231L, 232L, 233L, 241, 242, and 243.

#### 4. Science Electives (10 to 15 credits)

Complete an additional ten (10) to fifteen (15) credits (preferably in a two- or three-quarter sequence) in courses from the following list:

- Biology – BIOL 208L, 224L; BIOL& 221L, 222L, 223L, 251L, 252L, 253L, 260L
- Chemistry – CHEM& 241L, 242L, 243L, 251L, 252L, 253L
- Computer Science Engineering – CSE 101
- Engineering – ENGR 101, 102, 103
- Environmental Science – ENVS 211, 218L, 221
- Geology – GEOL102L, 218L; GEOL& 101, 103
- Math – MATH 203, 204, 205, 215, 221; MATH& 153, 254
- Physics – PHYS& 124L, 125L, 126L, 134, 135, 136, 231L, 232L, 233L, 241, 242, 243.

Other Electives – 5 to 12 credits

Sufficient additional college-level credits so that total credits earned is at least 90 quarter credits. These remaining courses may include prerequisites for major courses, additional major coursework, or specific general education or other university requirements, as approved by the advisor.

### **Associate in Science – Track 2 (AST2)**

Associate in Science – Track 2 is for students intending to transfer into programs in:

AST - Concentration Options:

- Atmospheric Science
- Computer Science
- Engineering
- Physics

AST2 – MRP

- Bioengineering and Chemical Engineering
- Computer and Electrical Engineering
- Mechanical/Civil/Aeronautical/Industrial/Materials Science Engineering

### **General Education Requirements**

Communication Skills [C] – 5 credits

- Complete ENGL& 101.

Quantitative Skills/Symbolic Reasoning Skills [Q] – 10 credits

- Complete MATH& 151 and 152, or Math courses that have MATH&152 as a prerequisite.

Note: MATH& 151 (Calculus I) requires the successful completion of both MATH 103 (trigonometry) and MATH 111 (college algebra), or recommending score on an approved placement test prior to registration. These prerequisite courses can be used to fulfill elective requirements within the Associate in Science (AS) degree program.

Health & Physical Education [HE, HPE, PE, PEDNC, PEMAR, PESPC] – 3 credits

Complete three (3) credits from either Option One or Option Two:

Option One: Complete two (2) credits of Health from the list below AND one (1) credit of any college-level PE activity course:

- HLTH 100, 101, 103, 104, 206, 207, 208, or 210
- PE activity

Option Two: Complete three (3) credits from one (1) of the courses listed below:

- HPE 258 or 266

Humanities & Social Sciences [HA, HB, SS] – 15 credits

Select five (5) credits of coursework from Humanities, five (5) credits of coursework from Social Sciences, and an additional five (5) credits of coursework from either area for a minimum of fifteen (15) credits. Humanities and Social Sciences courses must be selected from the Associate of Arts Distribution List. A maximum of five (5) credits of Humanities “B” list coursework may be applied.

Pre-Major Sequence – 25 credits

All students planning to earn the Associate in Science – Track 2 degree are required to complete the following course sequences. Please note that there are different sequences for Engineering and Non-engineering majors. The sequences taken are dependent on the major of the student. Sequences should be started and finished at the same institution to ensure proper transfer. Students MUST consult with faculty or advising staff to pick the correct sequences.

Engineering Major

1. Calculus-based Physics sequence – 15 credits

- PHYS& 231L, 232L, 233L, 241, 242, 243

2. Chemistry with Lab

- CHEM& 141, 151

3. Additional mathematics courses (required of all—be sure to consult advisor to identify correct path) —  
5 or 6 credits

- MATH& 153 or MATH 203 AND 204

Non-engineering Major

1. One of the Physics sequences — Consult with the baccalaureate institution to see which sequence is required — 15 credits

- PHYS& 124L, 125L, 126L, 134, 135, 136, 231L, 232L, 233L, 241, 242, 243.

2. Chemistry with Lab

- CHEM& 141, 151

3. Additional mathematics courses (required of all—be sure to consult advisor to identify correct path)—

5 or 6 credits

- MATH& 153 or MATH 203 AND 204

Elective Requirements – 32 credits

Students are again advised to consult with an advisor to ensure that the courses selected are the best fit for their major and transfer intent. Sequences should be started and finished at the same institution.

Engineering Major

Choose from the courses listed below:

- CHEM& 142, 143, 152L, 153L, 241, 242, 243, 251L, 252L, 253L
- CSE 101, 120, 121, 215, 222, 223, 224, 290
- CS& 131, 141
- ENGR& 104, 215, 224, 225
- ENGR 101, 107, 109 113, 114, 115, 120, 121, 150, 204, 214, 221, 239, 240, 250, 252, 253, 270, 280
- MATH& 254
- MATH 215, 221

Non-engineering Major

The remaining credits should be planned with the help of an advisor based on the requirements of the specific discipline at the baccalaureate institution the student selects to attend. Students can choose from the following list:

- BIOL& 100L, 221L, 222L, 223L, 251L, 252L, 253L, 260L
- BIOL 101L, 164, 165L, 167, 168L, 208L, 224L
- CHEM& 142, 143, 152L, 153L, 241, 242, 243, 251L, 252L, 253L
- CSE 120, 121, 215, 222, 223, 224, 290
- CS& 131, 141
- ENGR& 104, 215, 224, 225
- ENGR 101, 107, 109 113, 114, 115, 120, 121, 150, 204, 214, 221, 239, 240, 250, 252, 253, 270, 280
- ENVS 109L, 211L, 218L, 221L
- MATH& 153, 254
- MATH 203, 204, 215, 221
- PHYS& 231L, 232L, 233L, 241, 242, 243
- The pre-calculus courses (MATH 103 and 111) might also be used as electives if these courses had to be taken in preparation for the calculus sequence.

## **Associate in Applied Science – Transfer Degree (AAS-T)**

The Associate in Applied Science – Transfer degree (AAS-T) is designed to build upon the technical courses required for job preparation but also includes a college-level General-Education component, common in structure for all such degrees. In general, technical degree programs are not designed for transfer to other colleges or universities. However, several four-year colleges and universities have specific bachelor's degree programs that accept AAS-T degrees. Clark College

currently has one AAS-T degree in Early Childhood Education (see the Early Childhood Education program description in this catalog for specific program requirements).

Students seeking to transfer into degree programs other than those specifically designed for the AAS-T are urged to consider the DTA or AS-T in preparation for transfer. Majors outside the specifically designed degrees listed above likely will accept very few of the credits in the AAS-T degree (English composition, college-level math, and other general education courses should transfer).

## **“Washington 45” – List of One Year Transfer Courses**

The list of courses in Washington 45 does not replace the Direct Transfer Agreement, Associate of Science Tracks I and II or any Major Related Program agreement, nor will it guarantee admission to a four-year institution.

A student who completes courses selected from within the general education categories listed below at a public community, technical, four-year college or university in Washington State will be able to transfer and apply a maximum of 45 quarter credits toward general education requirement(s) at any other public and most private higher education institutions in the state.<sup>1</sup>

For transfer purposes, a student must have a minimum grade of C or better (2.0 or above) in each course completed from this list.

Students who transfer Washington 45 courses must still meet a receiving institution’s admission requirements and eventually satisfy all their general education requirements and their degree requirements in major, minor, and professional programs.

“First Year Transfer List” of general education courses

- Communications (5 credits) – ENGL& 101, ENGL& 102
- Quantitative and Symbolic Reasoning (5 credits) – MATH& 107, MATH& 148 or MATH& 151
- Humanities (10 credits in two different subject areas or disciplines<sup>2</sup>) – PHIL& 101, MUSC& 105, DRMA& 101, ENGL& 111, or HUM& 101
- For colleges that use History as a Humanities HIST& 116, HIST& 117, HIST& 118, HIST& 146, HIST& 147, HIST& 148
- Social Science (10 credits in two different subject areas or disciplines) – PSYC& 100, SOC& 101, POLS& 101, POLS& 202
- For colleges that use History as a Social Science: HIST& 116, HIST& 117, HIST& 118, HIST& 146, HIST& 147, HIST& 148
- Natural Sciences (10 credits in two different subject areas or disciplines) – BIOL& 100,
- BIOL& 160 with lab, ASTR& 100, ASTR& 101 with lab, CHEM& 105, CHEM& 110 with lab, CHEM& 121 with lab, CHEM& 161, CHEM& 162, ENV&S 100, ENV&S 101, PHYS& 114, GEOL& 101 with lab.
- Additional 5 credits in a different discipline can be taken from any category listed above.

NOTE: Although these courses are listed under categories, the actual course may satisfy a different general education category at a receiving institution.

<sup>1</sup>Many private non-profit colleges and universities have distinct general education requirements. Students should check with institution(s) they plan to attend regarding application of transfer credits that will meet general education requirements.

<sup>2</sup>Disciplines are sometimes called “subjects” or “subject matter areas” and designated by a prefix (i.e., PHIL for Philosophy and POLS for Political Science).

## Major Related Programs (MRPs)

**Bioengineering and Chemical Pre-Engineering Associate of Science Track 2 MRP**

**Biology DTA/MRP**

**Business DTA/MRP**

**Computer and Electrical Pre-Engineering Associate of Science Track 2 MRP**

**Math Education DTA/MRP**

**Mechanical/Civil/Aeronautical/Industrial/Materials Science pre-Engineering (Other Engineering) Associate of Science Track 2 MRP**

**Pre-Nursing DTA/MRP**

## Bioengineering and Chemical Pre-Engineering Associate of Science Track 2 MRP

The following is a degree program designed by a consortium of two-year and four-year colleges in Washington. Students should be aware that baccalaureate institutions may have slightly different requirements for these degrees, and students should consult the transfer institution for exact questions.

Students should complete the entirety of any science sequence at the same school for best transferability. These degrees are not DTA degrees, and there are some general education requirements that students will need to finish upon transfer.

Though this degree does not require such, Clark College students should know that the standard Clark AST degree path has this difference from the Major Related Program (MRP) defined below:

- Clark requires 3 credits of Health-Physical Education coursework.

Students must also meet the residency requirements as established by Clark. While Clark College has approved offering the degree below, Clark students should keep these requirements in mind should their transfer pathways change.

Students completing this Associate of Science will receive the same priority consideration for admission to the baccalaureate institution as they would for completing the direct transfer associate degree and will be given junior status by the receiving institution.

It is critical that you work with an Engineering faculty advisor to ensure your program will give you the maximum benefit when you transfer.

### A. Basic Requirements

Generic Requirements: 1. Communications Skills (5 credits)

MRP Requirements: 5 quarter credits of English composition

Clark College equivalents: ENGL&101 (5 cr.)

Generic Requirements: 2. Mathematics (10 credits)

Two courses at or above introductory calculus level. Third quarter calculus or approved statistics course: 5 quarter credits chosen with the help of an advisor based on the requirements of the specific discipline at the baccalaureate institution the student plans to attend.

MRP Requirements: Calculus I, II, III – 15 credits  
Differential Equations – 5 credits

Clark College equivalents: MATH&151 (5 cr.)  
MATH&152 (5 cr.)  
MATH&153 (5 cr.)  
MATH 221 (5 cr.)

Notes: Clark requires concurrent enrollment in or completion of MATH&254 when taking MATH221. MATH103 and MATH111 are required prerequisites for MATH&151 that may be needed if calculus placement is not met via COMPASS.

Generic Requirements: 3. Physics (15 credits)  
Calculus-based or non-calculus based sequence including laboratory. Students should be advised that some baccalaureate programs require physics with calculus.

MRP Requirements: Engineering Physics I, II, III + labs – 15-18 credits

Clark College equivalents: PHYS&221 (5 cr.)  
PHYS&222 (5 cr.)  
PHYS&223 (5 cr.)

Notes: Clark requires concurrent enrollment in PHYS094, 095, and 096.

Generic Requirements: 4. Chemistry with Laboratory (5 credits)

MRP Requirements: General Chemistry I, II, III + labs – 15-18 credits  
Organic Chemistry I + lab – 4-6 credits  
Organic Chemistry II + lab OR Biology for Science Majors + lab

Clark College equivalents: CHEM&141, 151 (5 cr.)  
CHEM&142, 152 (5 cr.)  
CHEM&143, 153 (6 cr.)  
CHEM&241, 251 (5 cr.)  
CHEM&242, 252 (5 cr.)  
OR BIOL&221 (5 cr.)

## **B. Distribution Requirements**

Generic Requirements: 1. Humanities/Fine Arts/English and Social Sciences (15 credits)

MRP Requirements: Minimum 15 quarter credits:  
Minimum 5 credits in Humanities minimum 5 credits in Social Science, plus an additional 5 credits in either Humanities or Social Science for a total of 15 credits.

Clark College equivalents: A course in Economics is recommended (ECON&201 or 202).  
PHIL&106 is strongly recommended as the Humanities course.

Notes: Courses taken must come from the current ICRC distribution list in order to count as General Education or General University Requirements (GER's/GUR's) at the receiving institution. Additional general educational requirements, cultural diversity requirements, and foreign language requirements, as required by the receiving institution, must be met prior to the completion of a baccalaureate degree.



## C. Electives

Generic Requirements: The remaining quarter credits should be planned with the help of an advisor based on the requirements of the specific discipline at the baccalaureate institution the student selects to attend.

For Engineering disciplines, these credits should include a design component consistent with ABET accreditation standards, as approved by the advisor.

MRP Requirements: Engineering (14-15 credits)

Select 3 electives as appropriate for intended major and intended baccalaureate institution:

- Computer Programming – 4-5 credits
- Linear Algebra
- Calculus IV (Advanced or Multi-variable Calculus)
- Technical Writing
- Electrical Circuits
- Statics
- Thermodynamics
- Chemical Process, Principles and Calculations
- Biology for Science Majors I + labs
- Biology for Science Majors II + labs
- Organic Chemistry 2 + labs

Clark College equivalents: Required at Clark: MATH&254 (5 cr.) – Calculus IV Other electives as advised dependent on transfer institution.

Total credits: 90-103 credits

## Biology DTA/MRP

This pathway is applicable to students planning to prepare for upper-division bachelor's degree majors in Biology. Many students transfer to baccalaureate institutions after completing the Associate Degree Direct Transfer Agreement (DTA); this pathway does not alter that agreement or the possibility that students may continue to follow this path. This Biology MRP streamlines and facilitates preparation for upper-division coursework in Biology across the state.

This document represents an agreement between the following baccalaureate institutions offering bachelor's degrees in Biology or a related field and the community and technical college system. Baccalaureate institutions party to this agreement include: Central Washington University; Eastern Washington University; The Evergreen State College; University of Washington Seattle; Washington State University Pullman; Western Washington University; Saint Martin's University; Seattle University; and Whitworth University.

Where the degree below allows for choice in courses, students are urged to contact potential transfer institutions to ensure that the courses chosen are best for the pathway.

Though this degree does not require such, Clark College students should know that the standard Clark AA degree path has these differences from the MRP defined below:

- a. Clark requires 3 credits of Health-Physical Education coursework, and
- b. As of Fall 2011, Clark requires a course in Oral Communication, and
- c. Clark's Social Science distribution requirement stipulates that students take courses from at

least three different departments.

Students must also meet the residency requirements as established by Clark. While Clark College has approved offering the degree below, Clark students should keep these requirements in mind should their transfer pathways change.

Students are responsible for researching and preparing for specific major requirements of baccalaureate institutions as early as possible prior to transferring.

### **A. Basic Requirements**

Generic DTA Requirements: 1. Communications Skills (10 credits)

MRP Requirements: 10 quarter credits of English composition

Clark College equivalents:

ENGL&101 (5 cr.)

ENGL&102 (5 cr.)

Notes: May be individualized based on baccalaureate college of choice.

Generic DTA Requirements: 2. Quantitative/Symbolic Reasoning Requirement (5 credits)  
Intermediate algebra proficiency is required.

MRP Requirements: 5 quarter credits of mathematics—Calculus I

Clark College equivalents: MATH&151 (5 cr.)

Clark College equivalents: Statistics (a course that includes descriptive and inferential statistics) may substitute for Calculus I at some institutions; students are encouraged to check with the transfer institution early in their decision process to confirm requirements. Intermediate Algebra proficiency may be demonstrated by successful completion of a Calculus and/or Statistics course for which Intermediate Algebra is a prerequisite.

### **B. Distribution Requirements**

Generic DTA Requirements: 1 Humanities (15 credits)

MRP Requirements: 15 quarter credits of Humanities

Consistent with the requirements in all DTA degrees - no more than 10 credits per discipline area, 5 credits maximum in world languages or ASL. No more than 5 credits of performance/skills classes are allowed.

Clark College equivalents: 15 quarter credits of Humanities as defined in the Clark College catalog.

Notes: In order to better prepare for successful transfer, students are encouraged to consult with the institution(s) to which they wish to transfer regarding the humanities courses that best support or may be required as prerequisites to their Biology curriculum.

Generic DTA Requirements: 2. Social Sciences (15 credits)

MRP Requirements: 15 quarter credits of Social Sciences

Clark College equivalents: 15 quarter credits of Social Sciences as defined in the Clark College catalog.

Notes: In order to better prepare for successful transfer, students are encouraged to consult with the institution(s) to which they wish to transfer regarding the social science courses that best support or may be required as prerequisites to their Biology curriculum.

Generic DTA Requirements: 3. Natural Sciences (minimum of 15 credits)

MRP Requirements: 30 quarter credits, including:

- 15 credits general biology (majors level)
- 15 credits general chemistry (majors level)

Clark College equivalents: 31 quarter credits as follows:

BIOL&221 (5 cr.)

BIOL&222 (5 cr.)

BIOL&223 (5 cr.)

CHEM&141 (4 cr.)

CHEM&142 (4 cr.)

CHEM&143 (4 cr.)

CHEM&151 (1 cr.)

CHEM&152 (1 cr.)

CHEM&153 (2 cr.)

Notes: A full year sequence at a single college is the best preparation for the baccalaureate biology degree.

## **C. Electives**

Generic DTA Requirements: Elective credits

MRP Requirements: 15 additional quarter credits

Clark College equivalents: 14 additional quarter credits (note: Clark's chemistry sequence has 16 credits)

Notes: Electives allow students to include additional courses to prepare for the biology major based on college selection. Examples include a full year sequence of organic chemistry for majors; a full year sequence of physics for science majors; or further math at the pre-calculus level or above or statistics. Students should check with the transfer institution prior to taking any further biology courses beyond the one-year sequence. Some colleges require all continuing biology courses be taken at the 300 level.

## **Business DTA/MRP**

This pathway is applicable to students planning to prepare for various business majors at universities in Washington<sup>1</sup>. Effective July 1, 2012, this agreement cancels and supersedes the existing statewide Business DTA agreement dated Summer 2003 and revised April 2006. Prior to July 1, 2012, parties to the 2006 and 2003 Business DTA MRP agree to continue to honor that agreement until July 1, 2014. This agreement shall be subject to review and renewal by all parties not later than September 2016.

This document represents the business DTA/MRP agreement that meets all requirements of Washington's Direct Transfer Agreement, between the baccalaureate institutions offering a Bachelor of Science or Bachelor of Arts in business administration including accounting, management, and management information systems and the community and technical college system. Baccalaureate institutions party to this agreement are Central Washington University, Eastern Washington University, University of Washington (all campuses), Washington State University (all campuses), Western Washington University, Gonzaga University, Heritage University, Pacific Lutheran University, Saint Martin's University, Seattle Pacific University, Seattle University, Walla Walla University, and Whitworth University.

Though this degree does not require such, Clark College students should know that the standard Clark AA degree path has these differences from the MRP defined below:

- a. Clark requires 3 credits of Health-Physical Education coursework,
- b. As of Fall 2011, Clark requires a course in Oral Communication, and
- c. Clark's Social Science distribution requirement stipulates that students take courses from at least three different departments.

Students must also meet the residency requirements as established by Clark. While Clark College has approved offering the degree below, Clark students should keep these requirements in mind should their transfer pathways change.

1 This DTA/MRP is not intended for Community and Technical College students pursuing a terminal professional/technical degree in Business.

## **A. Basic Requirements**

Generic DTA Requirements: 1. Communications Skills (10 credits)

MRP Requirements: 10 quarter credits of English composition

Clark College equivalents:

ENGL&101 (5 cr.)

ENGL&102 (5 cr.) or ENGL&235 (5 cr.)

Notes: ENGL&102 is REQUIRED at Eastern Washington University.

Generic DTA Requirements: 2. Quantitative/Symbolic Reasoning Requirement (5 credits)

Intermediate algebra proficiency is required

MRP Requirements: 10 credits total

Must include 5 credits of business calculus, calculus I or a higher-level math that includes calculus as a prerequisite.

May include finite math or pre-calculus prerequisites for calculus or other courses to prepare for business calculus.

Clark College equivalents:

Course 1: MATH&148, 151, 152, 153, 215, 221, or 254 (5 cr.)

Course 2: MATH103 or 105; MATH&111, 152, 153, 215, 221, or 254 (5 cr.)

## **B. Distribution Requirements**

Generic DTA Requirements: 1. Humanities (15 credits)

MRP Requirements: 15 quarter credits of Humanities

Consistent with the requirements in all DTA degrees – no more than 10 credits per discipline area, 5 credits maximum in world languages or ASL. No more than 5 credits of performance/skills classes are allowed.

Clark College equivalents: 15 quarter credits of Humanities as defined in the Clark College catalog. CMST&220 is strongly recommended.

Notes: Students intending to pursue the international business major should consult their potential transfer institutions regarding the level of world language required for admission to the major. 5 credits in world languages may apply to the Humanities requirement.

WSUV Business transfer students are advised to complete either CMST&220 or CMST&230.

Generic DTA Requirements: 2. Social Sciences (15 credits)

MRP Requirements: 15 quarter credits of Social Sciences, specifically:

- 5 credits, microeconomics
- 5 credits, macroeconomics
- 5 credits additional social science (not economics)

Clark College equivalents:

ECON&201 (5 cr.)

ECON&202 (5 cr.)

5 credits of social science outside economics

Generic DTA Requirements: 3. Natural Sciences

MRP Requirements: 15 quarter credits to include:

- 5 credits in statistics (business statistics preferred)
- 10 credits physical, biological, and/or earth science, including at least one lab course.

Clark College equivalents: BUS or MATH203 (3 cr.)

BUS or MATH204 (3 cr.)

9-10 credits of natural science course work, including one lab, as defined by Clark College

Notes: Students intending the manufacturing management major at WWU should consult WWU regarding the selection of natural science courses required for admission to the major. Students can apply up to 6 credits in statistics coursework toward the natural sciences requirement.

## **C. Major Requirements**

Generic DTA Requirements: 6. Business courses

MRP Requirements: 20 credits, including:

- 5 credits, Intro to Financial Accounting
- 5 credits, Financial Accounting II
- 5 credits, Managerial Accounting
- 5 credits, Business Law or Introduction to Law

Clark College equivalents: For all schools except UW:

ACCT&201 (5 cr.)

ACCT&202 (5 cr.)

ACCT&203 (5 cr.)

BUS&201 (5 cr.)

Notes: Universities with a lower-division Business Law requirement: UW (all campuses), WSU (all campuses) EWU, CWU, WWU, Gonzaga, SMU, SPU, Whitworth.

The following institutions do not require a lower-division Business Law course and agree to accept the course taken as part of this degree as a lower-division elective, but generally not as an equivalent to the course required at the upper division: Heritage, PLU, SU, and Walla Walla University.

International students who completed a business law course specific to their home country must take a business law course at a U.S. institution in order to demonstrate proficiency in U.S. business law.

## **D. Electives**

Generic DTA Requirements: 7. Elective courses

MRP Requirements: 5 credits of electives

Clark College equivalents: 5 credits of electives

Notes: Five institutions have requirements for admission to the major that go beyond those specified above. Students can meet these requirements by careful selection of the elective University Course Equivalent to:

- WSU (all campuses): Management Information Systems MIS 250
- Gonzaga: Management Information Systems BMIS 235
- PLU: Computer applications CSCE 120, either an equivalent course or skills test
- SPU: Spreadsheets BUS 1700, either an equivalent course or skills test
- WWU: Introduction to Business Computer Systems MIS 220 (for transfer students entering fall 2014)

## **Computer and Electrical Pre-Engineering Associate of Science Track 2 MRP**

The following is a degree program designed by a consortium of two-year and four-year colleges in Washington. Students should be aware that baccalaureate institutions may have slightly different requirements for these degrees, and students should consult the transfer institution for exact questions.

Students should complete the entirety of any science sequence at the same school for best transferability. These degrees are not DTA degrees, and there are some general education requirements that students will need to finish upon transfer.

Though this degree does not require such, Clark College students should know that the standard Clark AST degree path has these differences from the Major Related Program (MRP) defined below:

- Clark requires 3 credits of Health-Physical Education coursework.

Students must also meet the residency requirements as established by Clark. While Clark College has approved offering the degree below, Clark students should keep these requirements in mind should their transfer pathways change.

Students completing this Associate of Science will receive the same priority consideration for admission to the baccalaureate institution as they would for completing the direct transfer associate degree and will be given junior status by the receiving institution.

It is critical that you work with an Engineering faculty advisor to ensure your program will give you the maximum benefit when you transfer.

## **A. Basic Requirements**

Generic Requirements: 1. Communications Skills (5 credits)

MRP Requirements: 5 quarter credits of English composition

Clark College equivalents: ENGL&101 (5 cr.)

Generic Requirements: 2. Mathematics (10 credits)

Two courses at or above introductory calculus level. Third quarter calculus or approved statistics course: 5 quarter credits chosen with the help of an advisor based on the requirements of the specific discipline at the baccalaureate institution the student plans to attend.

MRP Requirements: Calculus I, II, III – 15 credits

Differential Equations – 5 credits

Linear Algebra – 5 credits

Clark College equivalents:

MATH&151 (5 cr.)

MATH&152 (5 cr.)

MATH&153 (5 cr.)

MATH 215 (5 cr.)

MATH 221 (5 cr.)

Notes: Clark requires concurrent enrollment of completion in MATH&254 when taking MATH221. MATH103 and MATH111 are required prerequisites for MATH&151 that may be needed if calculus placement is not met via COMPASS.

Generic Requirements: 3. Physics (15 credits)

Calculus-based or non-calculus based sequence including laboratory. Students should be advised that some baccalaureate programs require physics with calculus.

MRP Requirements: Engineering Physics I, II, III + labs – 15 to 18 credits

Clark College equivalents: PHYS&221 (5 cr.)

PHYS&222 (5 cr.)

PHYS&223 (5 cr.)

Notes: Clark requires concurrent enrollment in PHYS094, 095, and 096.

Generic Requirements: 4. Chemistry with Laboratory (5 credits)

MRP Requirements: General Chemistry I + labs – 5 credits

Clark College equivalents: CHEM&141, 151 (5 cr.)

Generic Requirements: 5. Required Major Courses

MRP Requirements: Electrical Circuits – 4-5 credits  
Computer Programming – 4-5 credits

Clark College equivalents: ENGR&204 (5 cr.)  
CSE121 (5 cr.)

## **B. Distribution Requirements**

Generic Requirements: 1. Humanities/Fine Arts/English and Social Sciences (15 credits)

MRP Requirements: Minimum 15 quarter credits:  
Minimum 5 credits in Humanities, minimum 5 credits in Social Science, plus an additional 5 credits in either Humanities or Social Science for a total of 15 credits.

Clark College equivalents: A course in Economics is recommended (ECON&201 or 202). PHIL&106 is strongly recommended as the Humanities course.

Notes: Courses taken must come from the current ICRC distribution list in order to count as General Education or General University Requirements (GER's/GUR's) at the receiving institution. Additional general educational requirements, cultural diversity requirements, and foreign language requirements, as required by the receiving institution, must be met prior to the completion of a baccalaureate degree.

## **C. Electives**

Generic Requirements:

The remaining quarter credits should be planned with the help of an advisor based on the requirements of the specific discipline at the baccalaureate institution the student selects to attend.

For Engineering disciplines, these credits should include a design component consistent with ABET accreditation standards, as approved by the advisor.

MRP Requirements:

Math, Science & Engr. Electives (20-25 credits)

Select 5 electives as appropriate for intended major and intended baccalaureate institution:

- A second course in Computer Programming – object oriented – 4-5 credits
- Innovation in Design
- Calculus IV (Advanced or Multi-variable Calculus)
- Technical Writing
- Statics
- Dynamics
- Thermodynamics
- Digital Logic
- Biology for Science Majors I + labs
- General Chemistry II + lab
- Applied Numerical Methods
- Microprocessors



Clark College equivalents:  
Required at Clark: MATH&254 (5 cr.) – Calculus IV  
Other electives as advised dependent on transfer institution.

Total credits: 95-104 credits

## **Math Education DTA/MRP**

This pathway is applicable to students planning to prepare for math education majors at the secondary level at universities in Washington. Students need to make early contact with their potential transfer institutions regarding the specific course choices in each area of the agreement where options are listed. Students also need to check with their potential transfer institutions regarding the requirement for overall minimum GPA, a higher GPA in a selected subset of courses or a specific minimum grade in one or more courses such as math or English.

Though this degree does not require such, Clark College students should know that the standard Clark AA degree path has these differences from the MRP defined below:

- a. Clark requires 3 credits of Health-Physical Education coursework, and
- b. As of Fall 2011, Clark requires a course in Oral Communication, and
- c. Clark's Social Science distribution requirement stipulates that students take courses from at least three different departments.

Students must also meet the residency requirements as established by Clark. While Clark College has approved offering the degree below, Clark students should keep these requirements in mind should their transfer pathways change.

Students are responsible for researching and preparing for specific major requirements of baccalaureate institutions as early as possible prior to transferring.

## **A. Basic Requirements**

Generic DTA Requirements: 1. Communications Skills (10 credits)

MRP Requirements: 10 quarter credits of English composition

Clark College equivalents:  
ENGL&101 (5 cr.)  
ENGL&102 or 109 (5 cr.)

Generic DTA Requirements:  
2. Quantitative/Symbolic Reasoning Requirement (5 credits)  
Intermediate algebra proficiency is required.

MRP Requirements:  
5 quarter credits: First-quarter calculus  
Intermediate algebra proficiency is required.

Clark College equivalents: MATH&151 (5 cr.)

## **B. Distribution Requirements**

Generic DTA Requirements: 1. Humanities (15 credits)

MRP Requirements: Introductory Speech and 10 credits of other humanities

Consistent with the requirements in all DTA degrees - no more than 10 credits per discipline area, 5 credits maximum in world languages or ASL. No more than 5 credits of performance/skills classes are allowed.

Clark College equivalents: CMST&220 (5 cr.)—Fulfills oral communications requirement.  
10 other credits of humanities meeting the stipulations for the DTA

Generic DTA Requirements: 2. Social Sciences (15 credits)

MRP Requirements: 15 quarter credits of Social Sciences, specifically:

- 5 credits, Intro to Psychology
- 10 credits, other social sciences

Clark College equivalents: PSYC&100 (5 cr.)

10 credits of social science (maximum of 5 cr. additional psychology)

Generic DTA Requirements: 3. Natural Sciences (15 credits)

MRP Requirements: 15 quarter credits to include:

- 2nd-quarter calculus
- 10 credits physical, biological, and/or earth science, including at least one lab course

Clark College equivalents: MATH&152 (5 cr.)

10 credits of natural science coursework, including one lab, as defined by Clark College

## **C. Major Requirements**

Generic DTA Requirements: 1. Math courses

MRP Requirements: 3rd- and 4th-quarter calculus  
Linear Algebra

Clark College equivalents:

MATH&153 (5 cr.)

MATH215 (5 cr.)

MATH&254 (5 cr.)

Generic DTA Requirements: 2. Education courses

MRP Requirements: Field Experience/Intro to Education

Clark College equivalents: EDUC&201 (3 cr.)

EDUC210 (3 cr.)

Generic DTA Requirements: 3. Elective courses

MRP Requirements: Other college-level courses, of which a maximum of 15 credits may be in

college-level courses as defined by the community college, and the remainder shall be fully transferable as defined by the receiving institution. Where appropriate, preparation courses for the major, minor, or professional certification should ideally be included in this coursework.

Clark College equivalents: 9 credits of elective as defined above.

## **Mechanical/Civil/Aeronautical/Industrial/Materials Science pre-Engineering (Other Engineering) Associate of Science Track 2 MRP**

The following is a degree program designed by a consortium of two-year and four-year colleges in Washington. Students should be aware that baccalaureate institutions may have slightly different requirements for these degrees, and students should consult the transfer institution for exact questions.

Students should complete the entirety of any science sequence at the same school for best transferability. These degrees are not DTA degrees, and there are some general education requirements that students will need to finish upon transfer.

Though this degree does not require such, Clark College students should know that the standard Clark AST degree path has these differences from the Major Related Program (MRP) defined below:

- Clark requires 3 credits of Health-Physical Education coursework.

Students must also meet the residency requirements as established by Clark. While Clark College has approved offering the degree below, Clark students should keep these requirements in mind should their transfer pathways change.

Students completing this Associate of Science will receive the same priority consideration for admission to the baccalaureate institution as they would for completing the direct transfer associate degree and will be given junior status by the receiving institution.

It is critical that you work with an Engineering faculty advisor to ensure your program will give you the maximum benefit when you transfer.

### **A. Basic Requirements**

Generic Requirements: 1. Communications Skills (5 credits)

MRP Requirements: 5 quarter credits of English composition

Clark College equivalents: ENGL&101 (5 cr.)

Generic Requirements: 2. Mathematics (10 credits)

Two courses at or above introductory calculus level. Third-quarter calculus or approved statistics course: 5 quarter credits chosen with the help of an advisor based on the requirements of the specific discipline at the baccalaureate institution the student plans to attend.

MRP Requirements:

Calculus I, II, III – 15 credits

Differential Equations – 5 credits

Linear Algebra – 5 credits

Clark College equivalents:

MATH&151 (5 cr.)

MATH&152 (5 cr.)

MATH&153 (5 cr.)

MATH 215 (5 cr.)

MATH 221 (5 cr.)

Notes: Clark requires concurrent enrollment or completion in MATH&254 when taking MATH221. MATH103 and MATH111 are required prerequisites for MATH&151 that may be needed if calculus placement is not met via COMPASS.

Generic Requirements: 3. Physics (15 credits)

Calculus-based or non-calculus based sequence including laboratory. Students should be advised that some baccalaureate programs require physics with calculus.

MRP Requirements: Engineering Physics I, II, III + labs – 15 to 18 credits

Clark College equivalents:

PHYS&221 (5 cr.)

PHYS&222 (5 cr.)

PHYS&223 (5 cr.)

Notes: Clark requires concurrent enrollment in PHYS094, 095, and 096.

Generic Requirements: 4. Chemistry with Laboratory (5 credits)

MRP Requirements: General Chemistry I, II + labs – 5 credits

Clark College equivalents:

CHEM&141, 151 (5 cr.)

CHEM&142, 152 (5 cr.)

Generic Requirements: 5. Required Major Courses

MRP Requirements:

- Statics – 5 credits
- Mechanics of Materials – 5 credits
- Dynamics – 5 credits

Clark College equivalents:

ENGR&214 (5 cr.)

ENGR&215 (5 cr.)

ENGR&225 (5 cr.)

## **B. Distribution Requirements**

Generic Requirements: 1. Humanities/Fine Arts/English and Social Sciences (15 credits)

MRP Requirements:

Minimum 15 quarter credits:

Minimum 5 credits in Humanities, minimum 5 credits in Social Science, plus an additional 5 credits in either Humanities or Social Science for a total of 15 credits.

Clark College equivalents:

A course in Economics is recommended (ECON&201 or 202).

PHIL&106 is strongly recommended as the Humanities course.

Notes: Courses taken must come from the current ICRC distribution list in order to count as General Education or General University Requirements (GER's/GUR's) at the receiving institution. Additional general educational requirements, cultural diversity requirements, and foreign language requirements, as required by the receiving institution, must be met prior to the completion of a baccalaureate degree.

### **C. Electives**

Generic Requirements: The remaining quarter credits should be planned with the help of an advisor based on the requirements of the specific discipline at the baccalaureate institution the student selects to attend. For Engineering disciplines, these credits should include a design component consistent with ABET accreditation standards, as approved by the advisor.

MRP Requirements: Math/Engr Electives – (15 credits)

Select 4 Electives(15-20 credits) as appropriate for intended major and intended baccalaureate institution:

- Computer Programming – 4-5 credits
- Innovation in Design
- Calculus IV (Advanced or Multi-variable Calculus)
- 3-D Visualization and CAD (Engineering Graphics)
- Technical Writing
- Thermodynamics
- Electrical Circuits
- Materials Science
- Applied Numerical Methods

Clark College equivalents: Required at Clark: MATH&254 (5 cr.) – Calculus IV

Other electives as advised dependent on transfer institution.

Total credits: 102-110 credits

## **Pre-Nursing DTA/MRP**

This pathway is applicable to students planning to prepare for upper-division Bachelor of Science, Nursing (Entry-to-practice/basic BSN pathway) by completing a broad selection of academic courses. Many students transfer to the BSN program after completing the Associate Degree Nursing (ADN) program (RN to BSN pathway); however, this agreement is not applicable to and does not alter those ADN to BSN articulation agreements.

Students planning a career pathway in Nursing should seek advisement from Clark College's Advising Department early. Besides this degree, Clark has several consortial agreements with regard to degrees in Nursing. This pathway streamlines preparation for the basic BSN pathway across the state. It does not, however, address the issue of significantly inadequate capacity (faculty, clinical opportunities, etc.) at the BSN level relative to workforce needs or current student interest. Due to high interest and limited space in BSN programs, admission to all BSN programs is highly competitive, with many qualified applicants finding themselves on waiting lists for admission.

This document represents an agreement between the following baccalaureate institutions offering an entry-to-practice/basic BSN program and the system of community and technical colleges. Baccalaureate institutions party to this agreement include: University of Washington, Seattle; Washington State University; Northwest University; Seattle University; Seattle Pacific University; Pacific Lutheran University; Walla Walla College. The Washington State University Intercollegiate College of Nursing (WSU-ICN) is a consortium whose members include Eastern Washington University, Gonzaga, and Whitworth. Associate degree transfers to WSU-ICN are admitted through WSU, not through the other consortium institutions. EWU participated in the development of this agreement.

Though this degree does not require such, Clark College students should know that the standard Clark AA degree path has these differences from the MRP defined below:

- a. Clark requires 3 credits of Health-Physical Education coursework, and
- b. Clark's Social Science distribution requirement stipulates that students take courses from at least three different departments.

Students must also meet the residency requirements as established by Clark. While Clark College has approved offering the degree below, Clark students should keep these requirements in mind should their transfer pathways change.

## **A. Basic Requirements**

Generic DTA Requirements: 1. Communications Skills (10 credits)

MRP Requirements: 10 quarter credits of English composition

Clark College equivalents:

ENGL&101 (5 cr.)

ENGL&102 (5 cr.)

Notes: ENGL&102 is REQUIRED at Northwest University and Walla Walla University.

Generic DTA Requirements: 2. Quantitative/Symbolic Reasoning Requirement (5 credits)

Intermediate algebra proficiency is required.

MRP Requirements: 5 quarter credits statistics (a course that includes descriptive and inferential statistics) Intermediate algebra proficiency is required.

Clark College equivalents:

MATH 203 (3 cr.)

MATH 204 (3 cr.)

Notes: UW Seattle and Seattle University require 10 credits in quantitative/symbolic reasoning with the additional class in college algebra or pre-calculus (at UW Seattle, a class in Logic also serves for the additional class). Students should make sure that the receiving institution will accept the business statistics sequence prior to starting.

## **B. Distribution Requirements**

## Generic DTA Requirements: 1. Humanities (15 credits)

### MRP Requirements:

5 quarter credits of Public Speaking

10 quarter credits of other Humanities

Consistent with the requirements in all DTA degrees – no more than 10 credits per discipline area, 5 credits maximum in world languages or ASL. No more than 5 credits of performance/skills classes are allowed.

### Clark College equivalents:

CMST&220 (5 cr.)—Fulfills oral communication requirement.

10 quarter credits of other Humanities, 5 of which can be CMST.

Notes: In order to better prepare for successful transfer, students are encouraged to consult with the institution(s) to which they wish to transfer regarding the humanities courses that best support or may be required as prerequisites to their nursing curriculum.

A curriculum that provides students with an understanding of and sensitivity to human diversity is encouraged (required by WSU). Credits in the humanities distribution area provide one opportunity for such a curriculum. See the humanities choices in the WSU “Diversity Course Identification Guidelines” for possible selection or choose courses that include minority, non-Western, ethnic or other “area” studies.

## Generic DTA Requirements: 2. Social Sciences (15 credits)

### MRP Requirements:

- 5 quarter credits, Introduction to Psychology
- 5 quarter credits, Human Development across the Life span
- 5 credits from the Sociology discipline

### Clark College equivalents:

PSYC&100 (5 cr.)

PSYC&200 (5 cr.)

5 credits in Sociology

Notes: Northwest University requires Cultural Anthropology and does not accept a course in the sociology discipline as a substitute. Students may be admitted to the BSN without Cultural Anthropology if they agree to complete the course at NU in the summer prior to the junior year. A curriculum that provides students with an understanding of and sensitivity to human diversity is encouraged (required by WSU). The credits in sociology provide one opportunity for such a curriculum. See the sociology choices in the WSU “Diversity Course Identification Guidelines” for possible selection or choose courses that include minority, non-Western, ethnic or other “area” studies.

## Generic DTA Requirements: 3. Natural Sciences

### MRP Requirements: 35 credits with at least 25 credits lab-based:

- 5 quarter credits General Biology, the course prerequisite to Anatomy/Physiology
- 10 quarter credits Anatomy and Physiology with lab
- 5 quarter credits Inorganic Chemistry with lab
- 5 quarter credits Organic/Biochemistry with lab (when Organic + Biochemistry are separate courses, both are required)

- 5 quarter credits Microbiology with lab
- 5 quarter credits Human Nutrition

Clark College equivalents: BIOL&100 or BIOL164/165 (5 cr.)  
(164/165 preferred)

BIOL&251 (5 cr.)

BIOL&252 (5 cr.)

BIOL&253 (5 cr.)

BIOL&260 (5 cr.)

CHEM&121 (5 cr.)

CHEM&131 (5 cr.)

NUTR103 (3 cr.)\*

\*Students need to be aware that Clark College's nutrition class is only three (3) credits, and not the required five (5) credits.

Notes: Introductory survey courses or review courses do not meet the content level expectations for these natural science requirements.

Northwest University requires 2 credits of Genetics as well. Students may be admitted to the BSN without Genetics if they agree to complete the course at NU in the summer prior to the junior year. At the time of application when some of the coursework may not yet be completed, UW Seattle requires a minimum GPA of 3.0 for 3 out of the 7 courses or 2.8 for 4 out of the 7.

## C. Electives

Generic DTA Requirements: Elective courses

MRP Requirements: Up to 10 additional quarter credits of which a maximum of 5 credits may be in college-level courses as defined by the community college, and the remainder shall be fully transferable as defined by the receiving institution.

Clark College equivalents: Up to 10 additional quarter credits of which a maximum of 5 credits may be in college-level courses as defined by the community college, and the remainder shall be fully transferable as defined by the receiving institution.

Students need to consult with the transfer institution to determine which course is "fully transferable."

Notes: See notes under humanities, social science and natural science.

A curriculum that provides students with an understanding of and sensitivity to human diversity is encouraged (required by WSU). The elective credits provide one opportunity for such a curriculum. See the choices in the WSU "Diversity Course Identification Guidelines" for possible course selection or select courses that include minority, non-Western, ethnic or other "area" studies.

## Career and Technical Degrees and Certificates

**Associate in Applied Science (AAS)**

**Associate in Applied Technology (AAT)**

**Certificate of Proficiency (CP)**

**Certificate of Achievement (CA)**

**Certificate of Completion**

**Degree & Certificate Intent**



The career and technical education degrees and certificates are designed for students interested in gaining specific technical career skills. Students focus on completing program specific coursework, balanced by minimal general education courses. Although the Associate in Applied Science and the Associate in Applied Technology degree programs are not designed to guarantee transfer to a senior institution, some institutions may accept technical coursework for students in certain areas of study. Students should contact an advisor and/or the senior institution for additional information.

## **General Requirements**

Complete a minimum number of credits in specified curriculum:

- Associate Degree: Ninety (90) credits minimum
- Certificate of Proficiency: Forty-five (45) credits minimum
- Certificate of Achievement: Twenty-one (21) credits minimum
- Maintain a minimum cumulative GPA of 2.00 or higher.

Meet academic residency requirements as follows:

- Associate Degree: Thirty (30) credits minimum must be completed at Clark College.
- Certificate of Proficiency: Fifteen (15) credits minimum must be completed at Clark College.
- Certificate of Achievement: Ten (10) credits minimum must be completed at Clark College.
- Earn a grade of "C" (2.00) or higher in each major area requirement and specifically listed courses unless otherwise noted in the department requirements.

## **General Credit Restrictions**

Physical Education Activity: Three (3) credits maximum in PE activity can apply toward the degree.

Other Applicable Credit Options:

- Advanced Placement (AP) and/or International Baccalaureate (IB): A maximum of sixty (60) credits from AP, IB or a combination of both, can be applied to a degree.
- College Level Examination Program (CLEP): Students may request up to fifteen (15) CLEP credits to be applied to a degree. Credits will be used to fulfill general elective requirements only.
- Course Challenge: Students may use credits earned from successful course challenges toward 25% of the degree or certificate. Credit by course challenge will meet academic residency requirements.
- Tech Prep/Direct Credit: Tech Prep/Direct Credit courses that are part of a professional program and fall into the restricted area in the DTA degree are limited to 15 credits. If Tech Prep/Direct Credit courses apply to a professional technical degree or certificate, there is no limit to the number of credits that can be applied.
- Cooperative Work Experience: No more than fifteen (15) credits may be applied to the associate degree.
- Special Projects: No more than fifteen (15) credits in Special Projects will be allowed toward the Associate in Arts degree.
- Military Experience: Credits may be earned by previous military experience. Please contact the Veterans Affairs Office at Clark College for further information. Credit awarded for military experience may be granted for up to 25% of the degree and/or certificate.

Advanced Placement / International Baccalaureate: Sixty (60) credits combined maximum in Advanced Placement (AP) and International Baccalaureate (IB).

Pass /Fail Grading Option: Sixty (60) credits maximum in courses with Pass / Fail grading option. For AAS degrees in nursing, the thirty-credit maximum is waived due to clinical requirements.

## General Information

For Associate in Applied Science degrees, General Education courses are restricted to two (2) distribution areas in the general education area of the degree.

Credit by Challenge coursework will meet academic residency requirements.

## Associate in Applied Science (AAS)

The Associate in Applied Science degree is designed for students who wish to complete a program with a specific career and technical education objective. Students are required to complete a minimum of thirty (30) credits at Clark College to meet Academic Residency requirement. Students are required to maintain a cumulative GPA of 2.00 to receive this degree.

### General Education Requirements

Note: Some specific requirements of a program may also meet the General Education requirements.

Communication Skills [C] – 6 credits minimum

Select one (1) course from list one and an additional course from either list one or list two, depending on program requirements.

#### List One

BTEC 107

ENGL 098

ENGL& 101

ENGL& 102

ENGL 108

ENGL 109

ENGL 110

ENGL& 235

ENGL 212 or BUS 211

MGMT 107

PTWR 135

#### List Two

CMST& 210

CMST& 220

CMST& 230

Health & Physical Education [HE, HPE, PE, PEDNC, PEMAR, PESPC] – 3 credits

Complete three (3) credits from either Option One or Option Two:

Option One: Complete two (2) credits of Health from the list below AND one (1) credit of any college-level PE activity course:

- HLTH 100, 101, 103, 104, 108, 206, 207, 208 or 210
- PE activity

Option Two: Complete three (3) credits from one (1) of the courses listed below:

- HPE 220, 258, or 266

Computational Skills [CP] – 3 credits

Complete three (3) credits from one of the following options:

- Any MATH/MATH& course numbered 030 or higher, except MATH 096
- Business – BUS 102
- Business Technology Medical Office BMED 103
- Computer Science – CS& 131, 141
- Computer Science & Engineering – CSE 121, 222, 223, 224
- Computer Technology – CTEC 121, 140, 141, 143, 224, 240, 241 281, 282
- A placement test score qualifying the student for entry into MATH 090 will satisfy this requirement for certain designated programs.
- PTCS 110

Human Relations [HR] – 3 credits

Complete three (3) credits from the list below:

- Communication Studies – CMST& 210,230
- Education - EDUC& 150
- Human Development – HDEV 105, 123, 155, 175, 186, 195, 198, 200
- Psychology - PSYC& 100, 200; PSYC 203
- Sociology - SOC& 101, 201; SOC 121, 131, 220
- Addiction Counselor Education – ACED 101, 201
- Women's Studies - WS 101
- College Preparation - COLL 101

Humanities [HA, HB] – 3 credits

Complete three (3) credits from the list below:

- Art - ART 103, 104, 105, 110, 115, 116, 117, 118, 131, 140, 141, 142, 145, 146, 151, 172, 173, 174, 180, 181, 182, 189, 190, 191, 203, 204, 208, 220, 221, 222, 223, 225, 226, 250, 257, 258, 289, 260, 261, 262, 270, 271, 273, 274, 278, 290, 295, 296, 297
- Communication Studies – CMST102, 216, 240; CMST& 210, 220, 230
- Any English course in the AA Humanities distribution requirement
- World Languages - &121, &122, &123, &221, &222, &223 in ASL, CHIN, FRCH, GERM, JAPN, SPAN; ASL 125; JAPN 171
- Humanities - &101, 103, 1085, 112, 152, 180, 200, 201, 210
- Journalism - JOUR 101, 111
- Music – MUSC 100, 101, 106, 110, 115, 116, 117, 118, 121, 122, 123, 125, 127, 135, 137, 138, 139, 150, 151, 152, 153, 154, 155, 170, 171, 172, 173, 174, 175, 176, 177, 178, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 193, 195, 196, 197, 201, 202, 210, 221, 222, 223, 239, 250, 251, 252, 253, 254, 255, 270, 271, 272, 273, 274, 275, 276, 277, 278, 280, 281, 282, 283, 284, 285, 287, 288, 289, 290, 295, 296, 297; MUSC& 104, 121, 122, 123, 128, 141, 142, 143, 221, 222, 223, 231, 232, 233; MUSCA 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 131, 132,

133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286

- Philosophy - &101, &120 215, 216, 217, 240, 251, 280, 290
- Drama - &101, 140, 141, 142, 143, 144, 145, 150, 152, 171, 172, 173, 240, 243, 244, 245, 250, 271, 272, 273
- Women's Studies – WS 101, 201, 210, 225

### Social Sciences [SS] – 3 credits

Complete three (3) credits from any of following departments (note the restriction on ACED and CMST):

- Addiction Counseling – ACED 101, HSSA& 101
- Anthropology - ANTH& 204, 206, 215
- Communication Studies – CMST& 230
- Criminal Justice - CJ& 101, 105
- Economics - ECON 101, 110, 111, 112, 120; ECON& 201, 202
- Environmental Science - ENV5 231
- Geography - GEOG& 100, 102, 200, 207; GEOG 205
- History - HIST& 126, 127, 128, 146, 147, 148, 215; HIST 231, 251, 252
- Political Science - POLS 111, 131, 141, &203, 231
- Psychology - PSYC 100, 200, &203
- Sociology - SOC &101, 121, 131, &201, 220
- Women's Studies - WS 101, 201, 210, 220, 225

### Natural Sciences [NS] – 3 credits

Complete three (3) credits from any of following departments (note the restriction on Agriculture, Anthropology, and Humanities):

- Anthropology – ANTH& 215L, 245L
- Astronomy – ASTR& 101L
- Biology – BIOL& 100L, 160L, 221L, 222L, 223L, 251L, 252L, 253L, 260L; BIOL 101,105L, 139, 140, 141, 142, 143, 145, 146, 150L, 164, 165L, 167, 168L, 208L, 224L
- Chemistry – CHEM& 110L, 121L, 131L, 141, 142, 143, 151L, 152L, 153L, 241, 242, 243, 251L, 252L, 253L
- Engineering - ENGR& 104
- Environmental Science – ENV5 104, 109L, 211L, 218L, 221
- Geology – GEOL& 101L, 103L, GEOL 102L, 218
- Humanities – HUM 180
- Math - MATH 135
- Meteorology – METR 101L
- Nutrition – NUTR 103
- Oceanography – OCEA& 101L
- Physical Science – PHSC 101L, 102L, 104L, 106, 110L
- Physics – PHYS& 100, 101L, 124L, 125L, 126L, 134, 135, 136, 231L, 232L, 233L, 241, 242, 243

### Specific Requirements in an Occupational Field

Students must complete the courses listed in their career plan, plus electives as needed to meet the ninety (90) credit requirement. Most occupational programs require more than fifty-nine (59) credits of specific requirements.

## **Associate in Applied Technology (AAT)**

The Associate in Applied Technology degree is designed for students who wish to complete a program with a specific technical career objective. Students are required to complete a minimum of thirty (30) credits at Clark College to meet Academic Residency requirement. Students are required to maintain a cumulative GPA of 2.00 to receive this degree.

### **General Education Requirements**

Note: Some specific requirements of a program may also meet the General Education requirements. A total of fifteen (15) credits between the three subject areas is required. You may take three (3) to five (5) credits from the courses listed below in each area of Communication Skills, Computational Skills and Human Relation, but the combined total needs to equal fifteen (15) credits.

Communication Skills [C] – 5 credits

Select a minimum of five (5) credits from the list below:

- BTEC 107
- ENGL& 101
- ENGL 212 or BUS 211
- ENGL& 235
- PTWR 135

Computational Skills [CP] – 5 credits

Complete five (5) credits from the list below:

- Business – BUS 102
- Business Technology Medical Office – BMED 103, 105
- Math – MATH 103, 105, 111, MATH& 107 or any course for which one of these is a prerequisite
- Computer Technology – CTEC 121
- PTCS 110

Human Relations [HR] – 5 credits

Complete five (5) credits from the list below:

- Communication Studies – CMST& 210,230
- Education - EDUC& 150
- Human Development – HDEV 105, 123, 155, 175, 186, 195, 198, 200
- Management – BUS& 101; MGMT 101, 106, 110, 112, 120, 122, 125, 128, 132
- Psychology - PSYC& 100, 200; PSYC 203
- Sociology - SOC& 101, 201; SOC 121, 131, 220
- Addiction Counselor Education – ACED 101, 201
- Women's Studies - WS 101
- College Preparation - COLL 101

## Specific Requirements in an Occupational Field

Students must complete the courses listed in their career plan, plus electives as needed to meet the ninety (90) credit requirement. All Associate in Applied Technology degree programs require at least seventy-five (75) credits minimum of major-related requirements.

## Certificate of Proficiency (CP)

The Certificate of Proficiency is designed for students who wish to receive specialized occupational training for a specific career objective. Students must maintain a cumulative GPA of 2.00 and take a minimum of forty-five (45) credits to receive this certificate. Students are required to complete a minimum of fifteen (15) credits at Clark College to meet the Academic Residency requirement.

### General Education Requirements

Note: Some specific requirements of a program may also meet the General Education requirements.

Communication Skills [C] – 3 credits

Complete a minimum of three (3) credits from the following course choices:

- BTEC 106 or 107
- BUS 211
- ENGL 097, 098, 103, 135, 212
- ENGL& 101, 102, 235
- Any PTWR course

Note: Pharmacy Technician students may meet the Communication Skills requirement by achieving one of the following:

1. Completion of ENGL 098 and a score of 74 on Reading Skills.
2. COMPASS test score of 78 on Writing skills AND completion of READ 087.
3. COMPASS test score of 78 on Writing skills AND a score of 74 on Reading skills.

Computational Skills [CP] – 3 credits

Complete a minimum of three (3) credits from:

- Any Mathematics (MATH/MATH&) course, except MATH 096
- Computer Science & Engineering 121, 222, 223, 224, CS& 131, CS& 141
- Business - BUS 102
- Business Technology Medical Office - BMED 103
- Computer Technology - Any CTEC course **except** CTEC 102, 103, 104, 105, 115, 180, 181, 200, or 281
- Chemistry - CHEM 095
- Pharmacy Technician - PHAR 110
- Professional Technical Computational Skills - PTCS 110
- Environmental Science - ENVS 135

Human Relations [HR] – 3 credits

Complete three (3) credits from the list below:

- Business Medical Office – BMED 166, 225, 226
- Business Technology – BTEC 140, 141, 143, 145, 148
- Communication Studies – CMST& 210,230
- Education - EDUC& 150
- Human Development – HDEV 105, 123, 155, 175, 186, 195, 198, 200
- Psychology - PSYC& 100, 200; PSYC 203
- Sociology - SOC& 101, 201; SOC 121, 131, 220
- Addiction Counselor Education – ACED 101, 201
- Women's Studies - WS 101
- College Preparation - COLL 101

### Specific Requirements in an Occupational Field

Refer to the prescribed curriculum in the catalog for specific coursework.

## Certificate of Achievement (CA)

The Certificate of Achievement is designed for students who wish to receive specialized occupational training for a specialized career objective requiring less than forty-five (45) credits, but more than twenty (20) credits. Students must maintain a cumulative GPA of 2.00 or better. Students are required to complete a minimum of ten (10) credits at Clark College to meet the Academic Residency requirement.

## Certificate of Completion

The Certificate of Completion is designed for students who wish to gain entry-level skills or for those who wish to upgrade their skills in a short period of time. Certificates of Completion typically consist of three to four courses, requiring twenty (20) or less credits. They are awarded by the department with the approval of the program advisory committee and the Office of Instruction. The courses can be taken simultaneously or individually as your schedule allows. These certificates are not awarded a standard Clark College diploma.

Certificates of Completion can be earned through the following departments:

- Business Technology
- Business Technology – Medical Office
- Computer Technology
- Early Childhood Education
- Nursing Assistant Certified
- Professional Baking

## Application of Credit

Credits earned through Advanced Placement (AP), International Baccalaureate (IB), Tech Prep/Direct Credit, CLEP, cooperative work experience, military experience, special projects and course challenge must fall within the following guidelines when awarded:

1. Credits may be awarded only if the learning experiences fall within the outcomes of the regular curriculum of the college.
2. Academic transcripts will indicate other credits awarded.
3. Credits cannot duplicate credits already awarded.
4. Students should read the degree requirements section of this catalog for information about applying other credit options toward a degree.

The following lists the number of credits that can be applied through other credit options in each degree or certificate program at Clark College:

Associate in Arts (AA) Associate in Fine Arts (AFA) and Associate in Science – Transfer (AST) degrees:

- A maximum of sixty (60) credits earned through AP and/or IB will apply.
- A maximum of 25% of the degree or certificate may have credits from course challenge and military experience.
- Students can apply 15 credits in CLEP, Tech Prep/Direct Credit, cooperative work experience and Special Projects toward an AA, AFA and AST degree.
- CLEP, cooperative work experience, and Tech Prep/Direct credits will only apply toward general electives. AP, IB, course challenge, and potentially military experience credits would be allowed in distribution areas

Associate in Applied Science (AAS), Associate in Applied Technology (AAT):

- A maximum of sixty (60) credits earned through AP and/or IB will apply.
- A maximum of 25% of the degree or certificate may have credits from course challenge and/or military experience.
- Students can apply 15 credits in CLEP, cooperative work experience and Special Projects toward an AA, AFA and AST degree.
- For the AAS and AAT, approved AP, IB, and Tech Prep/Direct Credit will apply to general education requirements where applicable.
- If Tech Prep/Direct Credit courses apply to a professional technical certificate, there is no limit to the number of credits that can be applied.
- Credits earned may apply toward the general elective, general education, distribution and/or program requirement categories of the degrees.
- Academic residency requirements must be met as well. Successful course challenge requirements will meet residency requirements.

Certificate of Proficiency (CP) programs Certificate of Achievement (CA) programs

- Up to fifteen (15) credits may be earned through course challenge, CLEP, special projects, cooperative work experience, Tech Prep/Direct Credit and applied to CP programs.
- Military experience credit can constitute 25% of the certificate.
- If Tech Prep/Direct Credit courses apply to a professional technical certificate, there is no limit to the number of credits that can be applied.
- Up to ten (10) credits may be earned through course challenge, CLEP, military experience, cooperative work experience, special projects, Tech Prep/Direct Credit and applied to CA programs.
- Credits earned will apply toward general education or program requirements.
- Academic residency requirements must be met as well. Successful course challenge requirements will meet residency requirements.

## Dental Hygiene

A career as a hygienist offers a wide range of opportunities. Services provided by dental hygienists include patient assessment procedures, managing and treating periodontal conditions, placing and finishing dental restorative materials, applying preventive materials to the teeth, teaching patients appropriate oral hygiene to maintain oral health, nutrition counseling, teeth whitening services, performing documentation and office management activities, developing and implementing community oral health programs, and more.



The Clark College Dental Hygiene program is accredited by the Commission on Dental Accreditation of the American Dental Association, a specialized accrediting body recognized by the Council on Postsecondary Accreditation and the United States Department of Education. Graduates receive a Bachelor of Applied Science degree. Students who successfully complete the program qualify to take national, regional, and state board examinations for licensure and are prepared to enter clinical practice. The program includes all responsibilities allowed by Washington state law. Clinical experience takes place in the Clark College Firstenburg Dental Hygiene Education and Care Center under the supervision of licensed dentists and dental hygienists.

## **Application Process & Preliminary Requirements**

The Dental Hygiene program is a seven-quarter clinical program with preliminary requirements that must be satisfied to qualify to apply and prior to program entry. Admission to the Dental Hygiene program is limited and competitive, and Clark College reserves the right to determine admissions status. Please note: completion of the preliminary requirements does not guarantee entrance into the Dental Hygiene program. To meet preliminary entrance requirements, candidates must:

- Complete the Clark College Application for Admission and Statement of Intent forms. Return to Enrollment Services in Gaiser Hall with the non-refundable admission fee and program application fee (amounts subject to change). For the current fee amounts, please visit the Dental Hygiene Website at [www.clark.edu/dentalhygiene](http://www.clark.edu/dentalhygiene).
- The application for Clark College's Dental Hygiene program is January 8th of every year for entry into the fall quarter. Students MUST have no more than 10 credits of preliminary coursework remaining to complete following the end of winter quarter to qualify for selection into the fall class. Preliminary Course Requirements are listed in the degree below.
- Submit ALL official college transcripts from ALL previous colleges attended to the Credential Evaluations Office for complete transcript evaluation, and continue to send updated transcripts quarterly as additional courses are completed. The most recent educational experience will be used to meet admission criteria.

Upon completion of the preliminary entrance requirements, all qualified applicants will be invited to and must participate in a mandatory student orientation with the Dental Hygiene Department. During orientation, the HESI A2 Admission test will be administered. Successful candidates will be notified in writing of final acceptance into the program. Payment of a non-refundable deposit will reserve a position for fall quarter entry. During the school year, the deposit will be refunded to all currently enrolled dental hygiene students.

Students not selected for entry are welcome to reapply the following year, but are encouraged to seek advising before doing so and must formally reapply and comply with the published admissions criteria for that year.

Selection criteria are subject to change. For complete, updated information, please refer to the Dental Hygiene program website at [www.clark.edu/dentalhygiene](http://www.clark.edu/dentalhygiene).

In accordance with the Americans with Disabilities Act and the Rehabilitation Act of 1973, accommodations for students with disabilities will be considered at the student's request. The student may need to provide documentation of disability to the Disability Support Services Office

to support his/her accommodation requests. Documentation guidelines and procedures can be found at [www.clark.edu/dss](http://www.clark.edu/dss). Once the student is qualified by DSS as having a disability, requested accommodations will be considered. Accommodations for the classroom, laboratory, or clinical setting will be evaluated according to reasonableness. Accommodations that compromise patient care, or that fundamentally alter the essential functions of the program or activity, are not considered to be reasonable.

## **Program Progression**

In order to progress from one course or quarter to the next after beginning the Dental Hygiene program, students must achieve a grade of 2.0 or higher in all required courses and maintain a cumulative GPA of 2.0 or higher.

## **International Baccalaureate (IB) - 360-992-2805**

Clark College recognized the International Baccalaureate (IB) program as a coherent, challenging course of study and responds individually to each participant's petition for granting of college credit. Students may be awarded credit for completing individual areas of study within the program. A minimum score of five (5) on the higher-level examination is required for consideration of credit. Standard-level examinations are not granted credit. A maximum of sixty (60) credits in IB coursework can apply to the Associate in Arts or Associate in Science – Transfer programs.

Students should have an official copy of their IB scores sent to Clark College, Attn: Credential Evaluations/GHL 108, 1933 Fort Vancouver Way, Vancouver, WA 98663. Once scores are received and reviewed, an email will be sent to the student at the Clark College student email address regarding the credits to be awarded. IB credits are posted to the transcript at the end of the quarter in which the scores were submitted as long as the student is enrolled in that quarter.

Specific department policies are listed below. Examinations completed in areas not listed below require appropriate department chair approval before credit will be granted.

The International Baccalaureate program is an applicable credit option and is subject to the restrictions listed under the Other Applicable Credit Options section in this catalog.

### **Mathematics**

Students successfully completing the Higher Level Mathematics Exam with a minimum score of five (5) will be granted college credit for MATH& 151 (5 credits) and may register for MATH& 152 (5 credits).

### **Chemistry**

Students successfully completing the Higher Level Chemistry Exam with a minimum score of five (5) will be granted college credit for CHEM& 141, 151, 142, 152, 143, and 153 (16 credits).

### **Physics**

Students successfully completing the Higher Level Physics Exam with a minimum score of five (5) will be granted college credit for PHYS& 124L, 125L, 126L, 134, 135, 136 (15 credits).

### **English**

Students successfully completing the Higher Level English A Exam with a minimum score of five (5) will be granted college credit for ENGL& 101 (5 credits).

# Procedure for Requesting AP Credits

Students should have an official copy of their AP scores sent to Clark College, Attn: Credential Evaluations/GHL 108, 1933 Fort Vancouver Way, Vancouver, WA 98663. Once scores are received and reviewed, an email will be sent to the student at the Clark College student email address regarding the credits to be awarded. AP credits are posted to the transcript at the end of the quarter in which the scores were submitted as long as the student is enrolled in that quarter.

## Scores

Credit is posted with an "S" grade based on the following recommendations:

Biology

Grade: 4

Action: BIOL& 100 (5 credits)

Chemistry (Chemistry Exam)

Grade: 3 or 4

Action: CHEM& 141, 151 (4), (1) credits

Grade: 5

Action: CHEM& 141, 151 (4), (1) credits and CHEM& 142, 152 (4), (1) credits

Computer Science A

Grade: 3, 4, or 5

Action: CS& 141

English (Language and Composition Exam)

Grade: 3, 4, or 5

Action: ENGL& 101 (5 credits)

English (Composition and Literature Exam)

Grade: 3, 4, or 5

Action: ENGL& 101 (5 credits)

English (Composition and Literature Exam and Language and Composition Exam)

Grade: 3, 4, or 5 on each exam

Action: ENGL& 101 (5 credits) and ENGL& 102 (5 credits)

Environmental Science

Grade: 3, 4, 5

Action: BIOL 101

French

Grade: 3

Action: FRCH& 221 (5 credits)

Grade: 4\*

Action: FRCH& 221 (5 credits) and FRCH& 222 (5 credits)

Grade: 5\*

Action: FRCH& 221 (5 credits), FRCH& 222 (5 credits), and FRCH& 223 (5 credits)

\* May require an additional proficiency interview with the department before credits are granted.

Human Geography

Grade: 5

Action: GEOG& 200 (5 credits)

German

Grade: 3

Action: GERM& 221 (5 credits)

Grade: 4\*

Action: GERM& 221 (5 credits) and GERM& 222 (5 credits)

Grade: 5\*

Action: GERM& 221 (5 credits), GERM& 222 (5 credits), and GERM& 223 (5 credits)

\* May require an additional proficiency interview with the department before credits are granted.

Government and Politics

Grade: 4 or 5

Action: POLS 111 (5 credits)

Japanese

Grade: 3

Action: JAPN& 221 (5 credits)

Grade: 4\*

Action: JAPN& 221 (5 credits) and JAPN& 222 (5 credits)

Grade: 5\*

Action: JAPN& 221 (5 credits), JAPN& 222 (5 credits), and JAPN& 223 (5 credits)

\* May require an additional proficiency interview with the department before credits are granted.

Macroeconomics

Grade: 3, 4, 5

Action: ECON& 202 (5 credits)

Mathematics (Calculus AB Exam)

Grade: 3 or 4

Action: MATH& 151 (5 credits)

Grade: 5

Action: MATH& 151 (5 credits) and MATH& 152 (5 credits)

Mathematics (Calculus BC Exam)

Grade: 3 or 4

Action: MATH& 151 (5 credits) and MATH& 152 (5 credits)

Grade: 5

Action: MATH& 151 (5 credits), MATH& 152 (5 credits), and MATH& 153 (5 credits)

Microeconomics

Grade: 3, 4, 5

Action: ECON& 201 (5 credits)

Physics (Physics B Exam)

Grade: 3, 4, or 5

Action: PHYS& 124L, 134 (5 credits)

Physics (Physics C Mechanics Exam)

Grade: 3 or 4

Action: PHYS& 124L, 134 (5 credits)

Grade: 5

Action: PHYS& 231L, 241 (5 credits)

Psychology  
Grade: 4 or 5  
Action: PSYC& 100 (5 credits)

Spanish  
Grade: 3  
Action: SPAN& 221 (5 credits)  
Grade: 4\*  
Action: SPAN& 221 (5 credits) and SPAN& 222 (5 credits)  
Grade: 5\*  
Action: SPAN& 221 (5 credits), SPAN& 222 (5 credits), and SPAN& 223 (5 credits)  
\* May require an additional proficiency interview with the department before credits are granted.

Statistics (Statistics Exam)  
Grade: 4 or 5  
Action: MATH 203 (3 credits) and MATH 204 (3 credits)

U.S. History  
Grade: 3  
Action: HIST& 146 (5 credits), HIST& 147 (5 credits), and HIST& 148 (5 credits)

World History  
Grade: 3  
Action: HIST& 126 (5 credits)

For any AP test that is not listed above, you must receive a score of 3 or better in order to receive 5 credits of General Electives.

## **Where to Get AP Scores**

Advanced Placement Program  
The College Board  
PO Box 6671  
Princeton, NJ 08541-6671  
Phone: 609-771-7300  
TTY: 609-882-4118  
[www.collegeboard.org](http://www.collegeboard.org)

## **Worksheets**

[Associate in Arts Degree - General Transfer](#)

[Associate in Science Transfer Degree - Track 1](#)

[Associate in Science Transfer Degree - Track 2](#)

[Associate in Applied Science Degree](#)

[Associate in Applied Technology Degree](#)

## Certificate of Proficiency

To see a full listing of Program Worksheets visit the [Advising Services webpage](#). Please note, these worksheets are used as an unofficial evaluation tool for advising purposes only.

## Addiction Counselor Education

The Clark College Addiction Counselor Education Department (ACED) program offers an AAS, for students pursuing the Chemical Dependency Professional (CDP) certification, an AA for students wishing to transfer to a state college or university and a Certificate of Proficiency for students who already possess a degree and plan to sit for the CDP state exam. The ACED program is certified by the National Association of Alcohol and Drug Abuse Counselors (NAADAC), as well as the National Addiction Studies Accreditation Commission (NASAC).

Addiction counselors work with families and individuals of all ages who are experiencing problems with addictive behaviors. Counselors may work as members of treatment teams in inpatient or outpatient settings, with schools, or in businesses. They provide group, individual, and couples therapy as well as assessments and interventions. Addiction counselors also work as liaisons for their clients to judicial systems, schools, state services, and communities. Counselors may serve as educators in their communities, acquainting community members with treatment options and prevention strategies for the community. Please contact the Addiction Counselor Education Department (ACED) program advisor for current Washington state certification requirements.

Students must complete all specifically listed courses and Major Area Requirements with a minimum grade of "C" or better in order to successfully complete the program and be awarded the award.

Refer to the Degree & Certificate Requirements Section of the Clark College Catalog to identify the courses needed to satisfy the General Education Requirements.

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### Addiction Counselor Education (CP)

The Certificate of Proficiency in Addiction Counselor Education equips members of the helping professions as well as other professions with knowledge of the addiction disorders and behaviors in order to assist them in the delivery of services to their clients and patients. Knowledge of addictive processes can greatly assist members of law enforcement, teachers, health care workers, corrections and social services workers, among others, in performing their jobs in a more comprehensive manner. This certificate is intended only for those students already holding an associate degree or above.

### General Education Requirements

<b>Communication Skills (3 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
<b>Computational Skills (3 credits required)</b>		
<b>Human Relations (3 credits required)</b>		
PSYC&100	GENERAL PSYCHOLOGY	5 cr.

### Major Area Requirements

ACED 101	SURVEY OF ADDICTIONOLOGY *	3 cr.
ACED 122	INTRODUCTION TO ADDICTIONS COUNSELING SKILLS	3 cr.
ACED 125	GROUP COUNSELING IN ADDICTIONS	3 cr.
ACED 132	INTRODUCTION TO COUNSELING FAMILY MEMBERS	3 cr.
ACED 136	LAW AND ETHICS IN ADDICTIONS COUNSELING	3 cr.
ACED 137	ADDICTIONS AND MENTAL ILLNESS	3 cr.
ACED 138	PREVENTION AND EDUCATION IN THE COMMUNITY	3 cr.
ACED 160	PHARMACOLOGY OF DRUGS OF ABUSE	3 cr.
ACED 164	ADOLESCENT ADDICTION ASSESSMENT & TREATMENT	3 cr.
ACED 170	AIR- AND BLOOD-BORNE PATHOGENS	2 cr.
ACED 201	THEORIES OF COUNSELING *	3 cr.
ACED 202	MULTI-CULTURAL ADDICTIONS COUNSELING	3 cr.
ACED 203	CASE MANAGEMENT IN ADDICTION MEDICINE	3 cr.
ACED 205	ADVANCED TECHNIQUES FOR ADDICTION COUNSEL	3 cr.
PSYC&200	LIFESPAN PSYCHOLOGY	5 cr.

**Total Required Credits: 59**

\*For non-majors also.

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the [Gainful Employment Program Information page](#).

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Treat substance abuse clients in multiple settings including individual and group counseling situations.
- Understand and participate in addiction placement, continuing care, and discharge of patients and clients with addictions.
- Communicate effectively, accurately, and professionally, using verbal, non-verbal, and written language with diverse populations of clients, patients, colleagues, the public, and other healthcare providers.
- Demonstrate professional and ethical behaviors when working with clients, patients, other professionals, and the public.
- Successfully complete the Washington State Chemical Dependency Professional exam.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.

- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

## Addiction Counselor Education (AAS)

### General Education Requirements

<b>Communication Skills (6 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
<b>Health &amp; Physical Education (3 credits required)</b>		
<b>Computational Skills (3 credits required)</b>		
<b>Human Relations (3 credits required)</b>		
PSYC&100	GENERAL PSYCHOLOGY **	5 cr.
<b>Humanities (3 credits required)</b>		
<b>Social Sciences (3 credits required)</b>		
<b>Natural Sciences (3 credits required)</b>		

### Major Area Requirements

ACED 101	SURVEY OF ADDICTIONOLOGY *	3 cr.
ACED 122	INTRODUCTION TO ADDICTIONS COUNSELING SKILLS	3 cr.
ACED 125	GROUP COUNSELING IN ADDICTIONS	3 cr.
ACED 132	INTRODUCTION TO COUNSELING FAMILY MEMBERS	3 cr.
ACED 136	LAW AND ETHICS IN ADDICTIONS COUNSELING	3 cr.
ACED 137	ADDICTIONS AND MENTAL ILLNESS	3 cr.
ACED 138	PREVENTION AND EDUCATION IN THE COMMUNITY	3 cr.
ACED 160	PHARMACOLOGY OF DRUGS OF ABUSE	3 cr.
ACED 164	ADOLESCENT ADDICTION ASSESSMENT & TREATMENT	3 cr.
ACED 170	AIR- AND BLOOD-BORNE PATHOGENS	2 cr.
ACED 201	THEORIES OF COUNSELING *	3 cr.
ACED 202	MULTI-CULTURAL ADDICTIONS COUNSELING	3 cr.
ACED 203	CASE MANAGEMENT IN ADDICTION MEDICINE	3 cr.
ACED 205	ADVANCED TECHNIQUES FOR ADDICTION COUNSEL	3 cr.
ACED 210	FIELD PLACEMENT I	1-6 cr.
and ACED 211	FIELD PLACEMENT II	1-6 cr.
PSYC&200	LIFESPAN PSYCHOLOGY **	5 cr.

### Additional Major Area Electives

ENGL&102	ENGLISH COMPOSITION II	5 cr.
or ENGL&235	TECHNICAL WRITING	5 cr.
or ENGL 109	WRITING ABOUT THE SCIENCES	5 cr.
HDEV coursework		4 cr.

### Summer Quarter (Optional)

ACED 132	INTRODUCTION TO COUNSELING FAMILY MEMBERS	3 cr.
ACED 136	LAW AND ETHICS IN ADDICTIONS COUNSELING	3 cr.
ACED 170	AIR- AND BLOOD-BORNE PATHOGENS	2 cr.

**Total Required Credits: 90**

\*For non-majors also.

\*\*May count for both Human Relations and Social Science distribution.

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Treat substance abuse clients in multiple settings including individual and group counseling situations.
- Understand and participate in addiction placement, continuing care, and discharge of patients and clients with addictions.
- Communicate effectively, accurately, and professionally, using verbal, non-verbal, and written language with diverse populations of clients, patients, colleagues, the public, and other healthcare providers.
- Demonstrate professional and ethical behaviors when working with clients, patients, other professionals, and the public.
- Successfully complete the Washington State Chemical Dependency Professional exam.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.
- Health and PE: Demonstrate progress toward healthier behaviors as appropriate for a career and technical education program.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts as appropriate for a



career and technical education program.

- Social Science: Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences as appropriate for a career and technical education program.
- Science: Apply fundamental principles and relationships from the Natural Sciences to solve problems as appropriate for a career and technical education program.

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### Addiction Counselor Education (AA)

Students who earn Clark College's Associate in Arts degree qualify to transfer to most Washington colleges and universities with junior standing. Lower-division course requirements will vary depending on the transfer institution. Contact an advisor at the transfer institution to determine required coursework as soon as possible.

#### General Education Requirements

<b>Communication Skills (10 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
<b>Quantitative Skills (5 credits required)</b>		
<b>Health &amp; Physical Education (3 credits required)</b>		
<b>Oral Communication (5 credits required)</b>		
<b>Humanities (15 credits required)</b>		
<b>Social Sciences (15 credits required)</b>		
PSYC&100	GENERAL PSYCHOLOGY	5 cr.
10 Additional credits from two other departments.		
<b>Natural Sciences (15 credits required)</b>		
Must include a lab science		

#### Major Area Requirements

ACED 101	SURVEY OF ADDICTIONOLOGY	3 cr.
ACED 122	INTRODUCTION TO ADDICTIONS COUNSELING SKILLS	3 cr.
ACED 125	GROUP COUNSELING IN ADDICTIONS	3 cr.
ACED 136	LAW AND ETHICS IN ADDICTIONS COUNSELING	3 cr.
ACED 160	PHARMACOLOGY OF DRUGS OF ABUSE	3 cr.
ACED 201	THEORIES OF COUNSELING	3 cr.
PSYC&200	LIFESPAN PSYCHOLOGY *	5 cr.
Additional Specified Electives		4 cr.

**Total Required Credits: 90**

\* For non-majors also.

Refer to the Degree and Certificate Requirements section in the Clark College Catalog to identify the courses needed to satisfy the general education requirements.

#### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Treat substance abuse clients in multiple settings, including individual and group counseling situations.
- Understand and participate in addiction placement, continuing care, and discharge of patients and clients with addictions.
- Communicate effectively, accurately, and professionally, using verbal, non-verbal, and written language with diverse populations of clients, patients, colleagues, the public, and other healthcare providers.
- Demonstrate professional and ethical behaviors when working with clients, patients, other professionals, and the public.
- Successfully complete the Washington State Chemical Dependency Professional exam.
- Information Literacy: Obtain, evaluate, and ethically use information.
- Communications: Communicate with various audiences using a variety of methods.
- Quantitative I: Perform mathematical calculations without the aid of a calculator.
- Quantitative II: Solve quantitative problems and interpret the solutions.
- Health & Physical Education: Demonstrate progress toward healthier behaviors.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Social Science: Evaluate, analyze and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.
- Power, Privilege, and Inequality: Analyze patterns of power, privilege and inequality.
- Natural Science I: Apply fundamental principles and relationships from the Natural Sciences to solve problems.
- Natural Science II: Evaluate claims about the natural world using scientific methodology.

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### Art

The Clark College Art Department offers many classes to help students prepare for advanced studies at a four-year institution, enter an art profession directly, or simply enrich their spirit. Clark's Art faculty is composed of a complementary blend of highly qualified

instructors possessing advanced degrees, as well as recognized working professionals who bring with them a practical knowledge of the art marketplace.

It is imperative that students planning to transfer to a college, university or art school and seek a B.A. or B.F.A. in a design-related field see an Art Department faculty member as early as possible to plan an individualized program. Call 360-992-2370 or 360-992-2639 for an appointment.

### General - Art (suggested) (AA)

This is a suggested program for the first two years of major study for a general Art degree. Lower-division course requirements will vary depending on the transfer institution. Contact the transfer institution to determine required coursework as early as possible. Many transfer institutions require foreign language.

### General Education Requirements

<b>Communication Skills (10 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
ENGL&102	ENGLISH COMPOSITION II	5 cr.
<b>Quantitative Skills (5 credits required)</b>		
MATH&107	MATH IN SOCIETY *	5 cr.
<b>Health &amp; Physical Education (3 credits required)</b>		
HPE 258	FITNESS-WELLNESS	3 cr.
or HPE 266	MIND BODY HEALTH	3 cr.
<b>Oral Communication (5 credits required)</b>		
CMST&230	SMALL GROUP COMMUNICATION **	5 cr.
<b>Humanities (15 credits required) ***, ****</b>		
ART 220	ART HISTORY: ANCIENT TO LATE ANTIQUE	5 cr.
or		
ART 221	ART HISTORY: MEDIEVAL-RENAISSANCE	5 cr.
or ART 222	ART HISTORY: BAROQUE-MODERN	5 cr.
or ART 223	ART IN THE TWENTIETH CENTURY	5 cr.
or		
ART 225	ART HISTORY: ASIAN ART	5 cr.
or		
ART 250	WOMEN ARTISTS THROUGH HISTORY	5 cr.
<b>Social Sciences (15 credits required)</b>		
From at least three different departments.		
<b>Natural Sciences (15 credits required)</b>		
From at least two different departments and must include a lab science.		

### Pre-Major Program Recommendations

ART 103	DRAWING I	3 cr.
ART 104	OBSERVATIONAL DRAWING	4 cr.
ART 110	CREATIVITY AND CONCEPT	3 cr.
ART 115	TWO-DIMENSIONAL DESIGN	4 cr.
ART 116	COLOR THEORY AND DESIGN	4 cr.
ART 117	THREE-DIMENSIONAL DESIGN	4 cr.
ART 203	THE HUMAN FIGURE I	4 cr.
or ART 118	TIME-BASED ART AND DESIGN	4 cr.
or		
ART 105	CONTEMPORARY DRAWING PRACTICES	4 cr.

\*Recommended

\*\*CMST& 230 is recommended and can be used for a Social Science elective.

\*\*\*Complete a five credit A-list course from a department other than Art.

\*\*\*\*Five credits of Studio Art from pre-major requirements can be applied.

**Total Required Credits: 90**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Information Literacy: Obtain, evaluate, and ethically use information.
- Communications: Communicate with various audiences using a variety of methods.
- Quantitative I: Perform mathematical calculations without the aid of a calculator.
- Quantitative II: Solve quantitative problems and interpret the solutions.
- Health & Physical Education: Demonstrate progress toward healthier behaviors.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Social Science: Evaluate, analyze and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.
- Power, Privilege, and Inequality: Analyze patterns of power, privilege and inequality.
- Natural Science I: Apply fundamental principles and relationships from the Natural Sciences to solve problems.

- Natural Science II: Evaluate claims about the natural world using scientific methodology.

### General - Art, Photography Concentration (suggested) (AA)

This is a suggested program for the first two years of major study in Art with a concentration in Photography. Lower-division course requirements will vary depending on the transfer institution. Contact an advisor at the transfer institution to determine required coursework as early as possible.

#### General Education Requirements

<b>Communication Skills (10 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
ENGL&102	ENGLISH COMPOSITION II	5 cr.
<b>Quantitative Skills (5 credits required)</b>		
MATH&107	MATH IN SOCIETY	5 cr.
<b>Health &amp; Physical Education (3 credits required)</b>		
HPE 258	FITNESS-WELLNESS	3 cr.
or HPE 266	MIND BODY HEALTH	3 cr.
<b>Oral Communication (5 credits required)</b>		
CMST&230	SMALL GROUP COMMUNICATION *	5 cr.
<b>Humanities (15 credits required) **</b>		
ART 140	PHOTOGRAPHY I	4 cr.
ART 223	ART IN THE TWENTIETH CENTURY	5 cr.
<b>Social Sciences (15 credits required)</b>		
From at least three different departments.		
<b>Natural Sciences (15 credits required)</b>		
From at least two different departments and must include a lab science.		

#### Pre-Major Requirement

ART 103	DRAWING I	3 cr.
ART 115	TWO-DIMENSIONAL DESIGN	4 cr.
ART 116	COLOR THEORY AND DESIGN	4 cr.
ART 141	PHOTOGRAPHY II	4 cr.
ART 146	DIGITAL PHOTOGRAPHY II	4 cr.
CGT 101	PHOTOSHOP RASTER GRAPHICS	4 cr.

#### Recommended Electives

ART 118	TIME-BASED ART AND DESIGN	4 cr.
ART 142	PHOTOGRAPHY III	4 cr.
ART 145	DIGITAL PHOTOGRAPHY I	3 cr.
ART 208	DIGITAL ILLUSTRATION	4 cr.
ART 290	SPECIAL PROJECTS	1-6 cr.
CGT 106	SOCIAL MEDIA EXPLORATION	3 cr.
CGT 201	WEB VIDEO PRODUCTION	4 cr.
JOUR 121	COLLEGE NEWSPAPER	1-3 cr.
ART 270	PUBLICATION PRODUCTION	1-9 cr.

**Total Required Credits: 90 Minimum**

\*CMST& 230 is recommended and can be used for a Social Science elective.

\*\*Complete a five credit A-list course from a department other than Art.

#### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Information Literacy: Obtain, evaluate, and ethically use information.
- Communications: Communicate with various audiences using a variety of methods.
- Quantitative I: Perform mathematical calculations without the aid of a calculator.
- Quantitative II: Solve quantitative problems and interpret the solutions.
- Health & Physical Education: Demonstrate progress toward healthier behaviors.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Social Science: Evaluate, analyze and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.
- Power, Privilege, and Inequality: Analyze patterns of power, privilege and inequality.
- Natural Science I: Apply fundamental principles and relationships from the Natural Sciences to solve problems.
- Natural Science II: Evaluate claims about the natural world using scientific methodology.

### Associate in Fine Arts, Graphic Design Concentration (AFA )

The Art Department is offering this specialized, two-year degree intended to prepare students wishing to transfer into competitive-entry design programs at baccalaureate institutions. The degree may also well serve those looking to acquire a solid foundation in

graphic design with the goal of seeking employment opportunities with just the associate degree, including those already holding a degree in another field who are looking to change careers.

Completion of the following recommended courses does not guarantee admission as an art major with junior standing at the transfer institution. A competitive GPA and a quality portfolio are also essential. Due to the AFA degree's heavy emphasis on art and graphic design foundation courses, upon acceptance, the AFA student should expect to complete further general education courses at the baccalaureate institution in addition to the major area coursework. Students are strongly advised to select and plan courses in collaboration with their Art Department advisor, and to contact the intended transfer institution to determine required coursework as early as possible.

Also, please see the **Computer Graphics Technology (CGT)** department's career and technical degrees in Web and Graphic Design, including an Associate of Applied Technology in Web and Graphic Design, the Graphic Design Certificate of Proficiency or the Web Design Certificate of Proficiency.

### General Education Requirements

<b>Communication Skills (5 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I (recommended)	5 cr.
<b>Quantitative Skills (5 credits required)</b>		
MATH&107	MATH IN SOCIETY (recommended)	5 cr.
or any college level Math class		
<b>Health &amp; Physical Education (3 credits required)</b>		
HPE 258	FITNESS-WELLNESS (recommended)	3 cr.
or HPE 266	MIND BODY HEALTH (recommended)	3 cr.
or 2 credits of Health plus 1 credit of PE		3 cr.
<b>Humanities (5 credits required)</b>		
Choose from department other than Art. Must be A-list distribution(s)*		
<b>Social Sciences (5 credits required)</b>		
(must NOT be a part of a major requirement)		
CMST&230	SMALL GROUP COMMUNICATION (recommended)	5 cr.
or any Social Science distribution		
<b>Natural Sciences (5 credits required)</b>		
(must be a lab science)		

### Major Area Requirements

<b>Fine Art Foundations</b>		
ART 103	DRAWING I	3 cr.
ART 110	CREATIVITY AND CONCEPT	3 cr.
ART 115	TWO-DIMENSIONAL DESIGN	4 cr.
ART 116	COLOR THEORY AND DESIGN	4 cr.
ART 118	TIME-BASED ART AND DESIGN	4 cr.
ART 145	DIGITAL PHOTOGRAPHY I	3 cr.
ART 104	OBSERVATIONAL DRAWING	4 cr.
or		
ART 105	CONTEMPORARY DRAWING PRACTICES	4 cr.
or		
ART 203	THE HUMAN FIGURE I	4 cr.
ART 223	ART IN THE TWENTIETH CENTURY	5 cr.
<b>Computer Graphics Technology</b>		
CGT 101	PHOTOSHOP RASTER GRAPHICS	4 cr.
CGT 102	ILLUSTRATOR VECTOR GRAPHICS	4 cr.
CGT 103	INDESIGN PAGE LAYOUT	4 cr.
<b>Graphic Design</b>		
ART 172	GRAPHIC DESIGN EXPLORATION	3 cr.
ART 173	GRAPHIC DESIGN STUDIO I	4 cr.
ART 174	TYPOGRAPHY	4 cr.
ART 208	DIGITAL ILLUSTRATION	4 cr.
ART 215	PORTFOLIO DEVELOPMENT	3 cr.
ART 270	PUBLICATION PRODUCTION (3 credits required)	1-9 cr.
ART 271	PUBLICATION DESIGN	4 cr.
ART 273	GRAPHIC DESIGN STUDIO II	4 cr.
CGT 214	PROFESSIONAL PRACTICES	4 cr.
or CGT 240	CAPSTONE PRACTICUM	4 cr.
or CGT 199	COOPERATIVE WORK EXPERIENCE	1-5 cr.

**Total Required Credits: 103**

\*World Languages 121, 122 or 123 recommended if you do not have 2 years of high school foreign language or equivalent.

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark*

College. After successful completion of this program, students will be able to:

- Communicate with various audiences using a variety of methods.
- Demonstrate progress toward healthier behaviors.
- Analyze, interpret, and evaluate works and ideas in the Humanities.
- Obtain, evaluate, and ethically use information.
- Apply fundamental principles and relationships from the Natural Sciences to solve problems.
- Evaluate claims about the natural world using scientific methodology.
- Analyze patterns of power, privilege and inequality.
- Perform mathematical calculations without the aid of a calculator.
- Solve quantitative problems and interpret the solutions.
- Evaluate, analyze, and explain events, behaviours, and institutions using perspectives and methods in the Social Sciences.
- Recognize and apply foundational art theory.
- Place Design Projects and issues in context of society and culture.
- Generate original ideas and utilize processes toward solving visual communication problems.
- Implement tools and technology to realize visual ideas.
- Interact, collaborate and implement projects with peers, clients or others in various work environments.
- Effectively organize and manage graphic design projects.
- Use written, verbal and visual means to effectively present and communicate graphic design projects.
- Demonstrate work and business ethics in graphic design practice.
- Information Literacy: Obtain, evaluate, and ethically use information.
- Communications: Communicate with various audiences using a variety of methods.
- Quantitative I: Perform mathematical calculations without the aid of a calculator.
- Quantitative II: Solve quantitative problems and interpret the solutions.
- Health & Physical Education: Demonstrate progress toward healthier behaviors.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Social Science: Evaluate, analyze and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.
- Power, Privilege, and Inequality: Analyze patterns of power, privilege and inequality.
- Natural Science I: Apply fundamental principles and relationships from the Natural Sciences to solve problems.

### Associate in Fine Arts, Studio Art Concentration (AFA)

The Art Department offers this specialized degree primarily for students intending to pursue a Bachelor of Fine Arts in Studio Art at a baccalaureate institution with competitive portfolio entry. The program also provides a suggested framework of study for those who, although they may not wish to transfer, still want a well-rounded educational experience in studio art for personal enrichment or to develop their skills as a commercial or fine artist. The degree places emphasis on fine-art foundations courses, but also allows room for the student to explore a particular studio area (painting, drawing, photography, ceramics, or metals) in depth. The culminating ART 215 Portfolio Development course will result in a documented body of work and in related written materials that the student can use to demonstrate their skills and to carry them to the next step on their pathway within the fine arts.

Completion of the following recommended courses does not guarantee admission as an art major with junior standing at the transfer institution. A competitive GPA and a quality portfolio are also essential. Due to the AFA degree's heavy emphasis on studio art and art foundation courses, upon acceptance, the AFA student should expect to complete further general education courses at the baccalaureate institution in addition to the major-area coursework. Students are strongly advised to select and plan courses in collaboration with their Art Department advisor, and to contact the intended transfer institution to determine required coursework as early as possible.

### General Education Requirements

<b>Communication Skills (5 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
<b>Quantitative Skills (5 credits required)</b>		
<b>Social Sciences (5 credits required)</b>		
<b>Humanities Academic (A List) (5 credits required)</b>		
Cannot include courses from the AFA major requirements.		
<b>Natural Sciences (5 credits required)</b>		
Must include a lab course		
<b>Health &amp; Physical Education (3 credits required)</b>		

### Major Area Requirements

<b>Fine Art Foundations</b>		
ART 103	DRAWING I	3 cr.
ART 110	CREATIVITY AND CONCEPT	3 cr.
ART 115	TWO-DIMENSIONAL DESIGN	4 cr.
ART 116	COLOR THEORY AND DESIGN	4 cr.
ART 117	THREE-DIMENSIONAL DESIGN	4 cr.
ART 118	TIME-BASED ART AND DESIGN	4 cr.
ART 104	OBSERVATIONAL DRAWING	4 cr.
or		
ART 105	CONTEMPORARY DRAWING PRACTICES	4 cr.
or		
ART 203	THE HUMAN FIGURE I	4 cr.

ART 215	PORTFOLIO DEVELOPMENT	3 cr.
<b>Art History</b>		
Choose 2 from List A and 1 more from either list A or B (15 credit required)		
<b>List A</b>		
ART 220	ART HISTORY: ANCIENT TO LATE ANTIQUE	5 cr.
ART 221	ART HISTORY: MEDIEVAL-RENAISSANCE	5 cr.
ART 222	ART HISTORY: BAROQUE-MODERN	5 cr.
ART 223	ART IN THE TWENTIETH CENTURY	5 cr.
<b>List B</b>		
ART 225	ART HISTORY: ASIAN ART	5 cr.
ART 226	SURVEY OF NON-WESTERN ART	5 cr.
ART 250	WOMEN ARTISTS THROUGH HISTORY	5 cr.
<b>Studio Concentration</b>		9 cr.
Select a minimum of 9 credits from one of the following studio concentration areas: **MUST NOT INCLUDE those listed in the Foundations requirements**		
Metal Arts: 189, 190, 191, 295*, 296*, 297* (* required concurrent enrollment in WELD 120, 121, 122 will count towards 9 credit concentration)		
Photography: 140, 141, 142, 145, 146		
Ceramics: 180, 181, 182		
Drawing: 104, 105, 203, 204, 260, 261, 262		
Painting: 257, 258, 259, 260, 261, 262		
<b>Specified Electives</b>		10 cr.
Select an additional 10 credits from AA distribution list of Specified Electives		

**Total Required Credits: 90**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Synthesize design skills, contextual awareness, technique and craftsmanship to create innovative, coherent works.
- Identify and utilize the elements and principles of design in works of art.
- Analyze works and ideas in the visual arts within appropriate historical, cultural, and stylistic contexts.
- Demonstrate technical skill, care in handling of materials, awareness of process, and purposeful execution appropriate to discipline.
- Use discipline appropriate vocabulary.
- Information Literacy: Obtain, evaluate, and ethically use information.
- Communications: Communicate with various audiences using a variety of methods.
- Quantitative I: Perform mathematical calculations without the aid of a calculator.
- Quantitative II: Solve quantitative problems and interpret the solutions.
- Health & Physical Education: Demonstrate progress toward healthier behaviors.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Social Science: Evaluate, analyze and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.
- Power, Privilege, and Inequality: Analyze patterns of power, privilege and inequality.
- Natural Science I: Apply fundamental principles and relationships from the Natural Sciences to solve problems.

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## Associate in Arts (AA) - General Transfer

The Associate in Arts (AA) degree is designed for students planning to transfer to a four-year institution to pursue a bachelor's degree program. The degree, in most cases, meets the first two (2) years of general education requirements at the senior institution. There are exceptions please check with the transfer institution for additional information. Most students transferring with the AA degree will be granted junior standing upon entry to the senior institution. The standard Associate in Arts degree is also known as a Direct Transfer Agreement (DTA) Associate degree.

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### Associate in Arts - General Transfer (AA)

#### General Education Requirements

<b>Communication Skills (10 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
or		
PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.
<b>and</b>		
ENGL&102	ENGLISH COMPOSITION II	5 cr.
or ENGL&235 TECHNICAL WRITING		
or ENGL 109 WRITING ABOUT THE SCIENCES		
or ENGL 110 COMPOSITION FOR LITERATURE		

<b>or</b>		
ENGL 103	ADVANCED ENGLISH COMPOSITION	3 cr.
ENGL 108	WRITING ABOUT FILM	3 cr.
or ENGL 109	WRITING ABOUT THE SCIENCES	5 cr.
or ENGL 110	COMPOSITION FOR LITERATURE	5 cr.
or ENGL 212	BUSINESS COMMUNICATIONS	3 cr.
or BUS 211	BUSINESS COMMUNICATIONS	3 cr.
and	INTERPERSONAL COMMUNICATION	5 cr.
CMST&210	or CMST&220	5 cr.
PUBLIC SPEAKING	or CMST&230	5 cr.
SMALL GROUP COMMUNICATION		
<b>Quantitative Skills/Symbolic Reasoning Skills (5 credits required)</b>		Choose
from the courses below to complete the minimum of five (5) credits:		
MATH 103	COLLEGE TRIGONOMETRY	5 cr.
MATH 105	FINITE MATHEMATICS	5 cr.
MATH 111	COLLEGE ALGEBRA	5 cr.
MATH 122	MATH FOR ELEMENTARY TEACHERS	5 cr.
MATH 123	MATH FOR ELEMENTARY TEACHERS	5 cr.
MATH 124	MATH FOR ELEMENTARY TEACHERS	5 cr.
MATH 140	CALCULUS FOR LIFE SCIENCES	6 cr.
MATH 203	DESCRIPTIVE STATISTICS	3 cr.
MATH 204	INFERENTIAL STATISTICS	3 cr.
MATH 205	DISCRETE MATHEMATICS	5 cr.
MATH 215	LINEAR ALGEBRA	5 cr.
MATH 221	DIFFERENTIAL EQUATIONS	5 cr.
MATH&107	MATH IN SOCIETY	5 cr.
MATH&148	BUSINESS CALCULUS	5 cr.
MATH&151	CALCULUS I	5 cr.
MATH&152	CALCULUS II	5 cr.
MATH&153	CALCULUS III	5 cr.
MATH&254	CALCULUS IV	5 cr.
PHIL&117	TRADITIONAL LOGIC	5 cr.
PHIL&120	SYMBOLIC LOGIC	5 cr.
<b>Health &amp; Physical Education (3 credits required)</b>		
Complete the minimum of three (3) credits, choosing courses from either option one or option two below:		
<b>Option One</b>		
HLTH 100	FOOD AND YOUR HEALTH	2 cr.
or HLTH 101	HEALTH FOR ADULT LIVING	3 cr.
or HLTH 103	ENVIRONMENTAL HEALTH	2 cr.
or HLTH 104	WEIGHT AND YOUR HEALTH	2 cr.
or HLTH 206	HUMAN SEXUALITY	2 cr.
or HLTH 207	WOMEN'S HEALTH	2 cr.
or HLTH 208	MEN'S HEALTH	2 cr.
or HLTH 210	MULTICULTURAL HEALTH	2 cr.
and PE activity		
<b>Option Two</b>		
HPE 258	FITNESS-WELLNESS	3 cr.
or HPE 266	MIND BODY HEALTH	3 cr.
<b>Oral Communication (5 credits required)</b>		
CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or CMST&220	PUBLIC SPEAKING	5 cr.
or CMST&230	SMALL GROUP COMMUNICATION	5 cr.

## Distribution Requirements

### Humanities (15 credits required)

Select courses from at least two (2) subject areas for a minimum of fifteen (15) credits. You may include no more than 10 credits from any one subject area. A maximum of five (5) credits of "B" list coursework may be applied. A maximum of five (5) credits of 100-level world language can be applied.

### Social Sciences (15 credits required)

Select courses from at least three (3) subject areas for a minimum of fifteen (15) credits. You may include no more than ten (10) credits from any one subject area.

### Natural Sciences (15 credits required)

Select courses from at least two (2) subject areas for a minimum of fifteen (15) credits. You may include no more than ten (10) credits from one subject area. You must include at least one lab science.

## Elective Requirements

Complete a total of twenty-seven (27) credits from courses numbered 100 and above. The two areas of Electives are listed below. No more than 15 credits can be taken from the General Elective area.

**Specified Electives (12 credits required)**

Approved courses that apply: C, Q, HA, HB, SS, NS, SE, HE, HPE, PE, OC

A maximum of two (2) credits in PE activity can apply toward this area. Courses coded as HPE count as one (1) credit of PE activity.

**General Electives (15 credits required)**

These courses may be vocational in nature from Career and Technical education courses. The transferability of the Career-Technical courses and any ENL 100-level courses is determined by the receiving baccalaureate institution.

Note: Coursework in ESL or FLPC cannot apply to the AA degree program.

**Total Required Credits: 90**

See the Distribution List for the Associate in Arts Degree in the Degree and Certificate Requirements section of the catalog.

**Program Outcomes**

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Information Literacy: Obtain, evaluate, and ethically use information.
- Communications: Communicate with various audiences using a variety of methods.
- Quantitative I: Perform mathematical calculations without the aid of a calculator.
- Quantitative II: Solve quantitative problems and interpret the solutions.
- Health & Physical Education: Demonstrate progress toward healthier behaviors.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Social Science: Evaluate, analyze and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.
- Power, Privilege, and Inequality: Analyze patterns of power, privilege and inequality.
- Natural Science I: Apply fundamental principles and relationships from the Natural Sciences to solve problems.
- Natural Science II: Evaluate claims about the natural world using scientific methodology.

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## Automotive Technology

Clark College has three automotive program offerings:

• Toyota T-TEN

• HiTECC (Dealer Ready)

• General Automotive (MLR)

### Toyota T-TEN

Clark College is an award-winning Toyota Technical Education Network (T-TEN) training center. Our T-TEN program requires a Toyota Dealer sponsorship prior to admission. Entry into the program is yearly, beginning summer quarter; the format is a two-year program of a quarter of instruction on campus followed by a quarter of on-the-job learning. This means that for the two years that they are in the program, students alternate one quarter of full-time classroom and lab practice with one quarter as a full-time dealership apprentice.

### HiTECC (Dealer Ready) – currently under development

The Hannah initiative for Technician Education with Clark College, or HiTECC automotive program prepares students for maintenance and repair employment opportunities in automotive dealerships nationwide. This program provides a broad overview of technology used in modern vehicles. The program structure is patterned after the successful Toyota program and will require a dealership sponsor prior to entry. Students will participate in a cooperative work experience at a dealership while attending school.

### General Automotive (MLR) – currently under development

The General Automotive program will focus on repairs performed in general or independent repair facilities. The program will offer two paths: a 1-year Certificate of Proficiency as a Maintenance and Light Repair (MLR) technician, and a 2-year General Automotive Service Technician AAT degree. This program does not require a sponsor for entry, although working in a shop during the two year program is encouraged. This program provides a solid foundational education that will cover approximately 70-75% of all repairs performed in general repair facilities.

For all programs, students must complete all Major Area Requirements with a minimum grade of "C" or better in order to successfully complete the program and earn the award.

Refer to the Degree & Certificate Requirements Section in the Clark College Catalog to identify the courses needed to satisfy the General Education Requirements.

For additional information regarding General Automotive, contact Advising, at 360-992-2345.

For additional information regarding T-TEN or HiTECC, contact Jason Crone, Coordinator, at 360-992-2566, or Advising, at 360-992-2345.



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## T-TEN Automotive (AAT)

### General Education Requirements

<b>Communication Skills (5 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I (recommended)	5 cr.
<b>Computational Skills (5 credits required)</b>		
<i>College-Level Math Required</i>		
MATH 103	COLLEGE TRIGONOMETRY (recommended)	5 cr.
or MATH&107	MATH IN SOCIETY (recommended)	5 cr.
<b>Human Relations (5 credits required)</b>		
SOC& 101	INTRO TO SOCIOLOGY (recommended)	5 cr.

### Major Area Requirements

AUTO 150	INTRODUCTION TO TOYOTA	6 cr.
AUTO 151	TOYOTA ELECTRICAL I	8 cr.
AUTO 152	TOYOTA ELECTRICAL II	8 cr.
AUTO 153	TOYOTA BRAKES	7 cr.
AUTO 154	TOYOTA INTERNSHIP I	4 cr.
AUTO 155	TOYOTA STEERING AND SUSPENSION	7 cr.
AUTO 156	TOYOTA ENGINE PERFORMANCE I	8 cr.
AUTO 157	TOYOTA ENGINE PERFORMANCE II	8 cr.
AUTO 250	TOYOTA CLIMATE CONTROL	7 cr.
AUTO 251	TOYOTA INTERNSHIP II	4 cr.
AUTO 252	TOYOTA ENGINE MECHANICAL	8 cr.
AUTO 253	TOYOTA MANUAL TRANSMISSION	7 cr.
AUTO 254	AUTOMATIC TRANSMISSIONS	9 cr.
AUTO 255	TOYOTA INTERNSHIP III	4 cr.

**Total Required Credits: 110**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Achieve, maintain, and advance in the Toyota/Lexus technician certification process.
- Represent Toyota/Lexus and their dealers by being competent, highly trained, and ethical Toyota technicians.
- Use Toyota's 6-step process to verify customer vehicle concern, determine related symptoms, analyze symptoms, isolate cause of concern, correct the concern, and verify proper vehicle operation.
- Work as an effective team member in a Toyota dealership environment.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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## T-TEN Automotive (CP)

### General Education Requirements

<b>Communication Skills (3 credits required)</b>		
BTEC 106	APPLIED OFFICE ENGLISH (recommended)	3 cr.
<b>Computational Skills (3 credits required)</b>		
<b>Human Relations (3 credits required)</b>		

### Major Area Requirements

AUTO 150	INTRODUCTION TO TOYOTA	6 cr.
AUTO 151	TOYOTA ELECTRICAL I	8 cr.
AUTO 152	TOYOTA ELECTRICAL II	8 cr.
AUTO 153	TOYOTA BRAKES	7 cr.
AUTO 154	TOYOTA INTERNSHIP I	4 cr.
AUTO 155	TOYOTA STEERING AND SUSPENSION	7 cr.
AUTO 156	TOYOTA ENGINE PERFORMANCE I	8 cr.
AUTO 157	TOYOTA ENGINE PERFORMANCE II	8 cr.
AUTO 250	TOYOTA CLIMATE CONTROL	7 cr.
AUTO 251	TOYOTA INTERNSHIP II	4 cr.
AUTO 252	TOYOTA ENGINE MECHANICAL	8 cr.
AUTO 253	TOYOTA MANUAL TRANSMISSION	7 cr.
AUTO 254	AUTOMATIC TRANSMISSIONS	9 cr.
AUTO 255	TOYOTA INTERNSHIP III	4 cr.

**Program Outcomes**

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Use Toyota's 6-step process to verify customer vehicle concern, determine related symptoms, analyze symptoms, isolate cause of concern, correct the concern, and verify proper vehicle operation.
- Represent Toyota/Lexus and their dealers by being competent, highly trained, and ethical Toyota technicians.
- Achieve, maintain, and advance in the Toyota/Lexus technician certification process.
- Work as an effective team member in a Toyota dealership environment.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

**HiTECC Automotive Technology (CP)**

**General Education Requirements**

<b>Communication Skills (3 credits required)</b>		
BTEC 106	APPLIED OFFICE ENGLISH	3 cr.
<b>Computational Skills (3 credits required)</b>		
		3 cr.
<b>Human Relations (3 credits required)</b>		
		3 cr.

**Major Area Requirements**

AUTO 160	INTRODUCTION TO DEALERSHIP OPERATIONS	6 cr.
AUTO 161	ELECTRICAL I	8 cr.
AUTO 162	ELECTRICAL II	8 cr.
AUTO 163	BRAKES	7 cr.
AUTO 164	INTERNSHIP I	4 cr.
AUTO 165	STEERING AND SUSPENSION	7 cr.
AUTO 166	ENGINE PERFORMANCE I	8 cr.
AUTO 167	ENGINE PERFORMANCE II	8 cr.
AUTO 260	CLIMATE CONTROL	7 cr.
AUTO 261	INTERNSHIP II	4 cr.
AUTO 262	ENGINE MECHANICAL	8 cr.
AUTO 263	MANUAL TRANSMISSION	7 cr.
AUTO 264	AUTOMATIC TRANSMISSIONS	9 cr.
AUTO 265	INTERNSHIP III	4 cr.

**Total Required Credits: 104**

**Program Outcomes**

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Use a 6-step process to verify customer vehicle concern, determine related symptoms, analyze symptoms, isolate cause of concern, correct the concern, and verify proper vehicle operation.
- Represent sponsoring dealers by being competent, highly trained, and ethical dealership technicians.
- Achieve, maintain, and advance in the ASE technician certification process.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

**HiTECC Automotive Technology (AAT)**

**General Education Requirements**

<b>Communication Skills (5 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
<b>Computational Skills (5 credits required)</b>		
MATH 103	COLLEGE TRIGONOMETRY	5 cr.
<b>Human Relations (5 credits required)</b>		
SOC& 101	INTRO TO SOCIOLOGY	5 cr.

**Major Area Requirements**

AUTO 160	INTRODUCTION TO DEALERSHIP OPERATIONS	6 cr.
AUTO 161	ELECTRICAL I	8 cr.
AUTO 162	ELECTRICAL II	8 cr.
AUTO 163	BRAKES	7 cr.
AUTO 164	INTERNSHIP I	4 cr.
AUTO 165	STEERING AND SUSPENSION	7 cr.
AUTO 166	ENGINE PERFORMANCE I	8 cr.
AUTO 167	ENGINE PERFORMANCE II	8 cr.
AUTO 260	CLIMATE CONTROL	7 cr.
AUTO 261	INTERNSHIP II	4 cr.
AUTO 262	ENGINE MECHANICAL	8 cr.
AUTO 263	MANUAL TRANSMISSION	7 cr.
AUTO 264	AUTOMATIC TRANSMISSIONS	9 cr.
AUTO 265	INTERNSHIP III	4 cr.

**Total Required Credits: 110**

#### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Use a 6-step process to verify customer vehicle concern, determine related symptoms, analyze symptoms, isolate cause of concern, correct the concern, and verify proper vehicle operation.
- Represent sponsoring dealers by being competent, highly trained, and ethical dealership technicians.
- Achieve, maintain, and advance in the ASE technician certification process.
- Work as an effective team member in a dealership environment.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

### General Automotive Service Technician (CP)

#### General Education Requirements

##### Communication Skills (5 credits required)

PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.
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##### Computational Skills (5 credits required)

PTCS 110	PROFESSIONAL TECHNICAL COMPUTATIONAL SKILLS	5 cr.
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##### Human Relations (5 credits required)

SOC& 101	INTRO TO SOCIOLOGY (recommended)	5 cr.
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#### Specified Electives to Enter Program

AUTO 170	AUTOMOTIVE PROCESSES	3 cr.
AUTO 171	MECHANICAL PROCESSES	5 cr.

#### Major Area Requirements

AUTO 172	MAINTENANCE PROCESSES	8 cr.
AUTO 173	UNDERCAR SERVICE AND REPAIR	15 cr.
AUTO 174	UNDERHOOD SERVICE AND REPAIR	15 cr.

**Total Required Credits: 61**

#### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Apply a consistent process to determine needed vehicle maintenance and repairs.
- Service vehicle systems and replace components in accordance with manufacturer guidelines.
- Develop a process to inspect, analyze, interpret and repair automotive concerns with an emphasis on customer safety and environment sustainability.
- Access and evaluate relevancy of Electronic Service Information (ESI) during vehicle inspections.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

### General Automotive Service Technology (AAT)

## General Education Requirements

### Communication Skills (5 credits required)

PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.
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### Computational Skills (5 credits required)

PTCS 110	PROFESSIONAL TECHNICAL COMPUTATIONAL SKILLS	5 cr.
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### Human Relations (5 credits required)

SOC& 101	INTRO TO SOCIOLOGY (recommended)	5 cr.
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## Specified Electives to Enter Program

AUTO 170	AUTOMOTIVE PROCESSES	3 cr.
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AUTO 171	MECHANICAL PROCESSES	5 cr.
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## Major Area Requirements

AUTO 172	MAINTENANCE PROCESSES	8 cr.
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AUTO 173	UNDERCAR SERVICE AND REPAIR	15 cr.
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AUTO 174	UNDERHOOD SERVICE AND REPAIR	15 cr.
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AUTO 271	DRIVER COMFORT AND CONVENIENCE SYSTEMS	15 cr.
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AUTO 272	ADVANCED DIAGNOSTIC STRATEGIES	15 cr.
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AUTO 273	CAPSTONE NEW TECHNOLOGY	4 cr.
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or

AUTO 274	INTERNSHIP	4 cr.
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**Total Required Credits: 95**

## Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Apply a consistent process to determine needed vehicle maintenance and repairs.
- Service vehicle systems and replace components in accordance with manufacturer guidelines.
- Develop a process to inspect, analyze, interpret and repair automotive concerns with an emphasis on customer safety and environment sustainability.
- Access and evaluate relevancy of Electronic Service Information (ESI) during vehicle inspections.
- Comply with Industry and Governmental safety standards in relation to liability of work performed.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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## Biological Sciences

Biological sciences are the basic foundation for many professions. Upper-division requirements at the transfer institution will determine the area of specialization. Students should work with a faculty advisor to develop a specific program.

### Professional Opportunities

Following completion of a Bachelor of Arts or Science Degree at a four-year institution of the student's choice, several avenues of employment or advancement are open. A few of these are:

- Food Processing
- Commercial Fisheries
- Graduate School
- State and Federal Wildlife agencies
- Science teaching at elementary or secondary level
- Environmental Sciences
- Transfer into professional health programs (medical, dental, pharmacy, physical therapy or optometry)
- Veterinary/Animal Science

Clark's Biological Sciences majors have had excellent success in finding placement in graduate programs, health science programs, and professional areas. Clark College offers the first two years of most Biological Sciences majors: Biology, Botany, Forestry, Genetics, Marine Biology, Microbiology, Wildlife, and Zoology. Special emphasis is placed on small class size, individual instruction, field experiences, and undergraduate research opportunities. There is good exchange between the support areas of Chemistry, Geology, and Physics to aid in developing relevant courses.

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### Biological Sciences (AST1)

This is a suggested program for the first two years of major study in Biological Sciences. Lower-division course requirements will vary depending on the transfer institution. Contact an advisor at the transfer institution to determine required coursework as early

as possible.

### General Education Requirements

<b>Communication Skills (5 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
<b>Quantitative Skills (10 credits required)</b>		
MATH&151	CALCULUS I	5 cr.
MATH&152	CALCULUS II	5 cr.
<b>Health &amp; Physical Education (3 credits required)</b>		
<b>Humanities &amp; Social Sciences (15 credits required)</b>		
CMST&220	PUBLIC SPEAKING	5 cr.
or CMST&230	SMALL GROUP COMMUNICATION	5 cr.
or CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
Humanities and Social Sciences Requirements**		10 cr.

### Pre-Major Program Requirements

BIOL&221	MAJORS ECOLOGY/EVOLUTION	5 cr.
BIOL&222	MAJORS CELL/MOLECULAR	5 cr.
BIOL&223	MAJORS ORGANISMAL PHYS	5 cr.
CHEM&141	GENERAL CHEMISTRY I	4 cr.
CHEM&142	GENERAL CHEMISTRY II	4 cr.
CHEM&143	GENERAL CHEMISTRY III	4 cr.
CHEM&151	GENERAL CHEMISTRY LABORATORY I	1 cr.
CHEM&152	GENERAL CHEMISTRY LABORATORY II	1 cr.
CHEM&153	GENERAL CHEMISTRY LABORATORY III	2 cr.
MATH&153	CALCULUS III	5 cr.
or MATH 203	DESCRIPTIVE STATISTICS	3 cr.
and MATH 204	INFERENCE STATISTICS	3 cr.
PHYS&124	GENERAL PHYSICS LAB I	1 cr.
and PHYS&134	GENERAL PHYSICS I	4 cr.
PHYS&125	GENERAL PHYSICS LAB II	1 cr.
and PHYS&135	GENERAL PHYSICS II	4 cr.
PHYS&126	GENERAL PHYSICS LAB III	1 cr.
and PHYS&136	GENERAL PHYSICS III	4 cr.

### Recommended Science and Composition Electives

CHEM&241	ORGANIC CHEMISTRY I	4 cr.
CHEM&242	ORGANIC CHEMISTRY II	4 cr.
CHEM&243	ORGANIC CHEMISTRY III	4 cr.
CHEM&251	ORGANIC CHEMISTRY LABORATORY I	1 cr.
CHEM&252	ORGANIC CHEMISTRY LABORATORY II	1 cr.
CHEM&253	ORGANIC CHEMISTRY LABORATORY III	2 cr.
ENGL&102	ENGLISH COMPOSITION II *	5 cr.
or ENGL 109	WRITING ABOUT THE SCIENCES *	5 cr.

### Science Electives (10-15 credits required)

BIOL 101	ENVIRONMENTAL BIOLOGY	5 cr.
BIOL 208	FIELD STUDIES IN BIOLOGY	1-10 cr.
or BIOL 224	FLOWERING PLANTS OF THE PACIFIC NORTHWEST	5 cr.
BIOL 139	INTRODUCTION TO WILDLIFE	3 cr.
BIOL 140	MAMMALS OF THE NORTHWEST *	3 cr.
or BIOL 141	BIRDS OF THE PACIFIC NORTHWEST	3 cr.
or BIOL 143	INTRODUCTION TO FORESTRY	3 cr.
BIOL 145	REPTILES & AMPHIBIANS OF THE PACIFIC NW	3 cr.

**Total Required Credits: 90**

\* Check with chosen 4-year school.

\*\*Minimum of five (5) credits of coursework in both Humanities and Social Sciences with the additional five (5) credits from either Humanities or Social Sciences.

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate understanding of the derivative as instantaneous rate of change and the definite integral as a limit of a Riemann sum in applied problems.
- Analyze and solve multi-step problems using techniques through single-variable calculus, and communicate the results.

- Apply fundamental principles and relationships from the Natural Sciences to solve problems.
- Apply scientific methodologies to develop and answer questions about the natural world.
- Acquire scientific information from appropriate sources to analyze issues, claims or situations.
- Communicate with various audiences using a variety of methods.
- Demonstrate progress toward healthier behaviors.
- Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Obtain, evaluate, and ethically use information.
- Analyze patterns of power, privilege and inequality.
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.

### Biology DTA/MRP (AA)

This pathway is applicable to students planning to prepare for upper-division bachelor's degree majors in Biology. Many students transfer to baccalaureate institutions after completing the Associate Degree Direct Transfer Agreement (DTA); this pathway does not alter that agreement or the possibility that students may continue to follow this path. This Biology MRP streamlines and facilitates preparation for upper-division coursework in Biology across the state.

This document represents an agreement between the following baccalaureate institutions offering bachelor's degrees in Biology or a related field and the community and technical college system. Baccalaureate institutions party to this agreement include: Central Washington University; Eastern Washington University; The Evergreen State College; University of Washington Seattle; Washington State University Pullman; Western Washington University; Saint Martin's University; Seattle University; and Whitworth University.

Where the degree below allows for choice in courses, students are urged to contact potential transfer institutions to ensure that the courses chosen are best for the pathway.

Though this degree does not require such, Clark College students should know that the standard Clark AA degree path has these differences from the MRP defined below:

- Clark requires 3 credits of Health-Physical Education coursework, and
- As of Fall 2011, Clark requires a course in Oral Communication, and
- Clark's Social Science distribution requirement stipulates that students take courses from at least three different departments.

Students must also meet the residency requirements as established by Clark. While Clark College has approved offering the degree below, Clark students should keep these requirements in mind should their transfer pathways change.

Students are responsible for researching and preparing for specific major requirements of baccalaureate institutions as early as possible prior to transferring.

Please visit the Major Related Programs section of this catalog to view a [printable PDF](#) of this document.

### Generic DTA Requirement

<b>A. Basic Requirements</b>	
1. Communications Skills	10 cr.
2. Quantitative/Symbolic Reasoning Requirement Intermediate algebra proficiency is required.	5 cr.
<b>B. Distribution Requirements</b>	
1. Humanities	15 cr.
2. Social Sciences	15 cr.
3. Natural Sciences (minimum of 15 cr.)	15 cr.

### MRP Requirements

<b>A. Basic Requirements</b>	
1. English Composition	10 cr.
2. Mathematics Calculus I	5 cr.
<b>B. Distribution Requirements</b>	
1. Humanities Consistent with the requirements in all DTA degrees - no more than 10 credits per discipline area, 5 credits maximum in world languages or ASL. No more than 5 credits of performance/skills classes are allowed.	15 cr.
2. Social Sciences Consistent with the requirements in all DTA degrees - no more than 10 credits per discipline area.	15 cr.
3. 30 quarter credits, including: 15 credits general biology (majors level) 15 credits general chemistry (majors level)	30 cr.
<b>C. Electives</b>	
1. 15 additional quarter credits	15 cr.

### Clark College Equivalents

#### A. Basic Requirements

<b>1. Communication Skills</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
ENGL&102	ENGLISH COMPOSITION II	5 cr.
<b>2. Quantitative/Symbolic Reasoning Requirement</b>		
MATH&151	CALCULUS I	5 cr.
<b>B. Distribution Requirements</b>		
<b>1. Humanities</b>		15 cr.
<b>2. Social Sciences</b>		15 cr.
<b>3. Natural Sciences</b>		
BIOL&221	MAJORS ECOLOGY/EVOLUTION	5 cr.
BIOL&222	MAJORS CELL/MOLECULAR	5 cr.
BIOL&223	MAJORS ORGANISMAL PHYS	5 cr.
CHEM&141	GENERAL CHEMISTRY I	4 cr.
CHEM&142	GENERAL CHEMISTRY II	4 cr.
CHEM&143	GENERAL CHEMISTRY III	4 cr.
CHEM&151	GENERAL CHEMISTRY LABORATORY I	1 cr.
CHEM&152	GENERAL CHEMISTRY LABORATORY II	1 cr.
CHEM&153	GENERAL CHEMISTRY LABORATORY III	2 cr.
<b>C. Electives</b>		
<b>1. 14 additional quarter credits (note: Clark's chemistry sequence has 16 credits)</b>		14 cr.

## Notes

### A. Basic Requirements

1. May be individualized based on baccalaureate college of choice.
2. Statistics (a course that includes descriptive and inferential statistics) may substitute for Calculus I at some institutions; students are encouraged to check with the transfer institution early in their decision process to confirm requirements.
3. Intermediate Algebra proficiency may be demonstrated by successful completion of a Calculus and/or Statistics course for which Intermediate Algebra is a prerequisite.

### B. Distribution Requirements

1. In order to better prepare for successful transfer, students are encouraged to consult with the institution(s) to which they wish to transfer regarding the humanities courses that best support or may be required as prerequisites to their Biology curriculum.
2. In order to better prepare for successful transfer, students are encouraged to consult with the institution(s) to which they wish to transfer regarding the social science courses that best support or may be required as prerequisites to their Biology curriculum.
3. A full year sequence at a single college is the best preparation for the baccalaureate biology degree.

### C. Electives

1. Electives allow students to include additional courses to prepare for the biology major based on college selection. Examples include a full year sequence of organic chemistry for majors; a full year sequence of physics for science majors; or further math at the pre-calculus level or above or statistics.

Students should check with the transfer institution prior to taking any further biology courses beyond the one-year sequence. Some colleges require all continuing biology courses be taken at the 300 level.

**Total Required Credits: 90 min.**

## Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Acquire scientific information from appropriate sources to analyze issues, claims or situations.
- Analyze and interpret quantitative information presented verbally, graphically, numerically, and/or symbolically. (GE)
- Analyze patterns of power, privilege, and inequality.
- Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Apply fundamental principles and relationships from the Natural Sciences to solve problems.
- Apply scientific methodologies to develop and answer questions about the natural world.
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.
- Obtain, evaluate, and ethically use information. (GE)
- Communicate with various audiences using a variety of methods.
- Demonstrate an effective strategy to solve a quantitative problem.
- Information Literacy: Obtain, evaluate, and ethically use information.
- Communications: Communicate with various audiences using a variety of methods.
- Quantitative I: Perform mathematical calculations without the aid of a calculator.
- Quantitative II: Solve quantitative problems and interpret the solutions.

- Health & Physical Education: Demonstrate progress toward healthier behaviors.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Social Science: Evaluate, analyze and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.
- Power, Privilege, and Inequality: Analyze patterns of power, privilege and inequality.
- Natural Science I: Apply fundamental principles and relationships from the Natural Sciences to solve problems.
- Natural Science II: Evaluate claims about the natural world using scientific methodology.

## Business Administration

The Business Administration program teaches individuals how to maintain a competitive edge in business today through theory and practical applications. There is special emphasis on utilizing technology to solve problems and improve productivity, teamwork, interpersonal skills, and professional workforce behavior.

Whether owning, operating, and/or managing a small or large business, Clark's Business Administration and technical education programs allow the student to specialize in a particular area of business. Graduates have found successful positions in accounting, sales and services, merchandising and management.

Students must complete all specifically listed courses in Major Area Requirements with a minimum grade of "C" or better in order to successfully complete the program and earn the award.

Consult with a business academic advisor for recommended course, program planning.

### Business Administration (AAS)

The Business Administration Applied Science degree is designed for the student who wishes to complete a general business program rather than one of the specialty areas. This degree requires a core of business courses as well as additional courses that can be structured to meet a student's individual needs.

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*.Certificate of Proficiency Completed accounts for 56-60 of necessary credits.*

### General Education Requirements

<b>Communication Skills (5 credits required)</b>		
CMST&220	PUBLIC SPEAKING	5 cr.
or CMST&230	SMALL GROUP COMMUNICATION	5 cr.
<b>Health &amp; Physical Education (3 credits required)</b>		
<b>Natural Sciences (3 credits required)</b>		
<b>Humanities (3 credits required)</b>		
<b>Computational Skills- satisfied in the CPs.</b>		
<b>Human Relations - satisfied in the CPs.</b>		
<b>Social Sciences - satisfied in the CPs.</b>		

### Major Area Requirements

BUS 029	BASIC ACCOUNTING PROCEDURES	3 cr.
BUS 036	ACCOUNTING APPLICATIONS	3 cr.
BUS 110	CUSTOMER SERVICE	3 cr.
BUS& 201	BUSINESS LAW	5 cr.
BUS 211	BUSINESS COMMUNICATIONS	3 cr.
BUS 260	PRINCIPLES OF MARKETING	5 cr.

### Additional Major Area Electives

Complete a minimum of 8 to 9 additional credits from the following areas:

- Accounting (ACCT)
- Business Administration (BUS)
- Economics (ECON)
- Supervisory Management (MGMT)
- Computer Applications (BTEC - 6 credit maximum)



and

Complete as many General Elective (GE) courses as needed to reach the total of 90 credits required by the degree.

**Total Required Credits: 90-94**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Communicate effectively using business terminology in written and verbal language.
- Analyze a target market and develop product, pricing, promotion, and distribution strategies to meet customers' needs at a profit.
- Identify and demonstrate professional traits and behaviors that apply to job performance in real-world environments.
- Accurately maintain payroll register as required under federal and state laws.
- Accurately prepare, interpret, and analyze financial statements for service and merchandising businesses.
- Use micro- and macroeconomic concepts to analyze domestic and global business situations.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.
- Health and PE: Demonstrate progress toward healthier behaviors as appropriate for a career and technical education program.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts as appropriate for a career and technical education program.
- Social Science: Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences as appropriate for a career and technical education program.
- Science: Apply fundamental principles and relationships from the Natural Sciences to solve problems as appropriate for a career and technical education program.

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### Business DTA/MRP (AA)

Students need to make early contact with their potential transfer institutions regarding the specific course choices in each area of the agreement where options are listed (Humanities, Social Science, and Business Law or Introduction to Law) and for electives. Students also need to check with their potential transfer institutions regarding the requirement for overall minimum GPA, a higher GPA in a selected subset of courses, or a specific minimum grade in one or more courses such as math or English.

Though this degree does not require such, Clark College students should know that the standard Clark AA degree path has these differences from the MRP defined below:

- a. Clark requires 3 credits of Health-Physical Education coursework,
- b. As of Fall 2011, Clark requires a course in Oral Communication, and
- c. Clark's Social Science distribution requirement stipulates that students take courses from at least three different departments.

Students must also meet the residency requirements as established by Clark. While Clark College has approved offering the degree below, Clark students should keep these requirements in mind should their transfer pathways change.

Students are responsible for researching and preparing for specific major requirements of baccalaureate institutions as early as possible prior to transferring.

Please visit the Major Related Programs section of this catalog to view a [printable PDF](#) of this document.

### Generic DTA Requirements

<b>A. Basic Requirements</b>	
1. Communications Skills	10 cr.
2. Quantitative/Symbolic Reasoning Requirement	5 cr.
Intermediate algebra proficiency is required.	
<b>B. Distribution Requirements</b>	
1. Humanities	15 cr.
2. Social Sciences	15 cr.
3. Natural Sciences	0 cr.
<b>C. Major Requirements</b>	
1. Business courses	0 cr.
<b>D. Electives</b>	
1. Elective courses	0 cr.

### MRP Requirements

<b>A. Basic Requirements</b>	
1. English Composition	10 cr.
2. Quantitative/Symbolic Reasoning Requirement	10 cr.
Must include 5 credits of business calculus, calculus 1 or a higher level math that included calculus as a prerequisite.	

May include finite math or precalculus prerequisites for calculus or other courses to

prepare for business calculus.

**B. Distribution Requirements**

**1. Humanities** 15 cr.

Consistent with the requirements in all DTA degrees - no more than 10 credits per discipline area, 5 credits maximum in world languages or ASL. No more than 5 credits of performance/skills classes are allowed.

**2. Social Sciences** 15 cr.

Microeconomics (5 cr.)

Macroeconomics (5 cr.)

Additional social science - not economics (5 cr.)

**3. Natural Sciences** 15 cr.

Statistics - business statistics preferred (5 cr.)

Physical, biological, and/or earth science, including at least one lab course (10 cr.)

**C. Major Requirements**

**1. Business Courses** 20 cr.

Intro to Financial Accounting (5 cr.)

Financial Accounting II (5 cr.)

Managerial Accounting (5 cr.)

Business Law or Introduction to Law (5 cr.)

**D. Electives**

**1. Electives** 5 cr.

**Clark College Equivalents**

**A. Basic Requirements**

**1. Communication Skills**

ENGL&101 ENGLISH COMPOSITION I 5 cr.

ENGL&102 ENGLISH COMPOSITION II 5 cr.

or ENGL&235 TECHNICAL WRITING 5 cr.

**2. Quantitative/Symbolic Reasoning**

Course 1

MATH&148 BUSINESS CALCULUS 5 cr.

or MATH&151 CALCULUS I 5 cr.

or MATH&152 CALCULUS II 5 cr.

or MATH&153 CALCULUS III 5 cr.

or MATH 215 LINEAR ALGEBRA 5 cr.

or MATH 221 DIFFERENTIAL EQUATIONS 5 cr.

or MATH&254 CALCULUS IV 5 cr.

Course 2

MATH 103 COLLEGE TRIGONOMETRY 5 cr.

or MATH 105 FINITE MATHEMATICS 5 cr.

MATH 111 COLLEGE ALGEBRA 5 cr.

or MATH&152 CALCULUS II 5 cr.

or MATH&153 CALCULUS III 5 cr.

or MATH 215 LINEAR ALGEBRA 5 cr.

or MATH 221 DIFFERENTIAL EQUATIONS 5 cr.

or MATH&254 CALCULUS IV 5 cr.

**B. Distribution Requirements**

**1. Humanities**

15 quarter credits of Humanities

(CMST&220 is strongly recommended)

**2. Social Sciences**

ECON&201 MICRO ECONOMICS 5 cr.

ECON&202 MACRO ECONOMICS 5 cr.

Social Science outside Economics 5 cr.

**3. Natural Sciences**

BUS 203 DESCRIPTIVE STATISTICS \* 3 cr.

or MATH 203 DESCRIPTIVE STATISTICS \* 3 cr.

BUS 204 INFERENCE STATISTICS \* 3 cr.

or MATH 204 INFERENCE STATISTICS \* 3 cr.

Natural Science coursework, including 1 lab as defined by Clark College 9-10 cr.

\*Students can apply up to 6 credits in statistics coursework toward the natural sciences requirement.

**C. Major Requirements**

**1. Business Courses (for all schools except UW)**

ACCT&201 PRINCIPLES OF ACCOUNTING I 5 cr.

ACCT&202 PRINCIPLES OF ACCOUNTING II 5 cr.

ACCT&203 PRINCIPLES OF ACCOUNTING III 5 cr.

BUS& 201 BUSINESS LAW 5 cr.

**D. Electives**

**1. Elective Courses** 5 cr.

## Notes

### A. Basic Requirements

#### 1. Communication Skills

ENGL& 102 is REQUIRED at Eastern Washington University.

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### B. Distribution Requirements

#### 1. Humanities

Students intending the international business major should consult their potential transfer institutions regarding the level of world language required for admission to the major. 5 credits in world languages may apply to the Humanities requirement.

CMST&220 is specifically required for WSUV business transfer.

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#### 3. Natural Sciences

Students intending the manufacturing management major at WWU should consult WWU regarding the selection of natural science courses required for admission to the major.

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### C. Major Requirements

#### 1. Business Courses

Universities with a lower division Business Law requirement: UW (all campuses), WSU (all campuses), EWU, CWU, WWU, Gonzaga, SMU, SPU, and Whitworth.

The following institutions do not require a lower division Business Law course and agree to accept the course taken as part of this degree as a lower division elective, but generally not as an equivalent to the course required at the upper division: Heritage, PLU, SU, and Walla Walla University.

International students who completed a business law course specific to their home country must take a business law course at a U.S. institution in order to demonstrate proficiency in U.S. business law.

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### D. Electives

#### 1. Elective Courses

Five institutions have requirements for admission to the major that go beyond those specified above. Students can meet these requirements by careful selection of the elective University Course Equivalent to:

- WSU (all campuses): Management Information Systems MIS 250
  - Gonzaga: Management Information Systems BMIS 235
  - PLU: Computer applications CSCE 120, either an equivalent course or skills test
  - SPU: Spreadsheet BUS 1700, either an equivalent course or skills test
  - WWW: Introduction to Business Computer Systems MIS 220 (for transfer students entering fall 2014)
- 

**Total Required Credits: 90 Minimum**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Information Literacy: Obtain, evaluate, and ethically use information.
- Communications: Communicate with various audiences using a variety of methods.
- Quantitative I: Perform mathematical calculations without the aid of a calculator.
- Quantitative II: Solve quantitative problems and interpret the solutions.
- Health & Physical Education: Demonstrate progress toward healthier behaviors.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Social Science: Evaluate, analyze and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.
- Power, Privilege, and Inequality: Analyze patterns of power, privilege and inequality.
- Natural Science I: Apply fundamental principles and relationships from the Natural Sciences to solve problems.
- Natural Science II: Evaluate claims about the natural world using scientific methodology.

Accounting is an essential component of every institution and business organization. Basic accounting skills provided by the one-year certificate or the two-year degree will prove to be valuable in managing financial resources, policies and decisions.

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### Accounting Clerk (CP)

This program is designed to prepare the student for an entry-level position as an accounting system operator, an accounting clerk, or a bookkeeper. The student learns bookkeeping skills in both the manual and computerized environments.

#### General Education Requirements

<b>Communication Skills (3 credits required)</b>		
BTEC 106	APPLIED OFFICE ENGLISH	3 cr.
or		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
<b>Computational Skills (5 credits required)</b>		
BUS 102	BUSINESS MATH APPLICATIONS	5 cr.
<b>Human Relations (3 credits required)</b>		
BTEC 148	BUSINESS PROFESSIONAL SELF DEVELOPMENT	3 cr.

#### Business Core Courses

BUS 028	BASIC ACCOUNTING PROCEDURES	3 cr.
BUS& 101	INTRODUCTION TO BUSINESS	5 cr.
BTEC 100	KEYBOARDING	1-3 cr.
BTEC 150	COMPUTER BUSINESS APPLICATIONS	5 cr.
ECON 101	INTRODUCTION TO ECONOMICS	3 cr.
MGMT 101	PRINCIPLES OF MANAGEMENT	3 cr.

#### Major Area Requirements

BUS 029	BASIC ACCOUNTING PROCEDURES	3 cr.
BUS 036	ACCOUNTING APPLICATIONS	3 cr.
BUS 130	COMPUTERIZED ACCOUNTING	3 cr.
BUS 199	COOPERATIVE WORK EXPERIENCE **	1-5 cr.
BTEC 135	10-KEY CALCULATOR	1 cr.
BTEC 170	EXCEL FOR BUSINESS ***	3 cr.
CMST&220	PUBLIC SPEAKING	5 cr.

**Total Required Credits: 56-58**

\*\*Minimum of 5 credits must be earned in Cooperative Work Experience

\*\*\*Prior completion of BTEC 169 or instructor permission required. Funding sources do not pay for courses specifically called out as a requirement

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the [Gainful Employment Program Information page](#).

#### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Perform all steps of the accounting cycle using both general and specialized journals: record, post, adjust, close, and prepare financial statements for service and merchandising businesses.
- Prepare payroll register.
- Analyze and present financial statements.
- Prepare cash flow statements.
- Manually and using a calculator, perform basic computations to approach practical business problems using appropriate mathematical techniques.
- Use the latest accounting software to perform the steps of the accounting cycle.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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### Accounting (AAS)

The completion of this two-year program prepares the graduate for entry-level employment in private or public accounting. In addition, this degree provides a solid foundation for the student who is interested in completing a four-year degree in accounting.

Certificate of Proficiency Completed accounts for 56-60 of necessary credits.

### General Education Requirements

#### Communicaiton Skills (5 credits required)

CMST&220	PUBLIC SPEAKING	5 cr.
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or

CMST&230	SMALL GROUP COMMUNICATION	5 cr.
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#### Health & Physical Education (3 credits required)

#### Humanities (3 credits required)

#### Natural Sciences (3 credits required)

Human Relations - *satisfied in the CPs.*

Social Science - *satisfied in the CPs.*

Computational Skills- *satisfied in the CPs.*

### Major Area Requirements

ACCT&201	PRINCIPLES OF ACCOUNTING I	5 cr.
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ACCT&202	PRINCIPLES OF ACCOUNTING II	5 cr.
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ACCT&203	PRINCIPLES OF ACCOUNTING III	5 cr.
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BUS 130	COMPUTERIZED ACCOUNTING	3 cr.
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BUS& 201	BUSINESS LAW	5 cr.
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BUS 203	DESCRIPTIVE STATISTICS	3 cr.
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BTEC 135	10-KEY CALCULATOR	1 cr.
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BTEC 170	EXCEL FOR BUSINESS	3 cr.
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### Additional Major Area Electives

Complete a minimum of 3 to 5 additional credits from the following areas:

- Accounting (ACCT)
- Business Administration (BUS)
- Economics (ECON)
- Supervisory Management (MGMT)
- Computer Applications (BTEC - 6 credit maximum)

**and**

Complete as many General Elective (GE) courses as needed to reach the total of 90 credits required by the degree.

**Total Required Credits: 90-102**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Accurately prepare, interpret, and analyze financial statements for service and merchandising businesses.
- Accurately prepare, interpret, and analyze financial statements using computerized systems for service and merchandising businesses.
- Accurately analyze financial data and information to make business decisions.
- Provide accounting data and information for all types and sizes of businesses, including sole proprietorships, partnerships, and corporations.
- Accurately create and maintain payroll records required under federal and state laws.
- Communicate effectively using verbal, non-verbal and written language with clarity, coherence and purpose.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.
- Health and PE: Demonstrate progress toward healthier behaviors as appropriate for a career and technical education program.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts as appropriate for a career and technical education program.
- Social Science: Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences as appropriate for a career and technical education program.
- Science: Apply fundamental principles and relationships from the Natural Sciences to solve problems as appropriate for a career and technical education program.

## Business Administration-Management

The supervisory manager has the important role of getting work completed by leading, managing, and motivating people. Clark College offers a comprehensive training program that leads to a Certificate of Achievement in Supervisory Management and provides a major base for the Associate in Applied Science degree. Courses deal with solutions to supervisory problems regularly encountered on the job. This program provides an opportunity for current and potential supervisors to increase and broaden their performance levels and to advance into more responsible positions.

Students must complete all specifically listed courses in Major Area Requirements with a minimum grade of "C" or better in order to successfully complete the program and earn the award.

Consult with a business academic advisor for recommended course, program planning.

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### Supervisory Management (CP)

#### General Education Requirements

##### Communication Skills (3 credits required)

BTEC 106	APPLIED OFFICE ENGLISH	3 cr.
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OR

ENGL&101	ENGLISH COMPOSITION I	5 cr.
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##### Computational Skills (5 credits required)

BUS 102	BUSINESS MATH APPLICATIONS	5 cr.
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##### Human Relations (3 credits required)

BTEC 148	BUSINESS PROFESSIONAL SELF DEVELOPMENT	3 cr.
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#### Business Core Courses

BUS 028	BASIC ACCOUNTING PROCEDURES	3 cr.
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BUS& 101	INTRODUCTION TO BUSINESS	5 cr.
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BTEC 100	KEYBOARDING	1-3 cr.
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BTEC 150	COMPUTER BUSINESS APPLICATIONS	5 cr.
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ECON 101	INTRODUCTION TO ECONOMICS	3 cr.
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MGMT 101	PRINCIPLES OF MANAGEMENT	3 cr.
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#### Major Area Requirements

MGMT 103	APPLIED MANAGEMENT SKILLS	3 cr.
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MGMT 110	CREATIVE PROBLEM SOLVING	3 cr.
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MGMT 128	HUMAN RESOURCES MANAGEMENT	3 cr.
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MGMT 199	COOPERATIVE WORK EXPERIENCE **	1-5 cr.
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#### Additional Area Requirements

Select a minimum of 9 credits from the Management courses

**Total Required Credits: 56-58**

\*\*Minimum of 5 credits must be earned in Cooperative Work Experience

#### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Effectively manage people and resources to meet organizational and instructional goals.
  - Understand and apply managerial techniques for decision making, problem solving, and managing change.
  - Apply the understating of human resources issues and functions, identifying applicable laws.
  - Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
  - Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
  - Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.
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### Supervisory Management (AAS)

The supervisory manager has the important role of getting work completed by leading, managing, and motivateing people. Courses deal with solutions to supervisory problems regularly encountered on the job. This program provides an opportunity for current and potential supervisors to increase and broaden their performance levels and to advance into more responsible positions.

*Certificate of Proficiency Completed accounts for 56-60 of necessary credits.*

## General Education Requirements

<b>Communication Skills (5 credits required)</b>		
CMST&220	PUBLIC SPEAKING	5 cr.
or		
CMST&230	SMALL GROUP COMMUNICATION	5 cr.
<b>Health and Physical Education (3 credits required)</b>		
3 cr.		
<b>Humanities (3 credits required)</b>		
<b>Natural Sciences (3 credits required)</b>		
3 cr.		
<b>Computational Skills- satisfied in the CPs.</b>		
<b>Human Relations- satisfied in the CPs.</b>		
<b>Social Science- satisfied in the CPs.</b>		

## Major Area Requirements

BUS 029	BASIC ACCOUNTING PROCEDURES	3 cr.
BUS& 201	BUSINESS LAW	5 cr.
BUS 211	BUSINESS COMMUNICATIONS	3 cr.
or		
MGMT 107	SUPERVISORY COMMUNICATION I, WRITTEN	3 cr.
MGMT 103	APPLIED MANAGEMENT SKILLS	3 cr.
MGMT 126	PROJECT MANAGEMENT	4 cr.
MGMT 128	HUMAN RESOURCES MANAGEMENT	3 cr.
MGMT 133	PRODUCTION AND OPERATIONS MANAGEMENT	3 cr.

Complete a minimum of 5 to 6 additional credits from the following areas:

- Accounting (ACCT)
- Business Administration (BUS)
- Economics (ECON)
- Supervisory Management (MGMT)
- Computer Applications (BTEC - 6 credit maximum)

**and**

Complete as many General Elective (GE) courses as needed to reach the total of 90 credits required by the degree.

**Total Required Credits: 91-98**

## Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Apply the understanding of human resource issues and functions.
- Communicate effectively using verbal, non-verbal and written language with clarity, coherence and purpose.
- Demonstrate understanding of the legal environments in business.
- Design a comprehensive management project with given criteria using latest software.
- Effectively manage people and resources to meet organizational and institutional goals.
- Identify applicable laws in terms of managing human resources.
- Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts. (GE)
- Apply fundamental principles and relationships from the Natural Sciences to solve problems. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.
- Health and PE: Demonstrate progress toward healthier behaviors as appropriate for a career and technical education program.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts as appropriate for a career and technical education program.
- Social Science: Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences as appropriate for a career and technical education program.
- Science: Apply fundamental principles and relationships from the Natural Sciences to solve problems as appropriate for a career and technical education program.

## Business Administration-Sales, Marketing and Customer Service

The certificates and degree in this area are designed to provide students with the basic skills necessary to work for a variety of organizations that focus on the distribution of customer goods and services. Graduates of these specialized certificates have found the acquired skills very valuable in all types of business and non-profit organizations, domestic as well as international.

Students must complete all specifically listed courses in Major Area Requirements with a minimum grade of "C" or better in order to successfully complete the program and earn the award.

Consult with a business academic advisor for recommended course, program listing.

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### Marketing (CP)

#### General Education Requirements

##### Communication Skills (3 credits required)

BTEC 106	APPLIED OFFICE ENGLISH	3 cr.
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or

ENGL&101	ENGLISH COMPOSITION I	5 cr.
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##### Computational Skills (3 credits required)

BUS 102	BUSINESS MATH APPLICATIONS	5 cr.
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##### Human Relations (3 credits required)

BTEC 148	BUSINESS PROFESSIONAL SELF DEVELOPMENT	3 cr.
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#### Business Core Courses

BUS 028	BASIC ACCOUNTING PROCEDURES	3 cr.
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BUS& 101	INTRODUCTION TO BUSINESS	5 cr.
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BTEC 100	KEYBOARDING	1-3 cr.
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BTEC 150	COMPUTER BUSINESS APPLICATIONS	5 cr.
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ECON 101	INTRODUCTION TO ECONOMICS	3 cr.
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MGMT 101	PRINCIPLES OF MANAGEMENT	3 cr.
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#### Major Area Requirements

BUS 117	ADVERTISING	3 cr.
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BUS 199	COOPERATIVE WORK EXPERIENCE **	1-5 cr.
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BUS 251	PROFESSIONAL SELLING	3 cr.
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BUS 260	PRINCIPLES OF MARKETING	5 cr.
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CMST&230	SMALL GROUP COMMUNICATION	5 cr.
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**Total Required Credits: 54-56**

\*\*Minimum of 5 credits must be earned in Cooperative Work Experience

#### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Analyze a target market and develop product, pricing, promotion, and distribution strategies to meet customers' needs at a profit.
- Create an effective business ad to meet the needs of specific target market(s).
- Successfully manage a buyer-seller relationship to include service follow-up, using professional selling techniques.
- Use micro- and macroeconomics concepts to analyze domestic and global business situations.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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### Marketing (AAS)

*Certificate of Proficiency Completed accounts for 56-60 of necessary credits.*

#### General Education Requirements

##### Communication Skills (3 credits required)

CMST&220	PUBLIC SPEAKING	5 cr.
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or

CMST&230	SMALL GROUP COMMUNICATION	5 cr.
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<b>Health and Physical Education</b>		3 cr.
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<b>Humanities</b>		3 cr.
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<b>Natural Sciences</b>		3 cr.
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<b>Computational Skills- satisfied in the CPs.</b>		
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**Human Relations - satisfied in the CPs.**  
**Social Sciences - satisfied in the CPs.**

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### Major Area Requirements

BUS 029	BASIC ACCOUNTING PROCEDURES	3 cr.
BUS 105	INTRODUCTION TO INTERNATIONAL BUSINESS	3 cr.
BUS 117	ADVERTISING	3 cr.
BUS& 201	BUSINESS LAW	5 cr.
BUS 251	PROFESSIONAL SELLING	3 cr.
BUS 260	PRINCIPLES OF MARKETING	5 cr.

Complete a minimum of 3 to 14 additional credits from the following areas:

- Accounting (ACCT)
- Business Administration (BUS)
- Economics (ECON)
- Supervisory Management (MGMT)
- Computer Applications (BTEC - 6 credit maximum)

**and**

Complete as many General Elective (GE) courses as needed to reach the total of 90 credits required by the degree.

**Total Required Credits: 90-94**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Successfully manage a buyer-seller relationship to include service follow-up, using professional selling techniques.
- Analyze a target market and develop product, pricing, promotion, and distribution strategies to meet customers' needs at a profit.
- Create an effective business ad to meet the needs of specific target market(s).
- Accurately maintain payroll register as required under federal and state laws.
- Establish market strategies on the international level.
- Use micro- and macroeconomics concepts to analyze domestic and global business situations.
- Apply legal principles, related to domestic and interantional marketing.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.
- Health and PE: Demonstrate progress toward healthier behaviors as appropriate for a career and technical education program.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts as appropriate for a career and technical education program.
- Social Science: Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences as appropriate for a career and technical education program.
- Science: Apply fundamental principles and relationships from the Natural Sciences to solve problems as appropriate for a career and technical education program.

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## Business Administration-Small Business Management

Small businesses play significant roles in today's economy, both domestic and global. No matter the type of industry, management training is essential to the probability of long-term success. This Small Business Management certificate includes the basic courses that provide the necessary skills needed for small business owners to sustain and expand their operations.

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### Small Business Management (CP)

This program is designed to provide current and prospective entrepreneurs and small-business owners with a basic foundation in small business management. Coursework includes accounting, business law, marketing, and business plan development. Upon completion of this program, students will be prepared to take on the challenge of starting, owning, and managing a small business or a franchise.

### General Education Requirements

**Communication Skills (3 credits required)**

BTEC 106	APPLIED OFFICE ENGLISH	3 cr.
or		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
<b>Computational Skills (3 credits required)</b>		
BUS 102	BUSINESS MATH APPLICATIONS	5 cr.
<b>Human Relations (3 credits required)</b>		
BTEC 148	BUSINESS PROFESSIONAL SELF DEVELOPMENT	3 cr.

### Business Core Course

BUS 028	BASIC ACCOUNTING PROCEDURES	3 cr.
BUS& 101	INTRODUCTION TO BUSINESS	5 cr.
BTEC 100	KEYBOARDING	1-3 cr.
BTEC 150	COMPUTER BUSINESS APPLICATIONS	5 cr.
ECON 101	INTRODUCTION TO ECONOMICS	3 cr.
MGMT 101	PRINCIPLES OF MANAGEMENT	3 cr.

### Major Area Requirements

BUS 029	BASIC ACCOUNTING PROCEDURES	3 cr.
BUS 036	ACCOUNTING APPLICATIONS	3 cr.
BUS 115	SMALL BUSINESS MANAGEMENT	3 cr.
BUS 135	BUSINESS PLAN	3 cr.
BUS& 201	BUSINESS LAW	5 cr.
BUS 251	PROFESSIONAL SELLING	3 cr.
BUS 199	COOPERATIVE WORK EXPERIENCE **	1-5 cr.

\*\*Minimum of 5 credits must be earned in Cooperative Work Experience

**Total Required Credits: 56-58**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Analyze a target market and develop product, pricing, promotion, and distribution strategies to meet customers' needs at a profit.
- Accurately maintain payroll register as required under federal and state laws.
- Accurately prepare, interpret, and analyze financial statements for service and merchandising businesses.
- Prepare feasibility and business plans.
- Apply legal and managerial principles related to starting and managing a small business.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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## Business Technology-Business Software

Certificate and degree programs within Business Technology offer students an opportunity to become computer literate, and gain competency working with the most current business software applications as applied in a business environment. Programs emphasize the technological changes occurring in the workforce, where employment opportunities increase dramatically for those who are skilled in operating a variety of software applications within the business environment.

### Business Technology Specialist (AAT)

Many information specialist positions are available in the business world with a wide range of responsibilities. Training for higher-level positions should provide skills in a variety of computer software including Internet as well as a basic knowledge of business.

### General Education Requirements

<b>Communication Skills (5 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
<b>Computational Skills (5 credits required)</b>		
BUS 102	BUSINESS MATH APPLICATIONS	5 cr.
<b>Human Relations (5 credits required)</b>		
CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or CMST&230	SMALL GROUP COMMUNICATION	5 cr.

### Major Area Requirements

BTEC 101	BEGINNING KEYBOARDING (3 credits required) *	1-3 cr.
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or BTEC 103	REFRESHER KEYBOARDING (3 credits required) *	1-3 cr.
BTEC 106	APPLIED OFFICE ENGLISH	3 cr.
BTEC 122	WORD FOR BUSINESS	5 cr.
BTEC 140	BUSINESS TECHNOLOGY SEMINAR	2 cr.
or BTEC 141	BUSINESS TECHNOLOGY SEMINAR	2 cr.
or BTEC 143	BUSINESS TECHNOLOGY SEMINAR	2 cr.
or BTEC 145	BUSINESS TECHNOLOGY SEMINAR	2 cr.
BTEC 199	COOPERATIVE WORK EXPERIENCE (3 credits required)	1-3 cr.
or CTEC 199	COOPERATIVE WORK EXPERIENCE (3 credits required)	1-5 cr.
BTEC 120	INTRODUCTION TO WORD	3 cr.
BTEC 165	POWERPOINT PRESENTATION	3 cr.
BTEC 169	INTRODUCTION TO EXCEL	3 cr.
BTEC 180	ACCESS FOR BUSINESS	3 cr.
or CTEC 180	INTRODUCTION TO ACCESS	3 cr.
BTEC 195	E-COMMERCE: INTRO TO BUSINESS ON THE WEB	3 cr.
BTEC 211	ADMINISTRATIVE PROCEDURES	5 cr.
BUS& 101	INTRODUCTION TO BUSINESS	5 cr.
CTEC 100	INTRODUCTION TO COMPUTING	3 cr.
CTEC 101	COMPUTING ESSENTIALS	2 cr.
CTEC 102	INTRODUCTION TO WINDOWS	3 cr.
CTEC 105	INTRODUCTION TO THE INTERNET	3 cr.
CTEC 181	INTRODUCTION TO DATABASE DESIGN USING ACCESS	5 cr.
CTEC 212	COMPTIA STRATA COMPUTER AND IT SUPPORT	5 cr.

## Electives

Students must complete a minimum of 15 elective credits. Choose from the following list:

BTEC 155	INTRODUCTION TO OFFICE PUBLISHING TOOLS	3 cr.
BUS 211	BUSINESS COMMUNICATIONS	3 cr.
or ENGL 212	BUSINESS COMMUNICATIONS	3 cr.
CTEC 103	INTRODUCTION TO MAC/OS	3 cr.
CTEC 110	COMMAND LINE ESSENTIALS FOR WINDOWS AND UNIX	3 cr.
and NTEC 232	COMPTIA A+ COMPUTER SUPPORT TECHNICIAN	6 cr.
CTEC 200	PC HELP DESK WORK EXPERIENCE	1-5 cr.
ENGL 135	INTRODUCTION TO TECHNICAL WRITING	5 cr.
ECON 101	INTRODUCTION TO ECONOMICS **	3 cr.
CHEM&141	GENERAL CHEMISTRY I	4 cr.
and	GENERAL CHEMISTRY LABORATORY I **	1 cr.
CHEM&151	CMST 216	5 cr.
INTERCULTURAL COMMUNICATION **	HIST&146	5 cr.
UNITED STATES HISTORY I **	MATH 103	5 cr.
COLLEGE TRIGONOMETRY	or MATH&107	5 cr.
MATH IN SOCIETY	PHIL&120	5 cr.
SYMBOLIC LOGIC	or PHIL&117	5 cr.
TRADITIONAL LOGIC		

**Total Required Credits: 95**

\*Register for BTEC 100.

\*\*If you are thinking of continuing on to the EWU BA in Technology that is delivered here on campus, you may want to use any of these classes as your electives. Check with the EWU advisor for more information.

## Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Use common office software to solve problems and present the results in a "business-ready" manner.
- Professionally employ appropriate interpersonal skills with sensitivity to ethnic and cultural differences in dealing with customers or fellow employees.
- Utilize time-management skills and set priorities while organizing and scheduling varied office activities.
- Edit business documents implementing proper grammar, spelling, word usage, and sentence structure.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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## Office Software Applications (CP)

This program is designed for students who have had prior training in computer software applications and office skills. Students with no prior training should consider entering the two-year program.

Prerequisites for enrollment: Ability to keyboard at 30 wpm (certified by a keyboarding test) and successful completion of ENGL& 101.

Students will be required to work part-time in an office during their last quarter.

Students must maintain a cumulative grade point average of 2.00 to receive this certificate.

### General Education Requirements

<b>Communication Skills (3 credits required)</b>		
BUS 211	BUSINESS COMMUNICATIONS	3 cr.
or ENGL 212	BUSINESS COMMUNICATIONS	3 cr.
<b>Computational Skills (3 credits required)</b>		
BUS 102	BUSINESS MATH APPLICATIONS	5 cr.
<b>Human Relations (3 credits required)</b>		
CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or CMST&230	SMALL GROUP COMMUNICATION	5 cr.

### Major Area Requirements

BTEC 120	INTRODUCTION TO WORD	3 cr.
BTEC 140	BUSINESS TECHNOLOGY SEMINAR	2 cr.
or BTEC 141	BUSINESS TECHNOLOGY SEMINAR	2 cr.
or BTEC 143	BUSINESS TECHNOLOGY SEMINAR	2 cr.
or BTEC 145	BUSINESS TECHNOLOGY SEMINAR	2 cr.
and BTEC 199	COOPERATIVE WORK EXPERIENCE (2-3 credits required)	1-3 cr.
or BTEC 147	PROFESSIONAL SELF-DEVELOPMENT	2 cr.
BTEC 155	INTRODUCTION TO OFFICE PUBLISHING TOOLS	3 cr.
BTEC 165	POWERPOINT PRESENTATION	3 cr.
BTEC 169	INTRODUCTION TO EXCEL	3 cr.
BTEC 180	ACCESS FOR BUSINESS	3 cr.
or CTEC 180	INTRODUCTION TO ACCESS	3 cr.
BTEC 195	E-COMMERCE: INTRO TO BUSINESS ON THE WEB	3 cr.
BUS& 101	INTRODUCTION TO BUSINESS	5 cr.
CTEC 101	COMPUTING ESSENTIALS	2 cr.
CTEC 102	INTRODUCTION TO WINDOWS	3 cr.

**Total Required Credits: 45-46**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Use common office software to solve problems and present the results in a "business-ready" manner.
- Professionally employ appropriate interpersonal skills with sensitivity to ethnic and cultural differences in dealing with customers or fellow employees.
- Utilize time-management skills and set priorities while organizing and scheduling varied office activities.
- Edit business documents implementing proper grammar, spelling, word usage, and sentence structure.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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### Business Technology-Medical Assistant

The Medical Assistant program prepares students for both front-office clerical and back-office clinical medical assistant responsibilities by providing cognitive (knowledge), psychomotor (skills), and affective (behavior) . Clark College's Medical Assistant Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), on recommendation of the Curriculum Review Board of the American Association of Medical Assistants Endowment (AAMAE). Graduates of Clark College's Medical Assisting program are eligible to sit for the American Association of Medical Assistants (AAMA) Certified Medical Assistant Examination, as well as, the national certification for Medical Assistants. To gain employment in as Certified Medical Assistant students must graduate from the program and pass both certifications.

Commission on Accreditation of Allied Health Education Programs  
www.caahep.org  
1361 Park Street  
Clearwater, FL 33756  
727-210-2350

Medical Assistant Education Review Board  
http://www.maerb.org/  
20 N. Wacker Drive, Suite 1575  
Chicago, IL 60606

1-800-228-2262

Washington State Department of Health  
www.doh.wa.gov  
Town Center 2  
111 Israel Rd SE  
Tumwater, WA 98501  
360-236-4700  
Fax number: 360-236-4818  
Email Address: hsqa.csc@doh.wa.gov

National Center for Competency Testing  
NCCT 7007 College Blvd Suite 385 Overland Park KS 66211  
Phone: 800.875.4404 Fax: 913.498.1243  
www.ncctinc.com/

American Association of Medical Assistants  
www.aama-nt.org

Applications are accepted at any time however this is a limited entry program. Candidates who meet the preliminary requirements will be considered for winter quarter entry.

**Minimum Requirements:**

• Complete the Clark College Application for Admission and the Medical Assistant Application. Return both to the Clark College Welcome Center with the non-refundable program application fees (subject to change). For the current fee amounts, please visit the Medical Assistant website. Date of Medical Assistant Application (fee paid date) will be considered in selecting students for entry into the program.

• Complete with a 2.0 or above all Preliminary Required Courses: BMED 103, BMED 110, BMED 111, BMED 116, BTEC 107 or PTWR 135 or ENGL&101, BTEC 149, HEOC 100 or BIOL 164/165, HEOC 104 and HEOC 130.

• To comply with Washington State Law [WAC 246-901-030(2)], Clark College requires that students must submit proof of high school graduation, GED completion, or U.S. degree conferment to be eligible for selection into the Medical Assisting Program. Students who do not plan to apply transfer credits towards the program are not required to submit official transcripts.

• Take the Clark College COMPASS Test. Call (360) 992-2648 for Assessment Center hours. The following scores or equivalent classes are required prior to program entry:

• Reading: COMPASS score of 74 or higher or completion of READ 087 or equivalent with 2.0 or above.

• Obtain a minimum Clark College cumulative GPA of 2.0 or above

**Program Progression:**

• Obtain a complete physical to verify proof of fitness to perform Medical Assistant requirements.

• Contact the Health Services Center at Clark College or a personal physician for the physical. Submit physical results to the Director of the Medical Assistant program.

• Complete all program courses with a minimum grade of "C" or better.

• Maintain a cumulative GPA of 2.00 or higher.

• Do not repeat any required program course more than once.

• Provide proof of all required immunizations before registering for Medical Office Clinical Procedures I (BMED 163)

<https://www.certifiedbackground.com/> (register as a student and pay the fee required as a BMED student under the Medical Assistant Program, complete the background check on this site as well).

• Complete or take concurrently all Medical Assistant Program courses before registering for Medical Assistant Practicum (BMED 166).

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**Medical Assistant (CP)**

**General Education Requirements**

**Communication Skills (3 credits required)**

BTEC 107 BUSINESS ENGLISH 5 cr.

or PTWR 135 INTRODUCTION TO APPLIED TECHNICAL WRITING 5 cr.

**Computational Skills (3 credits required)**

BMED 103 MATH FOR HEALTH CARE PROFESSIONALS 3 cr.

**Human Relations (3 credits required)**

BMED 166 MEDICAL ASSISTANT PRACTICUM \*\* 6 cr.

**Major Area Requirements**

BMED 105 STATISTICS FOR HEALTH CARE PROFESSIONALS 2 cr.

BMED 110 MEDICAL TERMINOLOGY I 3 cr.

BMED 111 MEDICAL TERMINOLOGY II 3 cr.

BMED 112 INTRODUCTION TO PATHOPHYSIOLOGY 5 cr.

BMED 116 MEDICAL OFFICE ADMINISTRATIVE PROCEDURES I 3 cr.

BMED 117 MEDICAL OFFICE ADMINISTRATIVE PROCEDURES II 3 cr.

BMED 130 MEDICAL CODING - CPT/HCPCS 4 cr.

BMED 132 MEDICAL CODING ICD-9-CM/ICD-10 5 cr.

BMED 137 THERAPEUTIC COMM SKILLS FOR HEALTH PROF 3 cr.

BMED 138	LEGAL ASPECTS OF THE MEDICAL OFFICE	2 cr.
BMED 139	MA ASSISTANT EXAMINATION REVIEW	2 cr.
BMED 163	MEDICAL OFFICE CLINICAL PROCEDURES I (with lab)	6 cr.
BMED 164	MEDICAL OFFICE CLINICAL PROCEDURES II (with lab)	6 cr.
BMED 165	MEDICAL OFFICE LABORATORY PROCEDURES	4 cr.
BTEC 101	BEGINNING KEYBOARDING (3 credits required) ***	1-3 cr.
or BTEC 103	REFRESHER KEYBOARDING (3 credits required) ***	1-3 cr.
BTEC 147	PROFESSIONAL SELF-DEVELOPMENT	2 cr.
BTEC 149	COMPUTER APPLICATIONS ESSENTIALS	3 cr.
HEOC 100	BASIC CONCEPTS OF ANATOMY AND PHYSIOLOGY *	4 cr.
HEOC 104	HEALTH CARE DELIVERY & CAREER EXPLORATION	3 cr.
HEOC 120	AIDS EDUCATION	1 cr.
HEOC 130	PHARMACOLOGY FOR HEALTH ASSISTANTS	3 cr.
FACPR032	FIRST AID AND HEALTH CARE PROVIDER CPR	1 cr.

### Recommended Electives

BMED 129	MEDICAL REIMBURSEMENT	5 cr.
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**Total Required Credits: 85**

\* Students pursuing the A.A.S. degree should take BIOL 164/165 or another approved science elective. HEOC 100/101 will not satisfy degree requirements as outlined in the Clark College catalog.

\*\* Practicum is a non-paid, supervised work experience.

\*\*\*Register for BTEC 100

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the [Gainful Employment Program Information page](#).

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate use of medical office administrative and clinical software to complete medical office tasks (scheduling, patient information management, billing and office finances). (affective, cognitive and psychomotor).
- Apply policies and principles of office management (patient reception, scheduling, billing and office finances). (affective, cognitive and psychomotor).
- Apply policies and procedures for office management. (cognitive).
- Demonstrate the ability to work as a team member to accomplish a task. (affective).
- Communicate effectively with peers, patients, and health care professionals through written and oral communications. (affective and psychomotor).
- Accurately and effectively demonstrate clinical skills required of the medical assistant. (affective, cognitive and psychomotor).
- Successfully complete all criteria necessary for taking the CMA Exam. (cognitive and psychomotor).
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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### Medical Assisting (AAT)

#### General Education Requirements

<b>Communication Skills (5 credits required)</b>		
BTEC 107	BUSINESS ENGLISH	5 cr.
or PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.
<b>Computational Skills (5 credits required)</b>		
BMED 103	MATH FOR HEALTH CARE PROFESSIONALS	3 cr.
BMED 105	STATISTICS FOR HEALTH CARE PROFESSIONALS	2 cr.
<b>Human Relations (5 credits required)</b>		
CMST&230	SMALL GROUP COMMUNICATION	5 cr.

#### Major Area Requirements

BMED 110	MEDICAL TERMINOLOGY I	3 cr.
BMED 111	MEDICAL TERMINOLOGY II	3 cr.
BMED 112	INTRODUCTION TO PATHOPHYSIOLOGY	5 cr.
BMED 116	MEDICAL OFFICE ADMINISTRATIVE PROCEDURES I	3 cr.
BMED 117	MEDICAL OFFICE ADMINISTRATIVE PROCEDURES II	3 cr.
BMED 129	MEDICAL REIMBURSEMENT	5 cr.
BMED 130	MEDICAL CODING - CPT/HCPCS	4 cr.
BMED 132	MEDICAL CODING ICD-9-CM/ICD-10	5 cr.
BMED 137	THERAPEUTIC COMM SKILLS FOR HEALTH PROF	3 cr.
BMED 138	LEGAL ASPECTS OF THE MEDICAL OFFICE	2 cr.
BMED 139	MA ASSISTANT EXAMINATION REVIEW	2 cr.
BMED 163	MEDICAL OFFICE CLINICAL PROCEDURES I (with lab)	6 cr.

BMED 164	MEDICAL OFFICE CLINICAL PROCEDURES II (with lab)	6 cr.
BMED 165	MEDICAL OFFICE LABORATORY PROCEDURES	4 cr.
BMED 166	MEDICAL ASSISTANT PRACTICUM	6 cr.
BTEC 101	BEGINNING KEYBOARDING * (3 credits required)	1-3 cr.
or BTEC 103	REFRESHER KEYBOARDING * (3 credits required)	1-3 cr.
BTEC 147	PROFESSIONAL SELF-DEVELOPMENT	2 cr.
BTEC 149	COMPUTER APPLICATIONS ESSENTIALS	3 cr.
FACPR032	FIRST AID AND HEALTH CARE PROVIDER CPR	1 cr.
HEOC 100	BASIC CONCEPTS OF ANATOMY AND PHYSIOLOGY	4 cr.
HEOC 104	HEALTH CARE DELIVERY & CAREER EXPLORATION	3 cr.
HEOC 120	AIDS EDUCATION	1 cr.
HEOC 130	PHARMACOLOGY FOR HEALTH ASSISTANTS	3 cr.

**Total Required Credits: 92**

\* Students should register for BTEC 100.

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate use of medical office administrative and clinical software to complete medical office tasks (scheduling, patient information management, billing and office finances). (affective, cognitive and psychomotor).
- Apply policies and principles of office management (patient reception, scheduling, billing and office finances). (affective, cognitive and psychomotor).
- Apply policies and procedures for office management. (cognitive).
- Demonstrate the ability to work as a team member to accomplish a task. (affective).
- Communicate effectively with peers, patients, and health care professionals through written and oral communications. (affective and psychomotor).
- Accurately and effectively demonstrate clinical skills required of the medical assistant. (affective, cognitive and psychomotor).
- Successfully complete all criteria necessary for taking the CMA Exam. (cognitive and psychomotor)
- Demonstrate lifelong learning.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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## Business Technology-Medical Information

The Business Technology Medical Information programs (BMED Department) at Clark College teach the business, computer and medical skills needed to succeed in high-demand and high-paying professions including Medical Billing and Coding, Medical Records, Registered Health Information Technician (RHIT) and many more.

With the planned implementation of the ICD-10 medical coding system October 1, 2015, the expected need for Coders and RHITs will be the highest in recent history. Many hospitals will need two coders for every one they currently employ. Graduates of these certificates and/or degrees become eligible to obtain certification and apply for employment in these rewarding fields. The BMED programs teach both ICD-9 & ICD-10 and offer classes that utilize real-world applications such as electronic charting, Encoder, PCS, and AHIMA Virtual Labs.

BMED courses are not limited entry and students may begin the coursework any term.

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### Health Information Assistant (CP)

The Health Information Assistant program trains individuals to work in a medical record department in a variety of healthcare settings. Individuals may also work as a health unit coordinator (unit secretary) in a hospital or work in RHIT related jobs. Health information assistants assemble medical records; analyze records for completeness; file, retrieve and protect medical records; release patient information; maintain health care statistics; enter patient data; and do some basic coding.

### General Education Requirements

<b>Communication Skills (3 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
<b>Computational Skills (3 credits required)</b>		
BMED 103	MATH FOR HEALTH CARE PROFESSIONALS	3 cr.
<b>Human Relations (3 credits required)</b>		
CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or CMST&230	SMALL GROUP COMMUNICATION	5 cr.

### Major Area Requirements

BIOL 164	HUMAN BIOLOGY	4 cr.
BIOL 165	HUMAN BIOLOGY LAB	1 cr.

BMED 105	STATISTICS FOR HEALTH CARE PROFESSIONALS	2 cr.
BMED 110	MEDICAL TERMINOLOGY I	3 cr.
BMED 111	MEDICAL TERMINOLOGY II	3 cr.
BMED 112	INTRODUCTION TO PATHOPHYSIOLOGY	5 cr.
BMED 129	MEDICAL REIMBURSEMENT	5 cr.
BMED 130	MEDICAL CODING - CPT/HCPCS	4 cr.
BMED 132	MEDICAL CODING ICD-9-CM/ICD-10	5 cr.
BMED 133	INTERMEDIATE MEDICAL CODING	5 cr.
BMED 138	LEGAL ASPECTS OF THE MEDICAL OFFICE	2 cr.
BMED 140	LEGAL ASPECTS OF HEALTH INFORMATION	2 cr.
BMED 222	HEALTH INFORMATION PROCEDURES	5 cr.
BMED 226	MEDICAL OFFICE PRACTICUM	3 cr.
or BMED 250	MEDICAL OFFICE CAPSTONE PRACTICUM	3 cr.
BTEC 149	COMPUTER APPLICATIONS ESSENTIALS	3 cr.
FACPR032	FIRST AID AND HEALTH CARE PROVIDER CPR	1 cr.
HEOC 104	HEALTH CARE DELIVERY & CAREER EXPLORATION	3 cr.
HEOC 130	PHARMACOLOGY FOR HEALTH ASSISTANTS	3 cr.

**Total Required Credits: 72**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Successfully complete all criteria necessary for admission into the second year of Accredited Health Information Management (through Shoreline CC).
- Apply principles of the health information management in a health care setting.
- Demonstrate the ability to work as a team member to accomplish a task.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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### Medical Billing/Coding Specialist (CP)

The Medical Billing/Coding Specialist program prepares individuals for employment in the areas of medical insurance, physician's office coding, inpatient hospital coding, healthcare claims processing, and home-remote coding. This program also serves the needs of healthcare personnel interested in upgrading their professional skills.

Training in medical billing includes CMS-1500 and UB04 claim forms as well as the processing of insurance claims and basic health information procedures. Coding training includes CPT-4, ICD-9 & ICD-10-CM, PCS, and MSDRGs as well as the legislative changes, such as the Affordable Care Act (ACA) to the billing and coding environment. Graduates have highly marketable skills that will continue to be in high demand. With the implementation of ICD-10 this October the need for trained individuals to fill these jobs have never been greater.

This program is open-entry and you may begin taking classes in this rewarding and lucrative field any quarter.

### General Education Requirements

<b>Communication Skills (3 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
or		
PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.
<b>Computational Skills (3 credits required)</b>		
BMED 103	MATH FOR HEALTH CARE PROFESSIONALS	3 cr.
<b>Human Relations (3 credits required)</b>		
CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or		
CMST&220	PUBLIC SPEAKING	5 cr.
or		
CMST&230	SMALL GROUP COMMUNICATION	5 cr.

### Major Area Requirements

BMED 105	STATISTICS FOR HEALTH CARE PROFESSIONALS	2 cr.
BMED 110	MEDICAL TERMINOLOGY I	3 cr.
BMED 111	MEDICAL TERMINOLOGY II	3 cr.
BMED 112	INTRODUCTION TO PATHOPHYSIOLOGY	5 cr.
BMED 116	MEDICAL OFFICE ADMINISTRATIVE PROCEDURES I	3 cr.
BMED 129	MEDICAL REIMBURSEMENT	5 cr.
BMED 130	MEDICAL CODING - CPT/HCPCS	4 cr.
BMED 132	MEDICAL CODING ICD-9-CM/ICD-10	5 cr.
BMED 133	INTERMEDIATE MEDICAL CODING	5 cr.



BMED 138	LEGAL ASPECTS OF THE MEDICAL OFFICE	2 cr.
BMED 226	MEDICAL OFFICE PRACTICUM	3 cr.
or BMED 250	MEDICAL OFFICE CAPSTONE PRACTICUM	3 cr.
BMED 233	PATIENT ADVOCATE1: INTRO TO HEALTH ADVOCACY	3 cr.
BTEC 149	COMPUTER APPLICATIONS ESSENTIALS	3 cr.
BIOL 164	HUMAN BIOLOGY	4 cr.
and BIOL 165	HUMAN BIOLOGY LAB	1 cr.
or HEOC 100	BASIC CONCEPTS OF ANATOMY AND PHYSIOLOGY	4 cr.
HEOC 104	HEALTH CARE DELIVERY & CAREER EXPLORATION	3 cr.
FACPR032	FIRST AID AND HEALTH CARE PROVIDER CPR	1 cr.

### Recommended Elective (Not Required)

BMED 140	LEGAL ASPECTS OF HEALTH INFORMATION	2 cr.
BTEC 169	INTRODUCTION TO EXCEL	3 cr.

**Total Required Credits: 67-68**

Refer to the Degree and Certificate Requirements section in the Clark College Catalog to identify the courses needed to satisfy the general education requirements.

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the [Gainful Employment Program Information page](#).

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate use of medical office software to complete medical office tasks (billing and coding).
- Apply policies and principles of medical reimbursement.
- Accurately code using ICD-9 and CPT coding principles.
- Demonstrate the ability to work as a team member to accomplish a task.
- Communicate effectively with peers, patients, and health care professionals through written and oral communications.
- Accurately process medical billing claims.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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### Medical Billing/Coding Professional (AAT)

The Medical Billing/Coding AAT trains students in both inpatient and outpatient coding and billing. The graduate of this program is highly trained in billing, coding and health information with many successfully passing CPC, or CCS certifications and obtaining high-paying and rewarding positions. In addition the student will earn their Associate of Applied Technology degree.

With the planned implementation of the ICD-10 medical coding system October 1, 2015, the expected need for Coders and RHITs will be the highest in recent history. Many hospitals will need two coders for every one they currently employ. The BMED programs teach both ICD-9 & ICD-10 and offer classes that utilize real-world applications such as electronic charting, Encoder, PCS, and AHIMA Virtual Labs.

BMED courses are not limited entry and students may begin the coursework any term.

### General Education Requirements

#### Communication Skills (5 credits required)

ENGL&101	ENGLISH COMPOSITION I	5 cr.
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or

PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.
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#### Computational Skills (5 credits required)

BMED 103	MATH FOR HEALTH CARE PROFESSIONALS	3 cr.
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and

BMED 105	STATISTICS FOR HEALTH CARE PROFESSIONALS	2 cr.
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#### Human Relations (5 credits required)

CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
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or

CMST&220	PUBLIC SPEAKING	5 cr.
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or

CMST&230	SMALL GROUP COMMUNICATION	5 cr.
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### Major Area Requirements

BMED 110	MEDICAL TERMINOLOGY I	3 cr.
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BMED 111	MEDICAL TERMINOLOGY II	3 cr.
BMED 112	INTRODUCTION TO PATHOPHYSIOLOGY	5 cr.
BMED 116	MEDICAL OFFICE ADMINISTRATIVE PROCEDURES I	3 cr.
BMED 129	MEDICAL REIMBURSEMENT	5 cr.
BMED 130	MEDICAL CODING - CPT/HCPCS	4 cr.
BMED 132	MEDICAL CODING ICD-9-CM/ICD-10	5 cr.
BMED 133	INTERMEDIATE MEDICAL CODING	5 cr.
BMED 138	LEGAL ASPECTS OF THE MEDICAL OFFICE	2 cr.
BMED 140	LEGAL ASPECTS OF HEALTH INFORMATION	2 cr.
BMED 222	HEALTH INFORMATION PROCEDURES	5 cr.
BMED 226	MEDICAL OFFICE PRACTICUM	3 cr.
or		
BMED 250	MEDICAL OFFICE CAPSTONE PRACTICUM	3 cr.
BMED 227	HEALTH DATA CONTENT AND STRUCTURE	3 cr.
BMED 233	PATIENT ADVOCATE1: INTRO TO HEALTH ADVOCACY	3 cr.
BMED 242	INTERMEDIATE ANATOMY AND PHYSIOLOGY	3 cr.
BTEC 100	KEYBOARDING	1-3 cr.
BTEC 135	10-KEY CALCULATOR	1 cr.
BTEC 149	COMPUTER APPLICATIONS ESSENTIALS	3 cr.
BTEC 169	INTRODUCTION TO EXCEL	3 cr.
BIOL 164	HUMAN BIOLOGY	4 cr.
and		
BIOL 165	HUMAN BIOLOGY LAB	1 cr.
or		
HEOC 100	BASIC CONCEPTS OF ANATOMY AND PHYSIOLOGY	4 cr.
HEOC 104	HEALTH CARE DELIVERY & CAREER EXPLORATION	3 cr.
HI 202	INTRODUCTION TO HEALTH CARE QUALITY	3 cr.
FACPR032	FIRST AID AND HEALTH CARE PROVIDER CPR	1 cr.

**Total Required Credits: 91-92**

#### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate use of medical office software to complete medical office tasks (billing and coding).
- Apply policies and principles of medical reimbursement.
- Accurately code using ICD-9/10 and CPT coding principles.
- Communicate effectively with peers, patients, and health care professionals through written and oral communications. Communicate effectively with peers, patients, and health care professionals through written and oral communications. Communicate effectively with peers, patients, and health care professionals through written and oral communications.
- Accurately process medical billing claims.
- Computational Skills: Solve quantitative problems and interpret the solutions.
- Communications: Communicate with various audiences using a variety of methods.
- Human Relations: Demonstrate interpersonal/human relations skills
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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#### Health Information and Informatics Management (AAT)

The Health Information and Informatics Management (HIIM) Program at Clark College provides training in business applications coupled with medical information that allow graduates to work in numerous healthcare careers. Completion of the HIIM degree will allow graduates to sit for the RHIT exam. A Registered Health Information Technician (RHIT) is a professional certification administered by the American Health Information Management Association (AHIMA) in the United States. Passing the exam results in licensure as a health information technician.

A registered health information technician (RHIT) spends the majority of his or her day at a desk working on a computer. The RHIT frequently uses computer programs to track information about patients such as the cost of treatment and the length of a hospital stay. This information is used by the hospital's management when reviewing the budget for a department or determining whether additional staff members are needed. The job often becomes repetitive as the RHIT uses many of the same codes frequently throughout the day. However, RHITs may make themselves more valuable by specializing in certain areas of medicine. For example, some RHITs become cancer registrars or optometry coding specialists. The entry-level RHIT jobs are \$11.56-20.45 and hour (median). After a few years of experience many RHITs move into the Health Information Management Directors field. These jobs range from \$39k-109k/year. Job satisfaction is high and work is enjoyable for most Registered Health Information Technicians. In addition many licensed RHITs work in related careers including medical billing and coding, management, IT project manager, health records tech, ROI officer, and health educators. (payscale.com)

## General Education Requirements

### Communication Skills (5 credits required)

ENGL&101	ENGLISH COMPOSITION I	5 cr.
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or

PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.
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### Computational Skills (5 credits required)

BMED 103	MATH FOR HEALTH CARE PROFESSIONALS	3 cr.
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and

BMED 105	STATISTICS FOR HEALTH CARE PROFESSIONALS	2 cr.
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### Human Relations (5 credits required)

CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
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or

CMST&220	PUBLIC SPEAKING	5 cr.
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or

CMST&230	SMALL GROUP COMMUNICATION	5 cr.
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## Major Area Requirements

BIOL 164	HUMAN BIOLOGY	4 cr.
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and

BIOL 165	HUMAN BIOLOGY LAB	1 cr.
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or

HEOC 100	BASIC CONCEPTS OF ANATOMY AND PHYSIOLOGY	4 cr.
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BMED 110	MEDICAL TERMINOLOGY I	3 cr.
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BMED 111	MEDICAL TERMINOLOGY II	3 cr.
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BMED 112	INTRODUCTION TO PATHOPHYSIOLOGY	5 cr.
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BMED 116	MEDICAL OFFICE ADMINISTRATIVE PROCEDURES I	3 cr.
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BMED 129	MEDICAL REIMBURSEMENT	5 cr.
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BMED 130	MEDICAL CODING - CPT/HCPCS	4 cr.
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BMED 132	MEDICAL CODING ICD-9-CM/ICD-10	5 cr.
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BMED 133	INTERMEDIATE MEDICAL CODING	5 cr.
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BMED 138	LEGAL ASPECTS OF THE MEDICAL OFFICE	2 cr.
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BMED 140	LEGAL ASPECTS OF HEALTH INFORMATION	2 cr.
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BMED 222	HEALTH INFORMATION PROCEDURES	5 cr.
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BMED 226	MEDICAL OFFICE PRACTICUM	3 cr.
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or

BMED 250	MEDICAL OFFICE CAPSTONE PRACTICUM	3 cr.
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BMED 227	HEALTH DATA CONTENT AND STRUCTURE	3 cr.
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BMED 228	MEDICAL DOCUMENT MANAGEMENT AND TECHNOLOGY	3 cr.
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BMED 233	PATIENT ADVOCATE1: INTRO TO HEALTH ADVOCACY	3 cr.
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BMED 242	INTERMEDIATE ANATOMY AND PHYSIOLOGY	3 cr.
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BTEC 100	KEYBOARDING	1-3 cr.
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BTEC 149	COMPUTER APPLICATIONS ESSENTIALS	3 cr.
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BTEC 169	INTRODUCTION TO EXCEL	3 cr.
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FACPR032	FIRST AID AND HEALTH CARE PROVIDER CPR	1 cr.
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HEOC 104	HEALTH CARE DELIVERY & CAREER EXPLORATION	3 cr.
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HEOC 130	PHARMACOLOGY FOR HEALTH ASSISTANTS	3 cr.
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HI 202	INTRODUCTION TO HEALTH CARE QUALITY	3 cr.
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HI 210	INTRODUCTION TO HEALTH SERVICES MANAGEMENT	3 cr.
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**Total Required Credits: 100-101**

## Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Manage processes for compliance and reporting to assure the accuracy and integrity of health data.
- Assure that documentation in the health record supports the diagnosis and reflects the progress, clinical findings and discharge status.
- Respond to the information needs of internal and external customers throughout the continuum of healthcare services.
- Support the implementation of legal and regulatory requirements related to the health information infrastructure regarding healthcare privacy and confidentiality issues, so as to help manage access, disclosure, and use of personal health information.
- Ensure compliance with organization-wide health record documentation guidelines.
- Monitor, verify, and interpret clinical vocabularies and terminologies used in the organization's health information systems, including abbreviation usage diagnosis and procedure codes.
- Apply current laws, accreditation, licensure and certification standards related to health information initiatives at the national, state, local and facility levels to ensure organizational compliance.
- Enhance health data collection, storage, analysis and reporting of information including end-user hardware and software applications.
- Help to recognize HIT best practices and enact strategic and operational plans for utilization of these practices.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.

- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

## Business Technology-Office

The office professional is indispensable in every business, industry, and agency in the United States. Career advancement is readily available for the individual who develops a high degree of skill in technology, management, communication, and human relations.

Students must complete all specifically listed courses and Major Area Requirements with a minimum grade of "C" or better in order to successfully complete the program and earn the award.

Refer to the Degree & Certificate Requirements Section of the Clark College Catalog to identify the courses needed to satisfy the General Education Requirements.

### Office Assistant (CP)

An office assistant compiles data and keyboards on a computer in performance of clerical duties to maintain business records and reports. A variety of other duties are usually performed, including filing, sorting mail, answering the telephone, posting data, and computing amounts on calculators.

### General Education Requirements

<b>Communication Skills (3 credits required)</b>		
BTEC 107	BUSINESS ENGLISH	5 cr.
<b>Computational Skills (3 credits required)</b>		
BUS 102	BUSINESS MATH APPLICATIONS	5 cr.
<b>Human Relations (3 credits required)</b>		
BTEC 148	BUSINESS PROFESSIONAL SELF DEVELOPMENT	3 cr.

### Core Requirements

BTEC 100	KEYBOARDING (3 credits required)	1-3 cr.
BTEC 114	INTRODUCTION TO OUTLOOK	1 cr.
BTEC 120	INTRODUCTION TO WORD	3 cr.
BTEC 131	FILING AND RECORDS MANAGEMENT	3 cr.
BTEC 135	10-KEY CALCULATOR	1 cr.
BTEC 169	INTRODUCTION TO EXCEL	3 cr.
BTEC 140	BUSINESS TECHNOLOGY SEMINAR	2 cr.
or		
BTEC 141	BUSINESS TECHNOLOGY SEMINAR	2 cr.
or		
BTEC 143	BUSINESS TECHNOLOGY SEMINAR	2 cr.
or		
BTEC 145	BUSINESS TECHNOLOGY SEMINAR	2 cr.
and		
BTEC 199	COOPERATIVE WORK EXPERIENCE (3 credits required)	1-3 cr.

### General Office Administration Concentration Course List

BTEC 155	INTRODUCTION TO OFFICE PUBLISHING TOOLS	3 cr.
BTEC 165	POWERPOINT PRESENTATION	3 cr.
BTEC 180	ACCESS FOR BUSINESS	3 cr.
or		
CTEC 180	INTRODUCTION TO ACCESS	3 cr.
BTEC 201	DOCUMENT FORMATTING (3 credits required)	1-3 cr.
CTEC 102	INTRODUCTION TO WINDOWS	3 cr.

### Legal Office Administration Concentration Course List

BTEC 201	DOCUMENT FORMATTING (3 credits required)	1-3 cr.
PRLE 101	INTRODUCTION TO LEGAL THEORY	3 cr.
PRLE 102	LEGAL ETHICS	3 cr.
PRLE 103	LEGAL RESEARCH	3 cr.
PRLE 151	CIVIL LITIGATION I: LEGAL DOCUMENT PREPARATION	3 cr.

### Medical Office Administration Concentration Course List

BMED 110	MEDICAL TERMINOLOGY I	3 cr.
BMED 111	MEDICAL TERMINOLOGY II	3 cr.
BMED 129	MEDICAL REIMBURSEMENT	5 cr.

BMED 138	LEGAL ASPECTS OF THE MEDICAL OFFICE	2 cr.
HEOC 104	HEALTH CARE DELIVERY & CAREER EXPLORATION	3 cr.

**Total Required Credits: 47-48**

\*\*BTEC 147 may be substituted for your first term of Seminar.

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the [Gainful Employment Program Information page](#).

#### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Produce professional documents using word-processing, spreadsheet, graphics, and database software.
- Produce and edit business documents implementing proper grammar, spelling, word usage, and sentence structure.
- Utilize time-management skills and set priorities while organizing and scheduling varied office activities.
- Create and maintain accurate filing systems (alpha, numeric, subject, and geographic) with paper and electronic records.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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#### Front Office Assistant (CA)

Front office assistants are all-around office workers who perform many clerical duties which are important for the smooth operation of an office. They may file records; tabulate and post data in record books; prepare and mail receipts, invoices, and similar items; operate calculators, copiers, and computers; receive customers; and perform other customer service. Students must complete all specifically listed courses and Major Area Requirements with a minimum grade of "C" or better in order to successfully complete the program and earn the award.

#### Major Area Requirements

BTEC 107	BUSINESS ENGLISH	5 cr.
BTEC 101	BEGINNING KEYBOARDING (3 credits required) *	1-3 cr.
or BTEC 103	REFRESHER KEYBOARDING (3 credits required) *	1-3 cr.
BTEC 120	INTRODUCTION TO WORD	3 cr.
BTEC 131	FILING AND RECORDS MANAGEMENT	3 cr.
BTEC 135	10-KEY CALCULATOR	1 cr.
BTEC 148	BUSINESS PROFESSIONAL SELF DEVELOPMENT	3 cr.
BTEC 114	INTRODUCTION TO OUTLOOK	1 cr.
BTEC 169	INTRODUCTION TO EXCEL	3 cr.
BUS 102	BUSINESS MATH APPLICATIONS	5 cr.

**Total Required Credits: 27**

\*Register for BTEC 100

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the [Gainful Employment Program Information page](#).

#### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Professionally employ appropriate interpersonal skills with sensitivity to ethnic and cultural differences in dealing with customers or fellow employees.
- Compose, produce, and edit business documents utilizing proper grammar, spelling, word usage, and sentence structure.
- Create and maintain accurate filing systems with paper and electronic records.
- Use computational skills to solve business problems.

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#### Office Management (AAT)

#### General Education Requirements

<b>Communication Skills (5 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
ENGL 212	BUSINESS COMMUNICATIONS	3 cr.
or BUS 211	BUSINESS COMMUNICATIONS	3 cr.
<b>Computational Skills (5 credits required)</b>		
BUS 203	DESCRIPTIVE STATISTICS	3 cr.
<b>Human Relations (5 credits required)</b>		
CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or CMST&230	SMALL GROUP COMMUNICATION	5 cr.

## Major Area Requirements

BTEC 107	BUSINESS ENGLISH	5 cr.
BTEC 120	INTRODUCTION TO WORD	3 cr.
BTEC 155	INTRODUCTION TO OFFICE PUBLISHING TOOLS	3 cr.
BTEC 165	POWERPOINT PRESENTATION	3 cr.
BTEC 169	INTRODUCTION TO EXCEL	3 cr.
BTEC 170	EXCEL FOR BUSINESS	3 cr.
BTEC 180	ACCESS FOR BUSINESS	3 cr.
or CTEC 180	INTRODUCTION TO ACCESS	3 cr.
BTEC 195	E-COMMERCE: INTRO TO BUSINESS ON THE WEB	3 cr.
BTEC 211	ADMINISTRATIVE PROCEDURES	5 cr.
MGMT 101	PRINCIPLES OF MANAGEMENT	3 cr.
MGMT 126	PROJECT MANAGEMENT	4 cr.
MGMT 128	HUMAN RESOURCES MANAGEMENT	3 cr.
MGMT 199	COOPERATIVE WORK EXPERIENCE (3 credits required)	1-5 cr.
BUS& 101	INTRODUCTION TO BUSINESS	5 cr.
BUS 102	BUSINESS MATH APPLICATIONS	5 cr.
ACCT&201	PRINCIPLES OF ACCOUNTING I	5 cr.
ACCT&202	PRINCIPLES OF ACCOUNTING II	5 cr.
BUS 130	COMPUTERIZED ACCOUNTING	3 cr.

## Electives

Take a minimum of 4 credits from the electives listed below:

MGMT 103	APPLIED MANAGEMENT SKILLS	3 cr.
MGMT 106	MOTIVATION AND PERFORMANCE	3 cr.
MGMT 107	SUPERVISORY COMMUNICATION I, WRITTEN	3 cr.
MGMT 110	CREATIVE PROBLEM SOLVING (strongly recommended)	3 cr.
MGMT 112	CONFLICT MANAGEMENT	2 cr.
MGMT 113	HUMOR IN THE WORKPLACE	1 cr.
MGMT 120	SUPERVISOR AS A TRAINER COACH	3 cr.
MGMT 122	LEADERSHIP PRINCIPLES	3 cr.
MGMT 125	TEAM BUILDING AND GROUP BEHAVIOR (strongly recommend	3 cr.
MGMT 132	LEGAL ISSUES IN EMPLOYEE RELATIONS (strongly recommend	3 cr.
MGMT 133	PRODUCTION AND OPERATIONS MANAGEMENT	3 cr.
BUS 280	SELECTED TOPICS	1-5 cr.

**Total Required Credits: 92**

## Program Outcomes

Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:

- Create, compose, and edit a variety of office correspondence, reports, tables, spreadsheets, charts, and database reports from rough drafts of text and data using word processing, spreadsheets, database, and desktop publishing software.
- Identify functions of business organizations and management in the global marketplace.
- Developing an understanding of the functions and skills needed by supervisors.
- Knowledge of accounting theory and practice including the entire accounting cycle using computerized methods to solve common business problems.
- Demonstrate and use application of statistics to practical business problems.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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## Administrative Assistant (AAT)

### General Education Requirements

<b>Communication Skills (5 credits required)</b>		
BTEC 107	BUSINESS ENGLISH	5 cr.
<b>Computational Skills (5 credits required)</b>		
BUS 102	BUSINESS MATH APPLICATIONS	5 cr.
<b>Human Relations (5 credits required)</b>		
CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or		
CMST&230	SMALL GROUP COMMUNICATION	5 cr.

### BTEC Core Requirements

BTEC 100	KEYBOARDING	1-3 cr.
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BTEC 114	INTRODUCTION TO OUTLOOK	1 cr.
BTEC 120	INTRODUCTION TO WORD	3 cr.
BTEC 131	FILING AND RECORDS MANAGEMENT	3 cr.
BTEC 135	10-KEY CALCULATOR	1 cr.
BTEC 140	BUSINESS TECHNOLOGY SEMINAR *	2 cr.
*General Office must take two quarters of seminar for a total of 4 credits and two quarters of co-op for a total of 6 credits		
or		
BTEC 141	BUSINESS TECHNOLOGY SEMINAR	2 cr.
or		
BTEC 143	BUSINESS TECHNOLOGY SEMINAR	2 cr.
or		
BTEC 145	BUSINESS TECHNOLOGY SEMINAR	2 cr.
and		
BTEC 199	COOPERATIVE WORK EXPERIENCE	1-3 cr.
BTEC 148	BUSINESS PROFESSIONAL SELF DEVELOPMENT	3 cr.
BTEC 169	INTRODUCTION TO EXCEL	3 cr.
BTEC 211	ADMINISTRATIVE PROCEDURES	5 cr.

#### General Office Administration Concentration Course List

BTEC 155	INTRODUCTION TO OFFICE PUBLISHING TOOLS	3 cr.
BTEC 165	POWERPOINT PRESENTATION	3 cr.
BTEC 180	ACCESS FOR BUSINESS	3 cr.
or		
CTEC 180	INTRODUCTION TO ACCESS	3 cr.
BTEC 201	DOCUMENT FORMATTING	1-3 cr.
BTEC 203	SPEED AND ACCURACY BUILDING	1-3 cr.
BTEC 207	INTRODUCTION TO SHAREPOINT	3 cr.
BUS& 101	INTRODUCTION TO BUSINESS	5 cr.
CTEC 102	INTRODUCTION TO WINDOWS	3 cr.
ENGL 212	BUSINESS COMMUNICATIONS	3 cr.

#### General Office Administration Concentration

minimum of 11 credits of the following

BUS 028	BASIC ACCOUNTING PROCEDURES	3 cr.
BUS 029	BASIC ACCOUNTING PROCEDURES	3 cr.
BUS 110	CUSTOMER SERVICE	3 cr.
BUS& 201	BUSINESS LAW	5 cr.
ECON 101	INTRODUCTION TO ECONOMICS	3 cr.
MGMT 101	PRINCIPLES OF MANAGEMENT	3 cr.

#### Legal Office Administration Concentration

BTEC 165	POWERPOINT PRESENTATION	3 cr.
BTEC 170	EXCEL FOR BUSINESS	3 cr.
BTEC 180	ACCESS FOR BUSINESS	3 cr.
or		
CTEC 180	INTRODUCTION TO ACCESS	3 cr.
BTEC 201	DOCUMENT FORMATTING	1-3 cr.
BTEC 203	SPEED AND ACCURACY BUILDING	1-3 cr.
BUS& 101	INTRODUCTION TO BUSINESS	5 cr.
BUS 110	CUSTOMER SERVICE	3 cr.
BUS& 201	BUSINESS LAW	5 cr.
ECON 101	INTRODUCTION TO ECONOMICS	3 cr.
PRLE 101	INTRODUCTION TO LEGAL THEORY	3 cr.
PRLE 102	LEGAL ETHICS	3 cr.
PRLE 103	LEGAL RESEARCH	3 cr.
PRLE 151	CIVIL LITIGATION I: LEGAL DOCUMENT PREPARATION	3 cr.
PRLE 209	CIVIL LITIGATION: INSURANCE CLAIMS	3 cr.

#### Medical Office Administration Concentration Course List

BMED 105	STATISTICS FOR HEALTH CARE PROFESSIONALS	2 cr.
BMED 110	MEDICAL TERMINOLOGY I	3 cr.
BMED 111	MEDICAL TERMINOLOGY II	3 cr.
BMED 112	INTRODUCTION TO PATHOPHYSIOLOGY	5 cr.
BMED 129	MEDICAL REIMBURSEMENT	5 cr.
BMED 130	MEDICAL CODING - CPT/HCPCS	4 cr.

BMED 132	MEDICAL CODING ICD-9-CM/ICD-10	5 cr.
BMED 133	INTERMEDIATE MEDICAL CODING	5 cr.
BMED 138	LEGAL ASPECTS OF THE MEDICAL OFFICE	2 cr.
BMED 140	LEGAL ASPECTS OF HEALTH INFORMATION	2 cr.
BMED 222	HEALTH INFORMATION PROCEDURES	5 cr.
BTEC 207	INTRODUCTION TO SHAREPOINT	3 cr.
HEOC 104	HEALTH CARE DELIVERY & CAREER EXPLORATION	3 cr.
HEOC 130	PHARMACOLOGY FOR HEALTH ASSISTANTS	3 cr.

**Total Required Credits: 90-95**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Communications: Communicate with various audiences using a variety of methods.
- Computational Skills: Solve quantitative problems and interpret the solutions.
- Human Relations: Demonstrate interpersonal/human relations skills.
- Create, compose, and edit correspondence, reports, memoranda, tables, spreadsheets, charts, and database reports.
- Use Windows to create and organize files and directories.
- Professionally perform procedures used in general offices.
- Identify functions of business organizations and management in the global marketplace.
- Use computational skills to solve business problems.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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## Chemistry

Chemistry is the study of the properties of materials and the changes that materials undergo. One of the joys of learning chemistry is seeing how chemical principles operate in all aspects of daily life, from everyday activities like lighting a match to more far-reaching matters like the development of drugs to cure cancer or reduce environmental hazards.

People who have degrees in chemistry hold a variety of positions in industry, government, and academia. Those who work in the chemical industry find positions as laboratory chemists, carrying out experiments to develop new products (research and development), analyzing materials (quality control), or assisting customers in using products (sales and services). Analytical and control chemists usually have at least a bachelor's degree. Those with more experience or training may work as managers or company directors. They may also embark in the medical fields or the environmental sciences.

Clark College's Chemistry Department offers a multifaceted curriculum designed to meet a variety of needs -- from those of students pursuing a health-related Applied Science Degree to requirements for earning an Associate in Science in Chemistry, Biology, Engineering, or Physics.

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### Chemistry (AST1)

This is a suggested program for the first two years of major study in chemistry. Lower-division course requirements will vary depending on the transfer institution. Contact an advisor at the transfer institution to determine required coursework as early as possible. Courses in computer applications are recommended for all students. Additional courses are needed to satisfy graduation requirements for the Associate in Science.

### General Education Requirements

<b>Communication Skills (5 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
<b>Quantitative Skills (10 credits required)</b>		
MATH&151	CALCULUS I	5 cr.
MATH&152	CALCULUS II	5 cr.
<b>Health &amp; Physical Education (3 credits required)</b>		
<b>Humanities &amp; Social Sciences (15 credits required)</b>		
CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or CMST&220	PUBLIC SPEAKING	5 cr.
or CMST&230	SMALL GROUP COMMUNICATION	5 cr.
GERM&121	GERMAN I	5 cr.

### Pre-Major Program Requirements

CHEM&141	GENERAL CHEMISTRY I	4 cr.
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CHEM&142	GENERAL CHEMISTRY II	4 cr.
CHEM&143	GENERAL CHEMISTRY III	4 cr.
CHEM&151	GENERAL CHEMISTRY LABORATORY I	1 cr.
CHEM&152	GENERAL CHEMISTRY LABORATORY II	1 cr.
CHEM&153	GENERAL CHEMISTRY LABORATORY III	2 cr.
PHYS&241	ENGINEERING PHYSICS I	4 cr.
and PHYS&231	ENGINEERING PHYSICS LAB I	1 cr.
PHYS&242	ENGINEERING PHYSICS II	4 cr.
and PHYS&232	ENGINEERING PHYSICS LAB II	1 cr.
PHYS&243	ENGINEERING PHYSICS III	4 cr.
and PHYS&233	ENGINEERING PHYSICS LAB III	1 cr.

### Science Electives

CHEM&241	ORGANIC CHEMISTRY I	4 cr.
CHEM&242	ORGANIC CHEMISTRY II	4 cr.
CHEM&243	ORGANIC CHEMISTRY III	4 cr.
CHEM&251	ORGANIC CHEMISTRY LABORATORY I	1 cr.
CHEM&252	ORGANIC CHEMISTRY LABORATORY II	1 cr.
CHEM&253	ORGANIC CHEMISTRY LABORATORY III	2 cr.

### Other Electives- 0-11 credits

ENGL&102	ENGLISH COMPOSITION II	5 cr.
or ENGL 109	WRITING ABOUT THE SCIENCES	5 cr.
or ENGL&235	TECHNICAL WRITING	5 cr.
MATH 111	COLLEGE ALGEBRA	5 cr.
MATH 221	DIFFERENTIAL EQUATIONS	5 cr.
MATH&254	CALCULUS IV	5 cr.
GERM&122	GERMAN II **	5 cr.
GERM&123	GERMAN III **	5 cr.
<b>or</b> another language		

**Total Required Credits: 105**

\*CMST&230 would count as a social science; otherwise, the third course needs to be a social science.

\*\* Please check with the transfer institution regarding foreign language requirements.

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate understanding of the derivative as instantaneous rate of change and the definite integral as a limit of a Riemann sum in applied problems.
- Analyze and solve multi-step problems using techniques through single-variable calculus, and communicate the results.
- Apply fundamental principles and relationships from the Natural Sciences to solve problems.
- Apply scientific methodologies to develop and answer questions about the natural world.
- Acquire scientific information from appropriate sources to analyze issues, claims or situations.
- Communicate with various audiences using a variety of methods.
- Demonstrate progress toward healthier behaviors.
- Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Obtain, evaluate, and ethically use information.
- Analyze patterns of power, privilege and inequality.
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.

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## Communication Studies (Area of Study)

Working with people requires excellent verbal communication skills. Communication skills are some of the most important skills employers look for in college students preparing for the workplace, regardless of major or degree. Clark College offers courses in interpersonal, small group, and public speaking, as well as studies in mass communication, cross-cultural, and persuasion theory.

Effective communication is vital for success in most careers. Communication Studies courses enhance many degree programs and can help students develop skills that are beneficial for a variety of different fields. Students pursuing an associate in arts, an applied science degree, or a certificate of proficiency can benefit from Communication Studies courses, and many four-year degree programs require that students take at least one Communication Studies course.

Students pursuing a four-year degree in Communication Studies are strongly advised to consult a Communication Studies faculty

member and an advisor from their transfer institution for assistance in planning their degree program.

#### **Competitive Speaking and Debate Team**

Students who enjoy public speaking will find a prestigious home on the Clark College Competitive Speaking and Debate Team. The team has a long history of success, having won state, regional, and national championships. The team's notoriety extends around the globe, as team members have traveled to Italy, Spain, Czech Republic, and Great Britain to compete.

Students are encouraged to join the team to improve public speaking and critical thinking abilities, as well to increase confidence and poise. For more information, contact the speech and debate director at 360-992-2285.

#### **Career Opportunities**

Students often ask, "What can I do with a communication degree?" Choosing the best educational path to a satisfying job and successful career can be difficult for a student. In a national survey of 1,000 human resource managers, oral communication skills are identified as valuable for both obtaining information and successful job performance. Fortune 500 executives indicate that college students need better communication skills, as well as the ability to work in teams and with people from diverse backgrounds. A degree in communication is useful for the following careers:

- Administrative Services
- Advertising
- College Professor
- Community Affairs
- Conflict Resolution Specialist
- Consulting
- Customer Service
- Government
- Health Communication
- Hotel Management
- Human Development
- International Relations
- Lobbyist
- Marketing
- Marriage Counselor
- Mediation
- Negotiator
- Police Officer
- Politics
- Public Relations
- Radio & Television Broadcasting
- Social Services

#### **Communication Studies Courses**

Many Clark students earn their Associate in Arts degree at Clark, transfer to a four-year institution with a junior standing and go on to earn their bachelor's degree in communication. Communication Studies department courses typically transfer to four-year institutions. However, students should contact their transfer institution to clarify each course's transferability.

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## **Computer Aided Design & Drafting Technology**

Drafting and design activities are central to the eventual creation of physical parts and structures. Designs, communicated through drawings which have been drafted and detailed, give rise to mechanical parts and assemblies; architectural building structures; bridges, roads and highways; and a seemingly infinite array of consumer products. Almost every company involved with design and/or manufacturing has one or more design/drafting positions, and those companies use computer aided drafting & design (CADD) software applications as their primary design and drafting tool.

Clark College offers CADD Certificate of Proficiency (CP) and Associate of Applied Science (AAS) programs in three areas: architectural, civil, and mechanical. Each of these programs is structured to prepare the student for entry-level work as a CADD technician. CADD Technology department personnel strive to take your personal goals into account, and will work with you to customize your degree requirements if warranted. This program is a professional-technical program and we try to provide the best real-world environment we can. Our teaching and open lab facilities boast fine equipment and each type of CADD software we teach is kept up to its current educational version. The program requires a co-op, or internship, for graduation. This experience -- driven by you, the student -- can be vital in gaining successful employment. After gaining experience, many people are successful in setting up their own contract design/drafting businesses. Other find that greater challenges are available in engineering or architecture, and go on to pursue further education in those fields. Some see CADD work as a means to support themselves as they continue that education.

#### **General Preparation**

Since many of the program courses are computer-based, students should be comfortable using a computer before entering any of these programs. If interested, contact a CADD department faculty advisor to help you in your career and course-scheduling decisions. Placement testing is required to determine if mathematical and reading levels are adequate for the required courses, or if remedial coursework must be first completed. Interested high school students should prepare themselves by taking mathematics (algebra and geometry), physics, and drafting in particular.

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## Architectural Computer-Aided Drafting/Design (CP)

### General Education Requirements

<b>Communication Skills (3 credits required)</b>		
ENGL&235	TECHNICAL WRITING	5 cr.
<b>Computational Skills (3 credits required)</b>		
MATH 103	COLLEGE TRIGONOMETRY	5 cr.
<b>Human Relations (3 credits required)</b>		
HDEV 198	PORTFOLIO DEVELOPMENT	1 cr.
HDEV 200	PROFESSIONAL DEVELOPMENT	2 cr.

### Major Area Requirements

CADD 101	CADD ORIENTATION	1 cr.
CADD 102	CADD CAREERS	1 cr.
CADD 110	BASIC SKETCHUP	4 cr.
CADD 140	BASIC AUTOCAD	4 cr.
or ENGR 140	BASIC AUTOCAD	4 cr.
CADD 141	ARCHITECTURAL DRAFTING 1	4 cr.
CADD 142	INTERMEDIATE AUTOCAD	2 cr.
CADD 170	BASIC REVIT: RESIDENTIAL	4 cr.
CADD 171	REVIT: COMMERCIAL	4 cr.
CADD 199	COOPERATIVE WORK EXPERIENCE (5 credits required)	1-6 cr.
CADD 207	PRESENTATION GRAPHICS	4 cr.
CADD 210	ARCHITECTURAL DRAFTING 2	3 cr.
CADD 214	AUTOCAD CUSTOMIZATION	3 cr.
ENGR 113	ENGINEERING SKETCHING AND VISUALIZATION (formerly ENGR 112, then ENGR&114)	2 cr.

**Total Required Credits: 54**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Create and manipulate architectural drawings and models in a multitude of CADD applications (core CADD skills).
- Fully annotate and print architectural drawings (core drafting skills).
- Demonstrate aspects of elementary design skills.
- Discuss and communicate aspects of various industries and businesses that typically use CADD applications.
- Demonstrate aspects of employability for an entry-level CADD-related position.
- Demonstrate aspects of professionalism as appropriate for an entry-level CADD-related position.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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## Civil Computer-Aided Drafting/Design (CP)

### General Education Requirements

<b>Communication Skills (3 credits required)</b>		
ENGL&235	TECHNICAL WRITING	5 cr.
<b>Computational Skills (3 credits required)</b>		
MATH 103	COLLEGE TRIGONOMETRY	5 cr.
<b>Human Relations (3 credits required)</b>		
HDEV 198	PORTFOLIO DEVELOPMENT	1 cr.
HDEV 200	PROFESSIONAL DEVELOPMENT	2 cr.

### Major Area Requirements

CADD 101	CADD ORIENTATION	1 cr.
CADD 102	CADD CAREERS	1 cr.
CADD 130	BASIC MICROSTATION	4 cr.
CADD 140	BASIC AUTOCAD	4 cr.
or ENGR 140	BASIC AUTOCAD	4 cr.
CADD 142	INTERMEDIATE AUTOCAD	2 cr.
CADD 143	CIVIL DRAFTING 1 WITH CIVIL 3D	4 cr.
CADD 170	BASIC REVIT: RESIDENTIAL	4 cr.
CADD 171	REVIT: COMMERCIAL	4 cr.

CADD 199	COOPERATIVE WORK EXPERIENCE (5 credits required)	1-6 cr.
CADD 207	PRESENTATION GRAPHICS	4 cr.
CADD 214	AUTOCAD CUSTOMIZATION	3 cr.
CADD 230	CIVIL DRAFTING 2	3 cr.
ENGR 113	ENGINEERING SKETCHING AND VISUALIZATION (formerly ENGR 112, then ENGR&114)	2 cr.
SURV 100	INTRODUCTION TO GPS	2 cr.
SURV 102	FUNDAMENTALS OF SURVEY	2 cr.

**Total Required Credits: 58**

#### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Create and manipulate civil drawings and models in a multitude of CADD applications (core CADD skills).
- Fully annotate and print civil drawings (core drafting skills).
- Demonstrate aspects of elementary design skills.
- Discuss and communicate aspects of various industries and businesses that typically use CADD applications.
- Demonstrate aspects of employability for an entry-level CADD-related position.
- Demonstrate aspects of professionalism as appropriate for an entry-level CADD-related position.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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#### Mechanical Computer-Aided Drafting/Design (CP)

##### General Education Requirement

###### Communication Skills (3 credits required)

ENGL&235	TECHNICAL WRITING	5 cr.
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###### Computational Skills (3 credits required)

MATH 103	COLLEGE TRIGONOMETRY	5 cr.
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###### Human Relations (3 credits required)

HDEV 198	PORTFOLIO DEVELOPMENT	1 cr.
HDEV 200	PROFESSIONAL DEVELOPMENT	2 cr.

##### Major Area Requirements

CADD 101	CADD ORIENTATION	1 cr.
CADD 102	CADD CAREERS	1 cr.
CADD 140	BASIC AUTOCAD	4 cr.
or ENGR 140	BASIC AUTOCAD	4 cr.
CADD 142	INTERMEDIATE AUTOCAD	2 cr.
CADD 150	BASIC SOLIDWORKS	4 cr.
or ENGR 150	BASIC SOLIDWORKS	4 cr.
CADD 154	MECHANICAL DRAFTING 1 WITH SOLIDWORKS	4 cr.
CADD 155	INTERMEDIATE SOLIDWORKS - TOP DOWN DESIGN	4 cr.
CADD 160	INTRODUCTION TO CAM	2 cr.
CADD 199	COOPERATIVE WORK EXPERIENCE (5 credits required)	1-6 cr.
CADD 207	PRESENTATION GRAPHICS	4 cr.
CADD 216	INTEGRATED COMPUTATIONAL DESIGN	3 cr.
CADD 240	MECHANICAL DRAFTING 2	3 cr.
ENGR 113	ENGINEERING SKETCHING AND VISUALIZATION (formerly ENGR 112, then ENGR&114)	2 cr.
ENGR 115	GEOMETRIC DIMENSIONING AND TOLERANCING	2 cr.

**Total Required Credits: 54**

#### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Create and manipulate mechanical drawings and models in a multitude of CADD applications (core CADD skills).
- Fully annotate and print mechanical drawings (core drafting skills).
- Demonstrate aspects of elementary design skills.
- Discuss and communicate aspects of various industries and businesses that typically use CADD applications.
- Demonstrate aspects of employability for an entry-level CADD-related position.

- Demonstrate aspects of professionalism as appropriate for an entry-level CADD-related position.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

## Architectural Computer-Aided Drafting/Design (AAS)

### General Education Requirements

<b>Communication Skills (6 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
ENGL&235	TECHNICAL WRITING	5 cr.
<b>Health &amp; Physical Education (3 credits required)</b>		
<b>Computational Skills (3 credits required)</b>		
MATH 103	COLLEGE TRIGONOMETRY	5 cr.
<b>Human Relations (3 credits required)</b>		
<b>Humanities (3 credits required)</b>		
ART 103	DRAWING I	3 cr.
<b>Social Sciences (3 credits required)</b>		
<b>Natural Sciences (3 credits required)</b>		
Must earn 5 credits from PHYS, PHSC, or ENVS courses.		

### Major Area Requirements

CADD 101	CADD ORIENTATION	1 cr.
CADD 102	CADD CAREERS	1 cr.
CADD 110	BASIC SKETCHUP	4 cr.
CADD 120	BASIC RHINOCEROS	4 cr.
CADD 140	BASIC AUTOCAD	4 cr.
or ENGR 140	BASIC AUTOCAD	4 cr.
CADD 141	ARCHITECTURAL DRAFTING 1	4 cr.
CADD 142	INTERMEDIATE AUTOCAD	2 cr.
CADD 170	BASIC REVIT: RESIDENTIAL	4 cr.
CADD 171	REVIT: COMMERCIAL	4 cr.
CADD 199	COOPERATIVE WORK EXPERIENCE (5 credits required)	1-6 cr.
CADD 207	PRESENTATION GRAPHICS	4 cr.
CADD 210	ARCHITECTURAL DRAFTING 2	3 cr.
CADD 214	AUTOCAD CUSTOMIZATION	3 cr.
CADD 299	CADD CAPSTONE PRACTICUM	5 cr.
ENGR 113	ENGINEERING SKETCHING AND VISUALIZATION	2 cr.
ART 104	OBSERVATIONAL DRAWING	4 cr.
ART 105	CONTEMPORARY DRAWING PRACTICES	4 cr.
HDEV 198	PORTFOLIO DEVELOPMENT	1 cr.
HDEV 200	PROFESSIONAL DEVELOPMENT	2 cr.

**Total Required Credits: 93**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Create and manipulate architectural drawings and models in a multitude of CADD applications (core CADD skills).
- Fully annotate and print architectural drawings (core drafting skills).
- Demonstrate aspects of elementary design skills.
- Discuss and communicate aspects of various industries and businesses that typically use CADD applications.
- Demonstrate aspects of employability for an entry-level CADD-related position.
- Demonstrate aspects of professionalism as appropriate for an entry-level CADD-related position.
- Demonstrate core architectural CADD and drafting skills, and professionalism and employability, through working with a client on a capstone project.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.
- Health and PE: Demonstrate progress toward healthier behaviors as appropriate for a career and technical education program.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts as appropriate for a career and technical education program.
- Social Science: Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences as appropriate for a career and technical education program.
- Science: Apply fundamental principles and relationships from the Natural Sciences to solve problems as appropriate for a career and technical education program.

## Civil Computer-Aided Drafting/Design (AAS)

## General Education Requirements

<b>Communication Skills (6 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
ENGL&235	TECHNICAL WRITING	5 cr.
<b>Health &amp; Physical Education (3 credits required)</b>		
<b>Computational Skills (3 credits required)</b>		
MATH 103	COLLEGE TRIGONOMETRY	5 cr.
<b>Human Relations (3 credits required)</b>		
<b>Humanities (3 credits required)</b>		
<b>Social Sciences (3 credits required)</b>		
<b>Natural Sciences (3 credits required)</b>		
Must earn 5 credits from PHYS, PHSC, or ENVS courses.		5 cr.

## Major Area Requirements

CADD 101	CADD ORIENTATION	1 cr.
CADD 102	CADD CAREERS	1 cr.
CADD 120	BASIC RHINOCEROS	4 cr.
CADD 130	BASIC MICROSTATION	4 cr.
CADD 140	BASIC AUTOCAD	4 cr.
or ENGR 140	BASIC AUTOCAD	4 cr.
CADD 142	INTERMEDIATE AUTOCAD	2 cr.
CADD 143	CIVIL DRAFTING 1 WITH CIVIL 3D	4 cr.
CADD 170	BASIC REVIT: RESIDENTIAL	4 cr.
CADD 171	REVIT: COMMERCIAL	4 cr.
CADD 199	COOPERATIVE WORK EXPERIENCE (5 credits required)	1-6 cr.
CADD 207	PRESENTATION GRAPHICS	4 cr.
CADD 214	AUTOCAD CUSTOMIZATION	3 cr.
CADD 230	CIVIL DRAFTING 2	3 cr.
CADD 299	CADD CAPSTONE PRACTICUM	5 cr.
ENGR 113	ENGINEERING SKETCHING AND VISUALIZATION	2 cr.
SURV 100	INTRODUCTION TO GPS	2 cr.
SURV 102	FUNDAMENTALS OF SURVEY	2 cr.
SURV 125	INTRODUCTION TO GIS	3 cr.
SURV 250	ARC GIS I	3 cr.
HDEV 198	PORTFOLIO DEVELOPMENT	1 cr.
HDEV 200	PROFESSIONAL DEVELOPMENT	2 cr.

**Total Required Credits: 96**

## Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Create and manipulate civil drawings and models in a multitude of CADD applications (core CADD skills).
- Fully annotate and print civil drawings (core drafting skills).
- Demonstrate aspects of elementary design skills.
- Discuss and communicate aspects of various industries and businesses that typically use CADD applications.
- Demonstrate aspects of employability for an entry-level CADD-related position.
- Demonstrate aspects of professionalism as appropriate for an entry-level CADD-related position.
- Demonstrate core civil CADD and drafting skills, and professionalism and employability, through working with a client on a capstone project.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.
- Health and PE: Demonstrate progress toward healthier behaviors as appropriate for a career and technical education program.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts as appropriate for a career and technical education program.
- Social Science: Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences as appropriate for a career and technical education program.
- Science: Apply fundamental principles and relationships from the Natural Sciences to solve problems as appropriate for a career and technical education program.

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## Mechanical Computer-Aided Drafting/Design (AAS)

### General Education Requirements

<b>Communication Skills (6 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
ENGL&235	TECHNICAL WRITING	5 cr.

<b>Health &amp; Physical Education (3 credits required)</b>		
<b>Computational Skills (3 credits required)</b>		
MATH 103	COLLEGE TRIGONOMETRY	5 cr.
<b>Human Relations (3 credits required)</b>		
<b>Humanities (3 credits required)</b>		
<b>Social Sciences (3 credits required)</b>		
<b>Natural Sciences (3 credits required)</b>		
Must earn 5 credits from PHYS, PHSC, or ENVS courses.		5 cr.

### Major Area Requirements

CADD 101	CADD ORIENTATION	1 cr.
CADD 102	CADD CAREERS	1 cr.
CADD 120	BASIC RHINOCEROS	4 cr.
CADD 140	BASIC AUTOCAD	4 cr.
or ENGR 140	BASIC AUTOCAD	4 cr.
CADD 142	INTERMEDIATE AUTOCAD	2 cr.
CADD 150	BASIC SOLIDWORKS	4 cr.
or ENGR 150	BASIC SOLIDWORKS	4 cr.
CADD 154	MECHANICAL DRAFTING 1 WITH SOLIDWORKS	4 cr.
CADD 155	INTERMEDIATE SOLIDWORKS - TOP DOWN DESIGN	4 cr.
CADD 160	INTRODUCTION TO CAM	2 cr.
CADD 199	COOPERATIVE WORK EXPERIENCE (5 credits required)	1-6 cr.
CADD 207	PRESENTATION GRAPHICS	4 cr.
CADD 240	MECHANICAL DRAFTING 2	3 cr.
ENGR&104	INTRODUCTION TO DESIGN	5 cr.
ENGR 113	ENGINEERING SKETCHING AND VISUALIZATION	2 cr.
ENGR 115	GEOMETRIC DIMENSIONING AND TOLERANCING	2 cr.
CADD 216	INTEGRATED COMPUTATIONAL DESIGN	3 cr.
CADD 299	CADD CAPSTONE PRACTICUM	5 cr.
HDEV 198	PORTFOLIO DEVELOPMENT	1 cr.
HDEV 200	PROFESSIONAL DEVELOPMENT	2 cr.

**Total Required Credits: 90**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Create and manipulate mechanical drawings and models in a multitude of CADD applications (core CADD skills).
- Fully annotate and print mechanical drawings (core drafting skills).
- Demonstrate aspects of elementary design skills.
- Discuss and communicate aspects of various industries and businesses that typically use CADD applications.
- Demonstrate aspects of employability for an entry-level CADD-related position.
- Demonstrate aspects of professionalism as appropriate for an entry-level CADD-related position.
- Demonstrate core mechanical CADD and drafting skills, and professionalism and employability through working with a client on a capstone project.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.
- Health and PE: Demonstrate progress toward healthier behaviors as appropriate for a career and technical education program.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts as appropriate for a career and technical education program.
- Social Science: Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences as appropriate for a career and technical education program.
- Science: Apply fundamental principles and relationships from the Natural Sciences to solve problems as appropriate for a career and technical education program.

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### Computer and Electrical Pre-Engineering

Electrical & Computer Engineers design, develop and analyze computer, electrical and electronic systems. These engineers work within multi-disciplinary teams and are employed in all industries. Their projects include power generation and distribution, communications systems, robotics, nano- and micro-electrical machinery, Biosystems, semiconductors, automation and robotics, networking, embedded systems and general computer system.

It is critical that you work with an Engineering faculty advisor to ensure your program will give you the maximum benefit when you transfer.

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## Computer and Electrical Pre-Engineering (AST2)

The following is a degree program designed by a consortium of two-year and four-year colleges in Washington. Students should be aware that baccalaureate institutions may have slightly different requirements for these degrees, and students should consult the transfer institution for exact questions.

Students should complete the entirety of any science sequence at the same school for best transferability. These degrees are not DTA degrees, and there are some general education requirements that students will need to finish upon transfer.

Though this degree does not require such, Clark College students should know that the standard Clark AST degree path has this difference from the Major Related Program defined below:

- Clark requires 3 credits of Health-Physical Education coursework.

Students must also meet the residency requirements as established by Clark. While Clark College has approved offering the degree below, Clark students should keep these requirements in mind should their transfer pathways change.

Students completing this Associate of Science will receive the same priority consideration for admission to the baccalaureate institution as they would for completing the direct transfer associate degree and will be given junior status by the receiving institution.

Please visit the Major Related Programs section of this catalog to view a [printable PDF](#) of this document.

### Generic Requirements

#### A. Basic Requirements

1. Communication Skills 5 cr.

2. Mathematics 10 cr.

Two courses at or above introductory calculus level. Third-quarter calculus or approved statistics course: 5 quarter credits chosen with the help of an Engineering faculty advisor based on the requirements of the specific discipline at the baccalaureate institution the student plans to attend.

3. Physics 15 cr.

Calculus-based or non-calculus based sequence including laboratory. Students should be advised that some baccalaureate programs require physics with calculus.

4. Chemistry with Laboratory 5 cr.

5. Required Major Courses

#### B. Distribution Requirements

1. Humanities 15 cr.

#### C. Electives

1. Elective Courses

The remaining quarter credits should be planned with the help of an Engineering faculty advisor based on the requirements of the specific discipline at the baccalaureate institution the student selects to attend.

For Engineering disciplines, these credits should include a design component consistent with ABET accreditation standards, as approved by the Engineering faculty advisor.

### Articulated Degree Requirements

#### A. Basic Requirements

1. English Composition 5 cr.

2. Mathematics

Calculus I, II, III - 15 credits

Differential Equations - 5 credits

Linear Algebra - 5 credits

3. Physics

Engineering Physics 1, 2, 3 + labs - 15 to 18 credits

4. Chemistry with Laboratory

General Chemistry I + labs - 5 credits

5. Required Major Courses

Electrical Circuits - 4-5 credits

Computer Programming - 4-5 credits

#### B. Distribution Requirements

1. Humanities/Fine Arts/English and Social Sciences

Minimum 15 quarter credits:

Minimum 5 credits in Humanities, minimum 5 credits in Social Science, plus an additional 5 credits in either Humanities or Social Science for a total of 15 credits.

#### C. Electives

1. Math. Science & Engr. Electives 20-25 cr.

Select 5 electives as appropriate for intended major and intended baccalaureate institution:

- A second course in Computer Programming - object oriented - 4-5 credits



- Innovation in Design
- Calculus IV (Advanced or Multi-variable Calculus)
- Technical Writing
- Statics
- Dynamics
- Thermodynamics
- Digital Logic
- Biology for Science Majors I + labs
- General Chemistry II + lab
- Applied Numerical Methods
- Microprocessors

## Clark College Equivalents

### A. Basic Requirements

<b>1. Communication Skills</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
<b>2. Mathematics</b>		
MATH&151	CALCULUS I	5 cr.
MATH&152	CALCULUS II	5 cr.
MATH&153	CALCULUS III	5 cr.
MATH 215	LINEAR ALGEBRA	5 cr.
MATH 221	DIFFERENTIAL EQUATIONS	5 cr.
<b>3. Physics</b>		
PHYS&241	ENGINEERING PHYSICS I	4 cr.
and PHYS&231	ENGINEERING PHYSICS LAB I	1 cr.
PHYS&242	ENGINEERING PHYSICS II	4 cr.
and PHYS&232	ENGINEERING PHYSICS LAB II	1 cr.
PHYS&243	ENGINEERING PHYSICS III	4 cr.
and PHYS&233	ENGINEERING PHYSICS LAB III	1 cr.
<b>4. Chemistry with Laboratory</b>		
CHEM&141	GENERAL CHEMISTRY I	4 cr.
CHEM&151	GENERAL CHEMISTRY LABORATORY I	1 cr.
<b>5. Required Major Courses</b>		
ENGR&204	ELECTRICAL CIRCUITS	5 cr.
CSE 121	INTRODUCTION TO C	5 cr.

### B. Distribution Requirements

**1. Humanities/Fine Arts/English & Social Sciences**  
A course in Economics is recommended (ECON&201 or 202).

PHIL&106 is strongly recommended as the Humanities course.

### C. Electives

**1. Required at Clark**  
MATH&254 (5 cr.) - Calculus IV

Other electives as advised dependent on transfer institution.

## Notes

### A. Basic Requirements

**2. Mathematics**  
Clark requires concurrent enrollment or completion in MATH&254 when taking MATH221.

MATH103 and MATH111 are required prerequisites for MATH&151 that may be needed if calculus placement is not met via COMPASS.

**3. Physics**  
Clark requires concurrent enrollment in PHYS094, 095, and 096.

### B. Distribution Requirements

**1. Humanities**  
Courses taken must come from the current ICRC distribution list in order to count as General Education or General University Requirements (GER's/GUR's) at the receiving

institution. Additional general educational requirements, cultural diversity requirements, and foreign language requirements, as required by the receiving institution, must be met prior to the completion of a baccalaureate degree.

**Total Required Credits: 95-104**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate progress toward healthier behaviors.
- Acquire scientific and technological information from appropriate sources to examine issues, claims or situations.
- Analyze and solve multi-step problems using techniques through single-variable calculus.
- Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Apply fundamental principles and relationships from the Natural Sciences to analyze technological or scientific problems.
- Apply scientific and technological knowledge and methodologies to creatively solve technological or scientific problems.
- Communicate with various audiences using a variety of methods.
- Demonstrate understanding of the derivative as an instantaneous rate of change and the definite integral as a limit of a sum.
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.
- Analyze patterns of power, privilege, and inequity in the United States. (GE)
- Obtain, evaluate, and ethically use information. (GE)
- Demonstrate understanding of the derivative as instantaneous rate of change and the definite integral as a limit of a Riemann sum in applied problems.
- Analyze and solve multi-step problems using techniques through single-variable calculus, and communicate the results.
- Apply fundamental principles and relationships from the Natural Sciences to analyze technological or scientific problems.
- Acquire scientific and technological information from appropriate sources to examine issues, claims or situations.
- Apply scientific and technological knowledge and methodologies to creatively solve technological or scientific problems.
- Communicate with various audiences using a variety of methods.
- Demonstrate progress toward healthier behaviors.
- Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Obtain, evaluate, and ethically use information.
- Analyze patterns of power, privilege and inequality.
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.

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## Computer Graphics Technology

The Computer Graphics Technology (CGT) program at Clark College provides hands-on learning with technologies used to create visual communications, digital imagery, integrated media, and applied technology solutions. Students taking our courses have an interest in computer graphics, multimedia, web design or graphic design. Our students' needs range from wanting specific software training, to acquiring a set of skills, to pursuing a certificate or degree.

CGT offers Career and Technical Education programs designed to prepare students for employment in various creative and technical disciplines. Please see our Career Pathway flowcharts for various job titles in the web and graphic design industry.

Our curriculum consists of two specialized certificate programs in Web Design or Graphic Design. These certificates can lead to one of our comprehensive AAT degrees in Web and Graphic Design or Web Development. Students may also be interested in the ART Department's Associate in Fine Arts (AFA) transfer degree in Graphic Design.

Students are encouraged to meet with a CGT program advisor to discuss options, help plan your course schedule, tour the facilities, and talk with current students. Students must complete all Major Area Requirements with a minimum grade of "C" or better in order to successfully complete the program and earn the award. Refer to the Degree & Certificate Requirement Section of the Clark College catalog to identify the courses needed to satisfy the General Education Requirements.

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### Web/Graphic Design (AAT)

The Web & Graphic Design AAT degree prepares students for professional practice in the field of visual communications. The program builds a first-year foundation of aesthetic and technical skills and progresses into advanced study of web and graphic design practices. Students learn to effectively communicate ideas and information in a variety of traditional, digital, print, web and other media formats. Essential skills are developed through practical hands-on experience, real client project work, a focus on professional skills and building a portfolio of work. Graduates can seek employment as freelance designers, production designers or coordinators, content managers or publishers, marketing communications specialists, or entry-level web or graphic designers.

### General Education Requirements

<b>Communication Skills (5 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
or		
PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.

**Computational Skills (5 credits required)****Human Relations (5 credits required)**

CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or CMST&230	SMALL GROUP COMMUNICATION	5 cr.

**Major Area Requirements****Fine Art Foundations**

ART 110	CREATIVITY AND CONCEPT	3 cr.
ART 115	TWO-DIMENSIONAL DESIGN	4 cr.
ART 118	TIME-BASED ART AND DESIGN	4 cr.

**Computer Graphics Technology**

CGT 101	PHOTOSHOP RASTER GRAPHICS	4 cr.
CGT 102	ILLUSTRATOR VECTOR GRAPHICS	4 cr.
CGT 103	INDESIGN PAGE LAYOUT	4 cr.
CGT 104	WEB MULTIMEDIA CONTENT I	4 cr.
CGT 201	WEB VIDEO PRODUCTION	4 cr.

**Graphic Design**

ART 172	GRAPHIC DESIGN EXPLORATION	3 cr.
ART 173	GRAPHIC DESIGN STUDIO I	4 cr.
ART 174	TYPOGRAPHY	4 cr.
ART 215	PORTFOLIO DEVELOPMENT	3 cr.
ART 271	PUBLICATION DESIGN	4 cr.
ART 270	PUBLICATION PRODUCTION (3 credits required)	1-9 cr.
ART 273	GRAPHIC DESIGN STUDIO II	4 cr.

**Web Design**

CTEC 160	WORDPRESS I	5 cr.
CTEC 122	HTML FUNDAMENTALS	4 cr.
CGT 105	USER EXPERIENCE DESIGN	4 cr.
CGT 106	SOCIAL MEDIA EXPLORATION	3 cr.
CGT 205	WEB DESIGN I	4 cr.
CGT 206	WEB DESIGN II	4 cr.
CGT 214	PROFESSIONAL PRACTICES	4 cr.
or CGT 240	CAPSTONE PRACTICUM	4 cr.
or CGT 199	COOPERATIVE WORK EXPERIENCE	1-5 cr.

**Total Required Credits: 99****Program Outcomes**

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Apply fine art theory and design purposeful projects relevant to audience needs.
- Synthesize multiple media assets with appropriate interactions and functions.
- Generate original ideas and utilize processes toward solving visual communication problems.
- Implement tools and technology to realize visual ideas.
- Interact, collaborate and implement projects with peers, clients or others in various work environments.
- Effectively organize and manage web design projects.
- Use written, verbal and visual means to effectively present and communicate web design projects.
- Demonstrate work and business ethics in web design practice.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

**Web Design (CP)**

The Web Design Certificate prepares students to create web graphics, integrate media, and design websites. The program provides a foundation of aesthetic and technical skills through the study of visual design concepts, multimedia technologies and web design practices. Essential skills are developed through practical hands-on experience, real client project work, a focus on professional skills and building a portfolio of work. Graduates can seek employment as a freelance web designer, production artist, web content designer, e-marketing assistant, or other web-related production and support roles within a business.

**General Education Requirements****Communication Skills (3 credits required)**

ENGL&101	ENGLISH COMPOSITION I	5 cr.
or		
PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.

**Computational Skills (3 credits required)**

CTEC 122	HTML FUNDAMENTALS	4 cr.
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**Human Relations (3 credits required)**

CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
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or CMST&230 SMALL GROUP COMMUNICATION 5 cr.

## Major Area Requirements

### Fine Art Foundations

ART 110	CREATIVITY AND CONCEPT	3 cr.
ART 115	TWO-DIMENSIONAL DESIGN	4 cr.
ART 118	TIME-BASED ART AND DESIGN	4 cr.

### Computer Graphics Technology

CGT 101	PHOTOSHOP RASTER GRAPHICS	4 cr.
CGT 102	ILLUSTRATOR VECTOR GRAPHICS	4 cr.
CGT 104	WEB MULTIMEDIA CONTENT I	4 cr.
CGT 201	WEB VIDEO PRODUCTION	4 cr.

### Graphic Design

ART 215	PORTFOLIO DEVELOPMENT	3 cr.
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### Web Design

CTEC 160	WORDPRESS I	5 cr.
CGT 105	USER EXPERIENCE DESIGN	4 cr.
CGT 106	SOCIAL MEDIA EXPLORATION	3 cr.
CGT 205	WEB DESIGN I	4 cr.
CGT 206	WEB DESIGN II	4 cr.
CGT 214	PROFESSIONAL PRACTICES	4 cr.
or CGT 240	CAPSTONE PRACTICUM	4 cr.
or CGT 199	COOPERATIVE WORK EXPERIENCE (4 credits required)	1-5 cr.

**Total Required Credits: 68**

## Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Apply fine art theory and design purposeful projects relevant to audience needs.
- Synthesize multiple media assets with appropriate interactions and functions.
- Generate original ideas and utilize processes toward solving visual communication problems.
- Implement tools and technology to realize visual ideas.
- Interact, collaborate and implement projects with peers, clients or others in various work environments.
- Effectively organize and manage web design projects.
- Use written, verbal and visual means to effectively present and communicate web design projects.
- Demonstrate work and business ethics in web design practice.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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## Graphic Design (CP)

The Graphic Design Certificate prepares students to conceptualize ideas, create original artwork, and develop visual design solutions. The program provides a foundation of aesthetic and technical skills through the study of fine art principles, the design process and graphic design practices. Essential skills are developed through practical hands-on experience, contextual project work, a focus on professional skills and building a portfolio of work. Graduates can seek employment as freelance graphic designers, production artists, digital graphics specialists, marketing assistants, or other graphic art production and support roles within a business.

## General Education Requirements

### Communication Skills (3 credits required)

ENGL&101	ENGLISH COMPOSITION I	5 cr.
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or

PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.
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### Computational Skills (3 credits required)

CTEC 122	HTML FUNDAMENTALS	4 cr.
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### Human Relations (3 credits required)

CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
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or CMST&230	SMALL GROUP COMMUNICATION	5 cr.
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## Major Area Requirements

### Fine Art Foundations

ART 103	DRAWING I	3 cr.
ART 110	CREATIVITY AND CONCEPT	3 cr.
ART 115	TWO-DIMENSIONAL DESIGN	4 cr.
ART 145	DIGITAL PHOTOGRAPHY I	3 cr.

### Computer Graphics Technology

CGT 101	PHOTOSHOP RASTER GRAPHICS	4 cr.
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CGT 102	ILLUSTRATOR VECTOR GRAPHICS	4 cr.
CGT 103	INDESIGN PAGE LAYOUT	4 cr.
<b>Graphic Design</b>		
ART 172	GRAPHIC DESIGN EXPLORATION	3 cr.
ART 173	GRAPHIC DESIGN STUDIO I	4 cr.
ART 174	TYPOGRAPHY	4 cr.
ART 208	DIGITAL ILLUSTRATION	4 cr.
ART 215	PORTFOLIO DEVELOPMENT	3 cr.
ART 270	PUBLICATION PRODUCTION (3 credits required)	1-9 cr.
ART 271	PUBLICATION DESIGN	4 cr.
ART 273	GRAPHIC DESIGN STUDIO II	4 cr.
CGT 214	PROFESSIONAL PRACTICES	4 cr.
or CGT 240	CAPSTONE PRACTICUM	4 cr.
or CGT 199	COOPERATIVE WORK EXPERIENCE (4 credits required)	1-5 cr.

**Total Required Credits: 72**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Recognize and apply foundational art theory.
- Place design projects and issues in context of society and culture.
- Generate original ideas and utilize processes toward solving visual communication problems.
- Implement tools and technology to realize visual ideas.
- Interact, collaborate and implement projects with peers, clients or others in various work environments.
- Effectively organize and manage graphic design projects.
- Use written, verbal and visual means to effectively present and communicate graphic design projects.
- Demonstrate work and business ethics in graphic design practice.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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## Computer Science

Computers are an integral part of most human activities and professions. Therefore, a wide variety of career opportunities are available to the computer science professionals who are commonly referred to as computer scientists.

Computer scientists are responsible for analyzing requirements, planning, developing high-level design, writing, and testing the program that delivers the expected results. Computer scientists may be involved with support and maintenance of the solutions.

Computer scientists are employed in all industries such as manufacturing, finance, service, retail, gaming, and others. Typically, computer scientists work with other professionals in order to develop solutions that meet business and customer requirements.

### Computer science specialties include:

- Artificial intelligence
- Computer vision
- Database
- Graphics and animation
- Embedded systems
- Networking
- Operating Systems
- Program languages and compilers
- Robotics

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## Computer Science (AST2)

This is a suggested program for the first two years of a four-year Computer Science program. These lower-division course requirements will vary depending on the math and English placement at Clark College, and on the requirements of the four-year institution to which you transfer. It is critical that you work with a Computer Science and Engineering faculty advisor to ensure your program will give you the maximum benefit when you transfer. Additional courses are needed to satisfy graduation requirements for the Associate in Science degree.

### General Education Requirements

<b>Communication Skills (5 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.

**Quantitative Skills (10 credits required)**

MATH&151	CALCULUS I	5 cr.
MATH&152	CALCULUS II	5 cr.

**Health & Physical Education (3 credits required)****Humanities & Social Science (15 credits required)****Pre-Major Program Requirements- 25 credits**

MATH&153	CALCULUS III	5 cr.
PHYS&241	ENGINEERING PHYSICS I	4 cr.
and PHYS&231	ENGINEERING PHYSICS LAB I	1 cr.
PHYS&242	ENGINEERING PHYSICS II	4 cr.
and PHYS&232	ENGINEERING PHYSICS LAB II	1 cr.
PHYS&243	ENGINEERING PHYSICS III	4 cr.
and PHYS&233	ENGINEERING PHYSICS LAB III	1 cr.
Additional Science		5 cr.

**Computer Science Electives**

CSE 120	INTRO TO ELECTRICAL/COMPUTING	5 cr.
CSE 121	INTRODUCTION TO C	5 cr.
CS& 131	COMPUTER SCIENCE I C++	5 cr.
CS& 141	COMPUTER SCIENCE I JAVA	5 cr.
CSE 222	INTRODUCTION TO DATA STRUCTURES	5 cr.
CSE 223	DATA STRUCTURES & OBJECT-ORIENTED PROGRAMMING	5 cr.
CSE 224	PROGRAMMING TOOLS	5 cr.
ENGR&204	ELECTRICAL CIRCUITS	5 cr.
ENGR 250	DIGITAL LOGIC DESIGN	5 cr.
ENGR 270	DIGITAL SYSTEMS AND MICROPROCESSORS	5 cr.
MATH 215	LINEAR ALGEBRA	5 cr.

**Total Required Credits: 90**

Requirements vary by school and program. See an Engineering faculty advisor regarding proper selection.

**Program Outcomes**

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate understanding of the derivative as instantaneous rate of change and the definite integral as a limit of a Riemann sum in applied problems.
- Analyze and solve multi-step problems using techniques through single-variable calculus, and communicate the results.
- Apply fundamental principles and relationships from the Natural Sciences to analyze technological or scientific problems.
- Acquire scientific and technological information from appropriate sources to examine issues, claims or situations.
- Apply scientific and technological knowledge and methodologies to creatively solve technological or scientific problems.
- Communicate with various audiences using a variety of methods.
- Demonstrate progress toward healthier behaviors.
- Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Obtain, evaluate, and ethically use information.
- Analyze patterns of power, privilege and inequality.
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.

**Computer Technology**

The Computer Technology (CTEC) department at Clark College offers training in a variety of foundational and content-specific topics relating to general computer literacy and fluency, computer operating systems interactions, programming, databases, web technology, and networking. Our course offerings serve a variety of missions: to enhance and expand an individual student's skill set, to serve as a prerequisite or requirement for another area of study, or to be a component course in one of the programs offered by this department.

CTEC currently offers the Computer Support Specialist program with degree and certificate options to provide students with skills for employment as computer technicians, help desk workers and other technical support roles. The department also offers a certificate in Web Programming and an AAT degree in Web Development.

Student considering options in computer-related careers should meet with a program advisor to consider which CTEC courses or programs may benefit them in their training and career exploration. CTEC course offerings can help provide a foundational understanding and set of skills in computer technology that will help them make informed decisions on career choices in other Clark College computer-related programs offered by Networking Technology (NTEC), Computer Graphics Technology (CGT), and Business

Technology (BTEC), as well as on transfer opportunities in Computer Science and Information Technology.

For CTEC degrees and certificates, students must complete all major area requirements with a minimum grade of "C" or better in order to successfully complete the program and earn the award. Students should refer to the Degree & Certificate Requirements Section of the Clark College Catalog to identify the courses needed to satisfy the General Education Requirements for our program offerings.

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### Computer Support (CP)

This program is designed for students desiring careers as computer support technicians and specialists who offer services and support for a company or organization. Support specialists install, configure and maintain hardware and software as well as diagnose, troubleshoot, and resolve computer-related problems. The Computer Support Specialist Certificate of Proficiency at Clark College features training in foundational skills, based on computer industry certifications; an emphasis on customer service; and work experience in a computer help desk setting.

Students interested in the Computer Support Specialist program should obtain advising before entering the program.

### General Education Requirements

PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.
or ENGL&101	ENGLISH COMPOSITION I	5 cr.
<b>Computational Skills (3 credits required)</b>		
MATH 030	PRE-ALGEBRA	5 cr.
<b>Human Relations (3 credits required)</b>		
CMST&230	SMALL GROUP COMMUNICATION	5 cr.
or CMST&210	INTERPERSONAL COMMUNICATION	5 cr.

### Major Area Requirements

BTEC 149	COMPUTER APPLICATIONS ESSENTIALS	3 cr.
CTEC 100	INTRODUCTION TO COMPUTING	3 cr.
CTEC 101	COMPUTING ESSENTIALS	2 cr.
CTEC 130	MICROSOFT MTA WINDOWS OS FUNDAMENTALS	3 cr.
CTEC 103	INTRODUCTION TO MAC/OS	3 cr.
CTEC 104	PC SUPPORT CUSTOMER SERVICE SKILLS	3 cr.
CTEC 110	COMMAND LINE ESSENTIALS FOR WINDOWS AND UNIX	3 cr.
CTEC 131	MICROSOFT MTA NETWORKING FUNDAMENTALS	3 cr.
and NTEC 132	WINDOWS MTA SERVER ADMINISTRATION FUNDAMENTALS	3 cr.
or NTEC 221	CISCO CCNA 1:INTRODUCTION TO NETWORKS	6 cr.
CTEC 200	PC HELP DESK WORK EXPERIENCE (2-5 credits required)	1-5 cr.
CTEC 213	COMPTIA A+ FUNDAMENTALS	4 cr.
CTEC 214	COMPTIA A+ OPERATING SYSTEMS & NETWORKING	4 cr.

**Total Required Credits: 51-54**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate foundational understanding of concepts, skills and issues relating to underlying technology and current industry standards involving computer technology.
- Install, configure, and maintain hardware and software to bring the system to an appropriate operational level for the end user.
- Diagnose, troubleshoot and repair customer hardware, software, and networking issues.
- Identify, access, and evaluate resources, and respond appropriately and professionally with written and verbal communications to colleagues and customers.
- Maintain a professional and supportive role with colleagues and customers in regard to their computer technology needs.
- Analyze the ethical and legal issues surrounding access to and use of technology.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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### Computer Support (AAS)

This program is designed for students desiring careers as computer support technicians and specialists who provide services and support for a company or organization. Support specialists install, configure and maintain hardware and software as well as diagnose, troubleshoot, and resolve computer-related problems. The Computer Support Specialist Associate of Applied Science at Clark College features training in foundational skills based on computer industry certifications. It also features an emphasis on support for a variety of platforms and network settings. Students in the program will gain practical experience in help desk and other service environments.

Students interested in the Computer Support Specialist program should obtain advising before entering the program.

### General Education Requirements

<b>Communication Skills (6 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
or		
PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.
<b>Computational Skills (3 credits required)</b>		
MATH 030	PRE-ALGEBRA	5 cr.
<b>Health &amp; Physical Education (3 credits required)</b>		
<b>Human Relations (3 credits required)</b>		
<b>Humanities (3 credits required)</b>		
CMST&230	SMALL GROUP COMMUNICATION	5 cr.
or CMST&210 INTERPERSONAL COMMUNICATION		5 cr.
<b>Social Sciences (3 credits required)</b>		3 cr.
<b>Natural Sciences (3 credits required)</b>		

## Major Area Requirements

BTEC 149	COMPUTER APPLICATIONS ESSENTIALS	3 cr.
and CTEC 100	INTRODUCTION TO COMPUTING	3 cr.
or CTEC 205	INTRODUCTION TO MANAGED INFORMATION SYSTEMS	5 cr.
CTEC 101	COMPUTING ESSENTIALS	2 cr.
CTEC 103	INTRODUCTION TO MAC/OS	3 cr.
CTEC 104	PC SUPPORT CUSTOMER SERVICE SKILLS	3 cr.
CTEC 105	INTRODUCTION TO THE INTERNET	3 cr.
CTEC 110	COMMAND LINE ESSENTIALS FOR WINDOWS AND UNIX	3 cr.
CTEC 130	MICROSOFT MTA WINDOWS OS FUNDAMENTALS	3 cr.
CTEC 131	MICROSOFT MTA NETWORKING FUNDAMENTALS	3 cr.
and NTEC 132	WINDOWS MTA SERVER ADMINISTRATION FUNDAMENTALS	3 cr.
or NTEC 221	CISCO CCNA 1:INTRODUCTION TO NETWORKS	6 cr.
CTEC 200	PC HELP DESK WORK EXPERIENCE (3-5 credits required)	1-5 cr.
CTEC 295	CAPSTONE EXPERIENCE	3 cr.
NTEC 232	COMPTIA A+ COMPUTER SUPPORT TECHNICIAN	6 cr.

## Related Electives

Students must complete a minimum of 22 credits in related electives. Choose from the following list:

BTEC 120	INTRODUCTION TO WORD	3 cr.
BTEC 122	WORD FOR BUSINESS	5 cr.
BTEC 149	COMPUTER APPLICATIONS ESSENTIALS	3 cr.
BTEC 150	COMPUTER BUSINESS APPLICATIONS	5 cr.
BTEC 169	INTRODUCTION TO EXCEL	3 cr.
BTEC 170	EXCEL FOR BUSINESS	3 cr.
BTEC 180	ACCESS FOR BUSINESS	3 cr.
BTEC 195	E-COMMERCE: INTRO TO BUSINESS ON THE WEB	3 cr.
CGT 105	USER EXPERIENCE DESIGN	4 cr.
CGT 106	SOCIAL MEDIA EXPLORATION	3 cr.
CTEC 100	INTRODUCTION TO COMPUTING	3 cr.
CTEC 102	INTRODUCTION TO WINDOWS	3 cr.
CTEC 121	INTRO TO PROGRAMMING & PROBLEM SOLVING	5 cr.
CTEC 122	HTML FUNDAMENTALS	4 cr.
CTEC 133	MICROSOFT MTA SECURITY FUNDAMENTALS	5 cr.
CTEC 134	MICROSOFT MTA DATABASE ADMIN	5 cr.
CTEC 140	INTRODUCTION TO UNIX	5 cr.
CTEC 141	UNIX SYSTEM ADMINISTRATION	5 cr.
CTEC 145	WEB SERVER TECHNOLOGY	5 cr.
CTEC 160	WORDPRESS I	5 cr.
CTEC 165	BUSINESS WEB PRACTICES	4 cr.
CTEC 212	COMPTIA STRATA COMPUTER AND IT SUPPORT	5 cr.
NTEC 125	INFORMATION SECURITY FUNDAMENTALS	3 cr.
NTEC 142	CLOUD COMPUTING FUNDAMENTALS	3 cr.
NTEC 221	CISCO CCNA 1:INTRODUCTION TO NETWORKS	6 cr.
NTEC 222	CISCO CCNA 2: ROUTING & SWITCHING ESSENTIALS	6 cr.
NTEC 223	CISCO CCNA 3: SCALING NETWORKS	6 cr.
NTEC 224	CISCO CCNA 4: CONNECTING NETWORKS	6 cr.
NTEC 225	CISCO CCNA SECURITY	6 cr.
NTEC 234	MICROSOFT SERVER ADMINISTRATOR 1	6 cr.
NTEC 235	MICROSOFT SERVER ADMINISTRATOR 2	6 cr.
NTEC 236	MICROSOFT SERVER ADMINISTRATOR 3	6 cr.
NTEC 242	DATACENTER VIRTUALIZATION TECHNOLOGY	6 cr.

**Total Required Credits: 94-97**



## Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate broad-based understanding of concepts, skills and issues relating to underlying technology and current industry standards involving computer and information technology.
- Install, configure, and maintain hardware and software to bring the system to an optimal operational level for the end user.
- Diagnose, troubleshoot and repair customer hardware, software, and networking issues in a variety of environments.
- Identify, access, and evaluate resources, and respond appropriately and professionally with written and verbal communications to colleagues and customers.
- Maintain a professional and supportive role with colleagues and customers in regard to their computer technology needs.
- Analyze the ethical and legal issues surrounding access to and use of technology.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.
- Health and PE: Demonstrate progress toward healthier behaviors as appropriate for a career and technical education program.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts as appropriate for a career and technical education program.
- Social Science: Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences as appropriate for a career and technical education program.
- Science: Apply fundamental principles and relationships from the Natural Sciences to solve problems as appropriate for a career and technical education program.

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## Web Programming (CA)

This certificate is designed to provide foundational training in key technologies related to web programming and web development.

All students interested in this program option should obtain advising prior to pursuing this certificate.

### Major Area Requirements

CTEC 121	INTRO TO PROGRAMMING & PROBLEM SOLVING	5 cr.
CTEC 122	HTML FUNDAMENTALS	4 cr.
CTEC 160	WORDPRESS I	5 cr.
CTEC 260	WORDPRESS II	5 cr.
CTEC 126	JAVASCRIPT	5 cr.
CTEC 127	PHP WITH SQL I	5 cr.
CTEC 227	PHP WITH SQL II	5 cr.
CTEC 228	API AND ADVANCED INTEGRATION	5 cr.
CTEC 199	COOPERATIVE WORK EXPERIENCE (4 credits required)	1-5 cr.
or CTEC 240	UNIX NETWORK ADMINISTRATION & SECURITY	5 cr.

**Total Required Credits: 43**

## Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate a working knowledge of recognized client/server-related technologies related to World Wide Web interactions.
- Exercise foundational skills relating to interactions and tools in the Linux operating system.
- Design and execute back-end scripting solutions to support web server activities.
- Create executable server-side resources using PHP and relational databases.
- Create and deploy client-side resources using HTML/CSS, JavaScript and other related tools.
- Develop and deliver web content in a team or group setting.

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## Web Development (AAT)

The Web Development AAT degree provides students with a foundational and employable skill set in web programming and development technologies as well experience and skills in web design and media associated with the World Wide Web. Essential skills are developed through practical hands-on experience, real client project work, a focus on professional skills and building a portfolio of work.

### General Education Requirements

<b>Communication Skills (5 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I (recommended)	5 cr.
or		
PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING (recommen	5 cr.
<b>Computational Skills (5 credits required)</b>		
CTEC 121	INTRO TO PROGRAMMING & PROBLEM SOLVING (recommende	5 cr.
<b>Human Relations (5 credits required)</b>		
CMST&210	INTERPERSONAL COMMUNICATION (recommended)	5 cr.
or CMST&230	SMALL GROUP COMMUNICATION (recommended)	5 cr.

## Major Area Requirements

<b>Web Foundations</b>		
CTEC 160	WORDPRESS I	5 cr.
ENGL 160	WRITING FOR THE WEB	3 cr.
CTEC 122	HTML FUNDAMENTALS	4 cr.
CGT 106	SOCIAL MEDIA EXPLORATION	3 cr.
<b>Web Media</b>		
CGT 101	PHOTOSHOP RASTER GRAPHICS	4 cr.
CGT 104	WEB MULTIMEDIA CONTENT I	4 cr.
CGT 201	WEB VIDEO PRODUCTION	4 cr.
<b>Web Design</b>		
CGT 105	USER EXPERIENCE DESIGN	4 cr.
CGT 205	WEB DESIGN I	4 cr.
CGT 206	WEB DESIGN II	4 cr.
CTEC 165	BUSINESS WEB PRACTICES	4 cr.
CGT 214	PROFESSIONAL PRACTICES	4 cr.
or CTEC 199	COOPERATIVE WORK EXPERIENCE (4 credits required)	1-5 cr.
or CGT 240	CAPSTONE PRACTICUM	4 cr.
<b>Web Development</b>		
CTEC 260	WORDPRESS II	5 cr.
CTEC 126	JAVASCRIPT	5 cr.
CTEC 127	PHP WITH SQL I	5 cr.
CTEC 227	PHP WITH SQL II	5 cr.
CTEC 228	API AND ADVANCED INTEGRATION	5 cr.
CTEC 145	WEB SERVER TECHNOLOGY	5 cr.

**Total Required Credits: 92**

## Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Web Foundations: Write, organize and publish well written content and code to engage web communities for personal and professional research, marketing, and interaction.
- Web Media: Create original visual graphics, audio, and integrated media design for the web.
- Web Design: Develop interactive websites from concept to design to execution with that provide an effective user experience and meet client needs.
- Web Development: Plan and execute industry standard code, web scripting, and server strategies to capture, integrate and manage data.
- Professional Practices: Demonstrate professional skills and business ethics to communicate and collaborate in various work environments.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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## Culinary Arts - Baking/Bakery Management

The Professional Baking and Pastry Arts program is currently undergoing curriculum and facility revisions and is not accepting new students. The new program is scheduled to open in a redesigned space in Fall 2016. Interested students should contact the Advising Center at (360) 992-2345 to discuss enrollment requirements and placement on the program's waitlist.

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## Culinary Arts - Cooking/Restaurant Management

The Cuisine and Restaurant Management program is currently undergoing curriculum and facility revisions and is not accepting new students. The new program is scheduled to open in a redesigned space in Fall 2016. Interested students should contact the Advising Center at (360) 992-2345 to discuss enrollment requirements and placement on the program's waitlist.

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## Dental Hygiene

A career as a hygienist offers a wide range of opportunities. Services provided by dental hygienists include patient assessment

procedures, managing and treating periodontal conditions, placing and finishing dental restorative materials, applying preventive materials to the teeth, teaching patients appropriate oral hygiene to maintain oral health, nutrition counseling, teeth whitening services, performing documentation and office management activities, developing and implementing community oral health programs, and more.

The Clark College Dental Hygiene program is accredited by the Commission on Dental Accreditation of the American Dental Association, a specialized accrediting body recognized by the Council on Postsecondary Accreditation and the United States Department of Education. Graduates receive a Bachelor of Applied Science degree. Students who successfully complete the program qualify to take national, regional, and state board examinations for licensure and are prepared to enter clinical practice. The program includes all responsibilities allowed by Washington state law. Clinical experience takes place in the Clark College Firstenburg Dental Hygiene Education and Care Center under the supervision of licensed dentists and dental hygienists.

### **Application Process & Preliminary Requirements**

The Dental Hygiene program is a seven-quarter clinical program with preliminary requirements that must be satisfied to qualify to apply and prior to program entry. Admission to the Dental Hygiene program is limited and competitive, and Clark College reserves the right to determine admissions status. Please note: completion of the preliminary requirements does not guarantee entrance into the Dental Hygiene program. To meet preliminary entrance requirements, candidates must:

- Complete the Clark College Application for Admission and Statement of Intent forms. Return to Enrollment Services in Gaiser Hall with the non-refundable admission fee and program application fee (amounts subject to change). For the current fee amounts, please visit the Dental Hygiene Website at [www.clark.edu/dentalhygiene](http://www.clark.edu/dentalhygiene).
- The application for Clark College's Dental Hygiene program is January 8th of every year for entry into the fall quarter. Students **MUST** have no more than 10 credits of preliminary coursework remaining to complete following the end of winter quarter to qualify for selection into the fall class. ***Preliminary Course Requirements are listed in the degree below.***
- Submit ALL official college transcripts from ALL previous colleges attended to the Credential Evaluations Office for complete transcript evaluation, and continue to send updated transcripts quarterly as additional courses are completed. The most recent educational experience will be used to meet admission criteria.

Upon completion of the preliminary entrance requirements, all qualified applicants will be invited to and must participate in a mandatory student orientation with the Dental Hygiene Department. During orientation, the HESI A2 Admission test will be administered. Successful candidates will be notified in writing of final acceptance into the program. Payment of a non-refundable deposit will reserve a position for fall quarter entry. During the school year, the deposit will be refunded to all currently enrolled dental hygiene students.

Students not selected for entry are welcome to reapply the following year, but are encouraged to seek advising before doing so and must formally reapply and comply with the published admissions criteria for that year.

*Selection criteria are subject to change. For complete, updated information, please refer to the Dental Hygiene program website at [www.clark.edu/dentalhygiene](http://www.clark.edu/dentalhygiene).*

In accordance with the Americans with Disabilities Act and the Rehabilitation Act of 1973, accommodations for students with disabilities will be considered at the student's request. The student may need to provide documentation of disability to the Disability Support Services Office to support his/her accommodation requests. Documentation guidelines and procedures can be found at [www.clark.edu/dss](http://www.clark.edu/dss). Once the student is qualified by DSS as having a disability, requested accommodations will be considered. Accommodations for the classroom, laboratory, or clinical setting will be evaluated according to reasonableness. Accommodations that compromise patient care, or that fundamentally alter the essential functions of the program or activity, are not considered to be reasonable.

### **Program Progression**

In order to progress from one course or quarter to the next after beginning the Dental Hygiene program, students must achieve a grade of 2.0 or higher in all required courses and maintain a cumulative GPA of 2.0 or higher.

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### **Dental Hygiene (BAS)**

#### **Preliminary Coursework REQUIRED for acceptance**

All preliminary courses must be completed with a 2.0 or above AND obtain minimum APPLICABLE and SCIENCE grade point averages (GPA) of 2.60

##### **Communication Skills (10 credits required)**

ENGL&101 ENGLISH COMPOSITION I \*

5 cr.

\*must be completed by end of winter quarter of application year

ENGL&102	ENGLISH COMPOSITION II	5 cr.
or		
ENGL 109	WRITING ABOUT THE SCIENCES	5 cr.
<b>Humanities (10 credits required)</b>		
CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or		
CMST&220	PUBLIC SPEAKING	5 cr.
or		
CMST&230	SMALL GROUP COMMUNICATION	5 cr.
<b>Social Sciences (10 credits required)</b>		
PSYC&100	GENERAL PSYCHOLOGY	5 cr.
SOC& 101	INTRO TO SOCIOLOGY	5 cr.
<b>College-level Math (5 credits required)</b>		
MATH 203	DESCRIPTIVE STATISTICS (recommended)	3 cr.
and		
MATH 204	INFERENCE STATISTICS (recommended)	3 cr.
<b>Natural Sciences (30 credits required)</b>		
All science courses must be seven (7) years current upon program entry.		
BIOL&251	HUMAN A & P I	5 cr.
BIOL&252	HUMAN A & P II	5 cr.
BIOL&253	HUMAN A & P III	5 cr.
BIOL&260	MICROBIOLOGY	5 cr.
CHEM&121	INTRO TO CHEMISTRY: PRE-HEALTH	5 cr.
CHEM&131	INTRO TO ORGANIC/BIOCHEM	5 cr.
NUTR 103	GENERAL NUTRITION	3 cr.
<b>Physical Education (1 credits required)**</b>		
**MUST be fitness/activity course		

## Junior Year

<b>Fall Quarter</b>		
DH 282	PHARMACOLOGY I	1 cr.
DH 283	CLINICAL DENTAL HYGIENE TECHNIQUES I	6 cr.
DH 284	ORAL MEDICINE	2 cr.
DH 285	PERIODONTICS I	3 cr.
DH 286	DENTAL ANATOMY	3 cr.
DH 292	INTRODUCTION TO DIGITAL MANAGEMENT SYSTEMS	1 cr.
<b>Winter Quarter</b>		
DH 303	HEAD AND NECK ANATOMY	3 cr.
DH 313	CLINICAL DENTAL HYGIENE TECHNIQUES II	5 cr.
DH 323	ORAL RADIOLOGY I	3 cr.
DH 353	ETHICS AND THE PROFESSION	1 cr.
DH 373	CARIOLOGY	2 cr.
DH 383	PHARMACOLOGY II	1 cr.
<b>Spring Quarter</b>		
DH 304	EDUCATIONAL THEORY AND APPLICATION	2 cr.
DH 314	CLINICAL DENTAL HYGIENE TECHNIQUES III	5 cr.
DH 324	ORAL RADIOLOGY II	1 cr.
DH 344	GENERAL AND ORAL PATHOLOGY	3 cr.
DH 364	LOCAL ANESTHESIA & PAIN CONTROL	4 cr.
DH 384	PHARMACOLOGY III	1 cr.

## Senior Year

<b>Summer Quarter</b>		
DH 301	INTRODUCTION TO DENTAL MATERIALS/ASSISTING	3 cr.
DH 321	CLINICAL DENTAL HYGIENE TECHNIQUES IV	4 cr.
DH 331	ORAL RADIOLOGY III	2 cr.
DH 431	RESTORATIVE DENTISTRY I	2 cr.
DH 471	NITROUS OXIDE SEDATION	1 cr.
<b>Fall Quarter</b>		
DH 402	DENTAL PUBLIC HEALTH - RESEARCH METHODS I	2 cr.
DH 412	CLINICAL DENTAL HYGIENE TECHNIQUES V	9 cr.
DH 432	RESTORATIVE DENTISTRY II	5 cr.
DH 452	SPECIAL NEEDS POPULATIONS II	1 cr.
DH 472	PERIODONTICS II	2 cr.
<b>Winter Quarter</b>		
DH 403	DENTAL PUBLIC HEALTH - RESEARCH METHODS II	2 cr.
DH 413	CLINICAL DENTAL HYGIENE TECHNIQUES VI	9 cr.
DH 433	RESTORATIVE DENTISTRY III	4 cr.
DH 453	SPECIAL NEEDS POPULATIONS III	1 cr.

DH 473	PERIODONTICS III	2 cr.
<b>Spring Quarter</b>		
DH 404	DENTAL PUBLIC HEALTH - RESEARCH METHODS III	1 cr.
DH 414	CLINICAL DENTAL HYGIENE TECHNIQUES VII	10 cr.
DH 434	RESTORATIVE DENTISTRY IV	3 cr.
DH 484	CAPSTONE	3 cr.

**Total Required Credits: 180-181**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Integrate the roles of clinician, educator, advocate, manager, and researcher to prevent oral diseases and promote health.
- Communicate effectively and professionally, using verbal, nonverbal, and written languages with patients, colleagues, the public, diverse populations, and other healthcare providers.
- Analyze professional behaviors and make appropriate decisions guided by ethical principles and core values
- Assess, diagnose, plan, implement, and evaluate the provision of optimal, evidence-based, and patient-centered dental hygiene care.
- Successfully complete all licensing exams.
- Demonstrate the skills necessary to stay current in the profession with a rigorous and robust emphasis on the study of current research.

## Diesel Technology

The diesel technician must be able to work on a great variety of equipment and their component parts. These include brake systems, drive trains, electrical and electronic circuits, hydraulic systems, and diesel engines. Diesel power is used in the transportation industry in light, medium, and heavy-duty trucks and in industrial applications such as heavy equipment, agriculture, marine propulsion, power generation, and locomotives.

Because of the widespread use of this type of power, diesel technicians can work in a shop or outdoors as a field service technician. This program is designed to prepare students for entry-level positions into the diesel technician trade. Diesel program instruction includes both classroom theory and extensive hands-on experience in the shop where the student encounters real day-to-day problems.

The diesel evening program includes courses for Caterpillar, Cummins, and Detroit engines; electronic controls; and industrial hydraulics for technicians who wish to further their knowledge and skills. Any course in the program can be made available to area employers and their employees.

Students must complete all Major Area Requirements and specifically listed courses with a minimum grade of "C" or better in order to successfully complete the program and earn the award.

Refer to the Degree & Certificate Requirements Section of the Clark College Catalog to identify the courses needed to satisfy the General Education Requirements.

## Diesel Technician (CP)

### General Education Requirements

<b>Communication Skills (3 credits required)</b>		
ENGL 097	WRITING FUNDAMENTALS	5 cr.
<b>Computational Skills (3 credits required)</b>		
MATH 085	INDUSTRIAL MATHEMATICS	5 cr.
or MATH 030	PRE-ALGEBRA	5 cr.
<b>Human Relations (3 credits required)</b>		
CMST&230	SMALL GROUP COMMUNICATION	5 cr.
or CMST&210	INTERPERSONAL COMMUNICATION	5 cr.

### Major Area Requirements

DIES 111	DIESEL FUNDAMENTALS	5 cr.
DIES 112	DIESEL PROCEDURES	10 cr.
DIES 113	DIESEL ENGINES/FUEL SYSTEMS	5 cr.
DIES 114	DIESEL PROCEDURES	10 cr.
DIES 115	DRIVE TRAINS	5 cr.
DIES 116	DIESEL PROCEDURES	10 cr.
DIES 120	BASIC ELECTRICAL	3 cr.

DIES 121	ELECTRONIC ENGINE MANAGEMENT SYSTEMS	3 cr.
DIES 122	ELECTRONIC VEHICLE CONTROL SYSTEMS	3 cr.
DIES 221	ELECTRICAL/ELECTRONIC SYSTEMS	5 cr.
DIES 222	DIESEL PROCEDURES	6 cr.
DIES 223	HYDRAULIC SYSTEMS	5 cr.
DIES 224	DIESEL PROCEDURES	10 cr.
DIES 225	BRAKES, STEERING, AND SUSPENSION	5 cr.
DIES 226	DIESEL PROCEDURES	10 cr.

#### Suggested Extra Courses for Preparation into the Trade

BUS 110	CUSTOMER SERVICE	3 cr.
DIES 096	CUMMINS ENGINES	3 cr.
DIES 135	INDUSTRIAL HYDRAULICS	3 cr.
IFA 031	INDUSTRIAL FIRST AID	1 cr.

**Total Required Credits: 110**

#### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Evaluate and use technical information from a variety of resources.
- Troubleshoot engines, hydraulic systems, electrical systems, power train systems, brakes, steering, and suspension systems.
- Repair engines, hydraulic systems, electrical systems, power train systems, brakes, steering, and suspension systems.
- Comply with personal and environmental safety practices that relate to the diesel power industry.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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#### Diesel Technologies (AAS)

##### Suggested Extra Courses (for preparation into trade)

BUS 110	CUSTOMER SERVICE	3 cr.
DIES 096	CUMMINS ENGINES	3 cr.
DIES 135	INDUSTRIAL HYDRAULICS	3 cr.
IFA 031	INDUSTRIAL FIRST AID	1 cr.

#### General Education Requirements

##### Communication Skills (6 credits required)

##### Health & Physical Education (3 credits required)

##### Computational Skills (3 credits required)

MATH 085	INDUSTRIAL MATHEMATICS	5 cr.
or MATH 030	PRE-ALGEBRA	5 cr.

##### Human Relations (3 credits required)

CMST&230	SMALL GROUP COMMUNICATION	5 cr.
or CMST&210	INTERPERSONAL COMMUNICATION	5 cr.

##### Humanities (3 credits required)

##### Social Sciences (3 credits required)

##### Natural Sciences (3 credits required)

Note: ENGL 097 does not meet the Communication Skills General Education Requirement for the AAS degree.

#### Major Area Requirements

DIES 111	DIESEL FUNDAMENTALS	5 cr.
DIES 112	DIESEL PROCEDURES	10 cr.
DIES 113	DIESEL ENGINES/FUEL SYSTEMS	5 cr.
DIES 114	DIESEL PROCEDURES	10 cr.
DIES 115	DRIVE TRAINS	5 cr.
DIES 116	DIESEL PROCEDURES	10 cr.
DIES 120	BASIC ELECTRICAL	3 cr.
DIES 121	ELECTRONIC ENGINE MANAGEMENT SYSTEMS	3 cr.
DIES 122	ELECTRONIC VEHICLE CONTROL SYSTEMS	3 cr.
DIES 221	ELECTRICAL/ELECTRONIC SYSTEMS	5 cr.
DIES 222	DIESEL PROCEDURES	6 cr.
DIES 223	HYDRAULIC SYSTEMS	5 cr.
DIES 224	DIESEL PROCEDURES	10 cr.
DIES 225	BRAKES, STEERING, AND SUSPENSION	5 cr.

**Total Required Credits: 120****Program Outcomes**

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Evaluate and use technical information from a variety of resources.
- Troubleshoot engines, hydraulic systems, electrical systems, power train systems, brakes, steering, and suspension systems.
- Repair engines, hydraulic systems, electrical systems, power train systems, brakes, steering, and suspension systems.
- Comply with personal and environmental safety practices that relate to the diesel power industry.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.
- Health and PE: Demonstrate progress toward healthier behaviors as appropriate for a career and technical education program.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts as appropriate for a career and technical education program.
- Social Science: Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences as appropriate for a career and technical education program.
- Science: Apply fundamental principles and relationships from the Natural Sciences to solve problems as appropriate for a career and technical education program.

**Diesel Technologies (AAT)****General Education Requirements**

**Communication Skills (5 credits required)**

**Computational Skills (5 credits required)**

**Human Relations (5 credits required)**

**Major Area Requirements**

DIES 111	DIESEL FUNDAMENTALS	5 cr.
DIES 112	DIESEL PROCEDURES	10 cr.
DIES 113	DIESEL ENGINES/FUEL SYSTEMS	5 cr.
DIES 114	DIESEL PROCEDURES	10 cr.
DIES 115	DRIVE TRAINS	5 cr.
DIES 116	DIESEL PROCEDURES	10 cr.
DIES 120	BASIC ELECTRICAL	3 cr.
DIES 121	ELECTRONIC ENGINE MANAGEMENT SYSTEMS	3 cr.
DIES 122	ELECTRONIC VEHICLE CONTROL SYSTEMS	3 cr.
DIES 221	ELECTRICAL/ELECTRONIC SYSTEMS	5 cr.
DIES 222	DIESEL PROCEDURES	6 cr.
DIES 223	HYDRAULIC SYSTEMS	5 cr.
DIES 224	DIESEL PROCEDURES	10 cr.
DIES 225	BRAKES, STEERING, AND SUSPENSION	5 cr.
DIES 226	DIESEL PROCEDURES	10 cr.

**Additional Recommended Courses (for preparation into trade)**

BUS 110	CUSTOMER SERVICE	3 cr.
DIES 096	CUMMINS ENGINES	3 cr.
DIES 135	INDUSTRIAL HYDRAULICS	3 cr.
IFA 031	INDUSTRIAL FIRST AID	1 cr.

**Total Required Credits: 110****Program Outcomes**

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Evaluate and use technical information from a variety of resources.
- Troubleshoot engines, hydraulic systems, electrical systems, power train systems, brakes, steering, and suspension systems.
- Repair engines, hydraulic systems, electrical systems, power train systems, brakes, steering, and suspension systems.
- Comply with personal and environmental safety practices that relate to the diesel power industry.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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## Drama (Area of Study)

The Clark College Drama program provides a rich cultural focus for the campus and surrounding community, blending theatre, music, dance, and art into entertaining and award-winning productions. The co-curricular program combines traditional classroom training with the opportunity for students to apply and test both performance and technical skills in staged productions before a paying audience.

A comprehensive curriculum teaches acting principles and techniques for both theatre and television, including scene study, characterization, and period styles of acting. Camera operations and directing skills are also studied.

Basic stagecraft design and construction, stage lighting and makeup courses provide behind-the-scenes knowledge to enhance acting performance and also skills for a career in the production side of the film and theatre industry. Students planning a career in acting or other phases of theatrical production can acquire foundation skills and experience in multiple settings while completing degree requirements. Theatre courses and performances also serve as excellent training for those planning careers in teaching or other fields that require public presentations.

Because course requirements vary at each institution, students interested in pursuing a four-year degree in Drama should work with advisors at Clark and their transfer institution to develop a course of study.

Drama courses typically transfer to four-year institutions. However, students should contact their transfer institution to clarify each course's transferability.

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## Early Childhood Education

Work in programs for young children is a challenging, absorbing, and personally rewarding career. In Clark College's Early Childhood Education program, students study child development and program organization, plan learning experiences for young children, and develop guidance skills in working with children.

The Early Childhood Education (ECE) department offers various certificates of achievement. As part of each certificate program, students are required to complete prescribed numbers of hours doing student teaching and/or observation in the Child and Family Studies program under the supervision of selected staff as well as in the community at large.

Programs are revised periodically to reflect changes in the specific career field. The following list of courses is an example of the coursework required for each program. Students planning to complete this program must meet with an advisor prior to registration for a current list of requirements.

Students must complete all Major Area Requirements and specifically listed courses with a minimum grade of "C" or better in order to successfully complete the program and earn the award.

Refer to the Degree & Certificate Requirements Section of the Clark College Catalog to identify the courses needed to satisfy the General Education Requirements.

Students preparing to transfer should make an early decision and contact the four-year school to which they will transfer. The Early Childhood Education Advisors can help in planning a schedule based on the four-year school's requirements. The department has made transfer agreements with several colleges to date.

Students must be able to pass a Criminal History screening to participate with the children in the ECE lab school. Participation in the ECE lab is a requirement for taking classes in ECE program. Students are also required to get a TB test or provide written proof that they have had one within the last year.

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## Early Childhood Education (AAS)

### General Education Requirements

<b>Communication Skills (6 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
<b>Health &amp; Physical Education (3 credits required)</b>		
<b>Computational Skills (3 credits required)</b>		
MATH 030	PRE-ALGEBRA (or COMPASS Placement in MATH 090)	5 cr.
<b>Human Relations (3 credits required)</b>		
EDUC&150	CHILD/FAMILY/COMMUNITY	3 cr.
<b>Humanities (3 credits required)</b>		
<b>Social Sciences (3 credits required)</b>		
<b>Natural Sciences (3 credits required)</b>		
ENVS 109	INTEGRATED ENVIRONMENTAL SCIENCE (recommended)	5 cr.



## Major Area Requirements

ECE 102	SCIENCE AND MATHEMATICS FOR YOUNG CHILDREN	3 cr.
ECE 105	INDIVIDUALIZED INSTRUCTION I	2 cr.
ECE 106	INDIVIDUALIZED INSTRUCTION II	2 cr.
ECE 116	LITERATURE AND STORYTELLING FOR CHILDREN	2 cr.
ECE 133	REFLECTIVE PRACTICES IN EARLY LEARNING	3 cr.
ECE 135	PARTNERSHIPS WITH FAMILIES IN EARLY CARE & EDUC	3 cr.
ECE 199	COOPERATIVE WORK EXPERIENCE (5 credits required)	1-5 cr.
ECE 211	LEARNING EXPERIENCES FOR YOUNG CHILDREN II	3 cr.
ECE 212	LEARNING EXP FOR YOUNG CHILDREN II LAB	3 cr.
ECE 213	LEARNING EXPERIENCES FOR YOUNG CHILDREN III	3 cr.
ECE 214	LEARNING EXP FOR YOUNG CHILDREN III LAB	3 cr.
ECE 215	EARLY CHILDHOOD SEMINAR	2 cr.
ECED&105	INTRO EARLY CHILD ED	5 cr.
ECED&107	HEALTH/NUTRITION/SAFETY	5 cr.
ECED&120	PRACTICUM-NURTURING REL	2 cr.
ECED&160	CURRICULUM DEVELOPMENT	5 cr.
ECED&170	ENVIRONMENTS-YOUNG CHILD	3 cr.
ECED&180	LANG/LITERACY DEVELOP	3 cr.
ECED&190	OBSERVATION/ASSESSMENT	3 cr.
EDUC&115	CHILD DEVELOPMENT	5 cr.
EDUC&130	GUIDING BEHAVIOR	3 cr.
EDUC&203	EXCEPTIONAL CHILD	3 cr.

## Additional Major Area Requirements

ECED&132	INFANTS/TODDLERS CARE	3 cr.
or EDUC&136	SCHOOL AGE CARE	3 cr.

**Total Required Credits: 102**

Concurrent enrollment required for ECE 199/ECE 215.

Concurrent enrollment required for ECED& 105/ECED& 120.

Concurrent enrollment required for ECE 211/ECE 212 Lab.

Concurrent enrollment required for ECE 213/ECE 214 Lab.

The course of study in Early Childhood Education conforms to the following:

- Guidelines for preparation of early childhood professionals; Washington State Skill Standards; and
- Early childhood education professional competencies.

## Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Student co-learners will demonstrate an understanding of and be able to apply developmentally appropriate practices to early learning practices.
- Student co-learners will understand and apply developmentally appropriate practices to curriculum development in all domains of learning.
- Student co-learners will understand, develop, and apply skills that facilitate classroom interactions that meet the needs and interests of children with a range of abilities, learning styles, cultures and background.
- Student co-learners will understand how to develop relationships with families and apply it to their teaching practices.
- Student co-learners will analyze and evaluate their awareness of equity pedagogy and create strategies for implementing cultural competence in their work with children and their families.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.
- Health and PE: Demonstrate progress toward healthier behaviors as appropriate for a career and technical education program.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts as appropriate for a career and technical education program.
- Social Science: Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences as appropriate for a career and technical education program.
- Science: Apply fundamental principles and relationships from the Natural Sciences to solve problems as appropriate for a career and technical education program.

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## Early Childhood Education (AAS-T)

Students preparing to transfer should make an early decision and contact the four-year school to which they will transfer. The Early Childhood Education coordinator can help in planning a schedule based on the four-year school's requirements. The department has made transfer agreements with several colleges to date.

Students must be able to pass a Criminal History screening to participate with the children in the ECE lab school. Participation in the ECE lab is a requirement for taking classes in ECE program. Students are also required to get a TB test or provide written proof

that they have had one within the last year.

## General Education Requirements

Note: Some general education requirements may be met by the specific requirements of the program.

<b>Communication Skills (10 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
ENGL&102	ENGLISH COMPOSITION II	5 cr.
<b>Quantitative Skills (10 credits required)</b>		
MATH 105	FINITE MATHEMATICS	5 cr.
MATH&107	MATH IN SOCIETY	5 cr.
<b>Humanities (10 credits required)</b> (must be taken from two departments)		
CMST&220	PUBLIC SPEAKING	5 cr.
CMST&210	INTERPERSONAL COMMUNICATION (recommended)	5 cr.
CMST 216	INTERCULTURAL COMMUNICATION (recommended)	5 cr.
CMST&230	SMALL GROUP COMMUNICATION (recommended)	5 cr.
MUSC 106	MUSIC IN EARLY CHILDHOOD EDUCATION (recommended)	3 cr.
MUSC&104	MUSIC APPRECIATION (recommended)	3 cr.
SPAN&121	SPANISH I (recommended)	5 cr.
WS 101	INTRODUCTION TO WOMEN'S STUDIES (recommended)	5 cr.
<b>Social Sciences (10 credits required)</b> (must be taken from two departments)		
PSYC&200	LIFESPAN PSYCHOLOGY	5 cr.
SOC& 101	INTRO TO SOCIOLOGY (recommended)	5 cr.
SOC 121	MARRIAGE AND FAMILY EXPERIENCES IN THE U.S. (recommended)	3 cr.
SOC 131	RACE AND ETHNICITY IN THE U.S. (recommended)	3 cr.
<b>Natural Sciences (10 credits required)</b> (5 credits must be a lab science)		
BIOL 164	HUMAN BIOLOGY (recommended)	4 cr.
and BIOL 165	HUMAN BIOLOGY LAB (recommended)	1 cr.
PHSC 101	GENERAL PHYSICAL SCIENCE (recommended)	5 cr.
PHSC 102	GENERAL PHYSICAL SCIENCE (recommended)	5 cr.

## Major Area Requirements

The courses in the following areas are required:

<b>Family and Community Relationships</b>		
EDUC&150	CHILD/FAMILY/COMMUNITY	3 cr.
<b>Health, Safety and Nutrition</b>		
ECED&107	HEALTH/NUTRITION/SAFETY	5 cr.
<b>Professionalism</b>		
ECE 215	EARLY CHILDHOOD SEMINAR	2 cr.

## Choose 5-6 credits from each content area below for a total of 30 credits:

<b>Child Development and Learning (including Typical and Atypical)</b>		
ECE 100	CHILD DEVELOPMENT: BIRTH TO SIX	3 cr.
EDUC&203	EXCEPTIONAL CHILD	3 cr.
<b>Curriculum Development and Implementation</b>		
ECE 211	LEARNING EXPERIENCES FOR YOUNG CHILDREN II	3 cr.
ECE 213	LEARNING EXPERIENCES FOR YOUNG CHILDREN III	3 cr.
ECED&160	CURRICULUM DEVELOPMENT	5 cr.
EDUC&136	SCHOOL AGE CARE	3 cr.
<b>Child Guidance</b>		
EDUC&130	GUIDING BEHAVIOR	3 cr.
<b>Diversity, Inclusion, Multicultural</b>		
ECE 105	INDIVIDUALIZED INSTRUCTION I	2 cr.
ECE 106	INDIVIDUALIZED INSTRUCTION II	2 cr.
ECED&105	INTRO EARLY CHILD ED	5 cr.
and	PRACTICUM-NURTURING REL (Must take both)	2 cr.
ECED&120	ECED&180	3 cr.
LANG/LITERACY DEVELOP	EDUC&203	3 cr.
EXCEPTIONAL CHILD	<b>Observation, Assessment and Evaluation</b>	
ECE 106	INDIVIDUALIZED INSTRUCTION II	2 cr.
ECED&105	INTRO EARLY CHILD ED	5 cr.
and	PRACTICUM-NURTURING REL	2 cr.
ECED&120	EDUC&130	3 cr.
GUIDING BEHAVIOR	<b>Practicum/Field Experience (suggested</b>	
<b>minimum 300 hours)</b>		
ECE 212	LEARNING EXP FOR YOUNG CHILDREN II LAB	3 cr.
ECE 214	LEARNING EXP FOR YOUNG CHILDREN III LAB	3 cr.
ECE 199	COOPERATIVE WORK EXPERIENCE	1-5 cr.

**Total Required Credits: 90 minimum**

**Program Outcomes**

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Student co-learners will demonstrate an understanding of and be able to apply developmentally appropriate practices to early learning practices.
- Student co-learners will understand and apply developmentally appropriate practices to curriculum development in all domains of learning.
- Student co-learners will understand, develop, and apply skills that facilitate classroom interactions that meet the needs and interests of children with a range of abilities, learning styles, cultures and background.
- Student co-learners will understand how to develop relationships with families and apply it to their teaching practices.
- Student co-learners will analyze and evaluate their awareness of equity pedagogy and create strategies for implementing cultural competence in their work with children and their families.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.
- Health and PE: Demonstrate progress toward healthier behaviors as appropriate for a career and technical education program.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts as appropriate for a career and technical education program.
- Social Science: Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences as appropriate for a career and technical education program.
- Science: Apply fundamental principles and relationships from the Natural Sciences to solve problems as appropriate for a career and technical education program.

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**State Initial Early Childhood Educaiton Certificate (statewide) (CC)**

**Major Area Requirements**

ECED&105	INTRO EARLY CHILD ED	5 cr.
ECED&107	HEALTH/NUTRITION/SAFETY	5 cr.
ECED&120	PRACTICUM-NURTURING REL	2 cr.

**Total Required Credits: 12**

**Program Outcomes**

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Student co-learners will demonstrate an understanding of and be able to apply developmentally appropriate practices to early learning practices.
- Student co-learners will understand and apply developmentally appropriate practices to curriculum development in all domains of learning.
- Student co-learners will understand, develop, and apply skills that facilitate classroom interactions that meet the needs and interests of children with a range of abilities, learning styles, cultures and background.
- Student co-learners will understand how to develop relationships with families and apply it to their teaching practices.
- Student co-learners will analyze and evaluate their awareness of equity pedagogy and create strategies for implementing cultural competence in their work with children and their families.
- Students will demonstrate developmentally appropriate practices as they apply to health, safety and nutrition of young children.
- Students will identify developmentally appropriate practices in both guidance strategies and curriculum development.
- Students will demonstrate effective oral and written communication appropriate to the field of Early Childhood Education.

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**State Short Early Childhood Education Certificate of Specialization-General (statewide) (CC)**

\*CC-State Short Early Childhood Education Certificate of Specialization-General (statewide)

**Major Area Requirements**

ECED&105	INTRO EARLY CHILD ED	5 cr.
ECED&107	HEALTH/NUTRITION/SAFETY	5 cr.
ECED&120	PRACTICUM-NURTURING REL	2 cr.
EDUC&115	CHILD DEVELOPMENT	5 cr.
EDUC&130	GUIDING BEHAVIOR	3 cr.

**Total Required Credits: 20**

**Program Outcomes**

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Student co-learners will demonstrate an understanding of and be able to apply developmentally appropriate practices to early learning practices.
- Student co-learners will understand and apply developmentally appropriate practices to curriculum development in all domains of learning.

- Student co-learners will understand, develop, and apply skills that facilitate classroom interactions that meet the needs and interests of children with a range of abilities, learning styles, cultures and backgrounds.
- Student co-learners will understand how to develop relationships with families and apply it to their teaching practices.
- Student co-learners will analyze and evaluate their awareness of equity pedagogy and create strategies for implementing cultural competence in their work with children and their families.

### Short State Certificate of Specialization-Infants and Toddlers (statewide) (CC)

#### Major Area Requirements

ECED&105	INTRO EARLY CHILD ED	5 cr.
ECED&107	HEALTH/NUTRITION/SAFETY	5 cr.
ECED&120	PRACTICUM-NURTURING REL	2 cr.
ECED&132	INFANTS/TODDLERS CARE	3 cr.
EDUC&115	CHILD DEVELOPMENT	5 cr.

**Total Required Credits: 20**

#### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Student co-learners will demonstrate an understanding of and be able to apply developmentally appropriate practices to early learning practices .
- Student co-learners demonstrate ability to implement emergent curriculum in various domains of learning.
- Student co-learners will understand, develop, and apply skills that facilitate classroom interactions that meet the needs and interests of children with a range of abilities, learning styles, cultures and backgrounds.
- Student co-learners display an ability to inform families of curriculum engagement in multiple ways.
- Student co-learners apply awareness of diversity in curriculum planning and implementation.

### Short State Certificate of Specialization-School Age Care (statewide) (CC)

#### Major Area Requirements

ECED&105	INTRO EARLY CHILD ED	5 cr.
ECED&107	HEALTH/NUTRITION/SAFETY	5 cr.
ECED&120	PRACTICUM-NURTURING REL	2 cr.
EDUC&115	CHILD DEVELOPMENT	5 cr.
EDUC&136	SCHOOL AGE CARE	3 cr.

**Total Required Credits: 20**

#### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Student co-learners will demonstrate an understanding of and be able to apply developmentally appropriate practices to early learning practices.
- Student co-learners demonstrate ability to implement emergent curriculum in various domains of learning.
- Student co-learners display ability to adapt curriculum to meet the needs and interests of children with a range of abilities, learning styles, cultures and backgrounds.
- Student co-learners display an ability to inform families of curriculum engagement in multiple ways.
- Student co-learners will analyze and evaluate their awareness of equity pedagogy and create strategies for implementing cultural competence in their work with children and their families.

### Short State Certificate of Specialization-Family Child Care (statewide) (CC)

#### Major Area Requirements

ECED&105	INTRO EARLY CHILD ED	5 cr.
ECED&107	HEALTH/NUTRITION/SAFETY	5 cr.
ECED&120	PRACTICUM-NURTURING REL	2 cr.
EDUC&115	CHILD DEVELOPMENT	5 cr.
ECED&134	FAMILY CHILD CARE	3 cr.

**Total Required Credits: 20**

#### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Student co-learners will demonstrate an understanding of and be able to apply developmentally appropriate practices to early learning practices.
- Student co-learners demonstrate ability to implement emergent curriculum in various domains of learning.
- Student co-learners will understand, develop, and apply skills that facilitate classroom interactions that meet the needs and interests of children with a range of abilities, learning styles, cultures and backgrounds.
- Student co-learners display an ability to inform families of curriculum engagement in multiple ways.
- Student co-learners apply awareness of diversity in curriculum planning and implementation.

### Short State Certificate of Specialization-Administration (statewide) (CC)

#### Major Area Requirements

ECED&105	INTRO EARLY CHILD ED	5 cr.
ECED&107	HEALTH/NUTRITION/SAFETY	5 cr.
ECED&120	PRACTICUM-NURTURING REL	2 cr.
ECED&139	ADMIN EARLY LRNG PROG	3 cr.
EDUC&115	CHILD DEVELOPMENT	5 cr.

**Total Required Credits: 20**

#### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Student co-learners will demonstrate an understanding of and be able to apply developmentally appropriate practices to early learning practices.
- Student co-learners demonstrate ability to implement emergent curriculum in various domains of learning.
- Student co-learners display ability to adapt curriculum to meet the needs and interests of children with a range of abilities, learning styles, cultures and backgrounds.
- Student co-learners will understand how to develop relationships with families and apply it to their teaching practices.
- Student co-learners will analyze and evaluate their awareness of equity pedagogy and create strategies for implementing cultural competence in their work with children and their families.

### Education

Teachers play a direct role in the life of almost every person and in the development of society as a whole. Shortages of trained educators are anticipated in the near future as many of those currently working in the profession reach retirement age.

Elementary teachers instruct students in basic concepts in several subjects, including mathematics, language arts, science, and social studies. They also introduce small children to formal learning in kindergarten.

Secondary teachers usually specialize in teaching one subject to high school students such as English, music, history, mathematics, languages, biology, chemistry, or others. Many secondary teachers spend at least some time teaching outside of their subject area. Duties may also include attending staff meetings, supervising extracurricular activities and meeting with parents.

A minimum of a bachelor's degree plus teaching certification is required to teach in grades kindergarten through 12.

Prospective education students should consult with an education advisor to plan a course of study. At Clark College, students usually complete General Education Requirements within the Associate in Arts degree. A specific course of study should be planned based on the requirements of the senior institution where the student will transfer.

#### Elementary Education - Transfer to WSU Vancouver (AA)

This pathway is applicable to students planning to prepare for an upper-division elementary education major. This degree is defined specifically for transfer to the WSUV cohort program in elementary education and replaces the AA-DTA/MRP for WSUV transfer in Elementary Education.

Students taking this degree should note that a change in transfer institution might change requirements, and advisors at the transfer institution should be consulted.

The coding for this degree is NOT different that of the standard Elementary Education degree.

Although not required for this degree, students should be advised they must take the WEST-B in order to apply to teacher preparation programs.

Students must also meet the residency requirements as established by Clark. While Clark College has approved offering the degree below, Clark students should keep these requirements in mind should their transfer pathways change.

## General Education Requirements

<b>Communication Skills (10 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
ENGL&102	ENGLISH COMPOSITION II	5 cr.
<b>Quantitative Skills (5 credits required)</b>		
MATH 122	MATH FOR ELEMENTARY TEACHERS	5 cr.
and MATH 123	MATH FOR ELEMENTARY TEACHERS	5 cr.
and MATH 124	MATH FOR ELEMENTARY TEACHERS	5 cr.
<b>Health &amp; Physical Education (3 credits required)</b>		
<b>Oral Communications (5 credits required)</b>		
<b>Humanities (15 credits required)</b>		
CMST&220	PUBLIC SPEAKING (Fulfills oral communication requirement)	5 cr.
MUSC 106	MUSIC IN EARLY CHILDHOOD EDUCATION (List B)	3 cr.
Other Humanities*		7 cr.
<b>Social Sciences (26-30 credits required)</b>		
ECON 101	INTRODUCTION TO ECONOMICS	3 cr.
or ECON&201	MICRO ECONOMICS	5 cr.
or ECON&202	MACRO ECONOMICS	5 cr.
GEOG&100	INTRODUCTION TO GEOGRAPHY	5 cr.
HIST&146	UNITED STATES HISTORY I	5 cr.
or HIST&147	UNITED STATES HISTORY II	5 cr.
or HIST&148	UNITED STATES HISTORY III	5 cr.
POLS 111	AMERICAN NATIONAL GOVERNMENT AND POLITICS	5 cr.
or POLS 171	SURVEY OF THE UNITED STATES CONSTITUTION	3 cr.
PSYC&100	GENERAL PSYCHOLOGY	5 cr.
PSYC&200	LIFESPAN PSYCHOLOGY	5 cr.
<b>Natural Sciences (15 credits required)</b>		
(must include a lab course)		
• 5 credits Biological Science		
• 5 credits Physical Science		
• 5 credits additional Natural Science		

## Major Area Requirements

EDUC&201	INTRODUCTION TO EDUCATION	3 cr.
(Recommended not required)		
EDUC 210	INTRODUCTORY FIELD EXPERIENCE	3 cr.
(Recommended not required)		
ENGL 105	ENGLISH GRAMMAR	5 cr.
(Strongly Recommended)		

\* For this degree only, ENGL105 may fulfill a List A Humanities requirement.

**Total Required Credits: 90 Minimum**

## Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Information Literacy: Obtain, evaluate, and ethically use information.
- Communications: Communicate with various audiences using a variety of methods.
- Quantitative I: Perform mathematical calculations without the aid of a calculator.
- Quantitative II: Solve quantitative problems and interpret the solutions.
- Health & Physical Education: Demonstrate progress toward healthier behaviors.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Social Science: Evaluate, analyze and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.
- Power, Privilege, and Inequality: Analyze patterns of power, privilege and inequality.
- Natural Science I: Apply fundamental principles and relationships from the Natural Sciences to solve problems.
- Natural Science II: Evaluate claims about the natural world using scientific methodology.

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## Elementary Education DTA/MRP - WSUV Pathway (AA)

The Elementary Education MRP degree was discontinued by the state effective in winter quarter 2014. Students pursuing this degree prior to that time will have a two year window to complete their degree, and in accordance with applicable catalog requirements. Students interested in pursuing Elementary Education as a major should contact Advising to discuss appropriate pathways and to develop an educational plan.

## Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Information Literacy: Obtain, evaluate, and ethically use information.
- Communications: Communicate with various audiences using a variety of methods.
- Quantitative I: Perform mathematical calculations without the aid of a calculator.
- Quantitative II: Solve quantitative problems and interpret the solutions.
- Health & Physical Education: Demonstrate progress toward healthier behaviors.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Social Science: Evaluate, analyze and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.
- Power, Privilege, and Inequality: Analyze patterns of power, privilege and inequality.
- Natural Science I: Apply fundamental principles and relationships from the Natural Sciences to solve problems.
- Natural Science II: Evaluate claims about the natural world using scientific methodology.

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## Emergency Medical Services

### Emergency Medical Technician

Clark College offers a Certificate of Completion in Emergency Medical Technician-Basic (EMT-B). The EMT-B course is designed to enhance job opportunities in pre-hospital emergency settings. A variety of community agencies such as ambulance companies, police and fire departments, and large industries utilize employees with EMT-B training. This program includes lecture, laboratory, emergency room observation, and field experience on an ambulance or fire rescue unit as available.

### Emergency Medical Technician-Basic

EMT 103 is a ten-credit-hour Clark College course taught at the Northwest Regional Training Center (NWRTC). Check the Clark College website for directions to the training center. Students must bring the following items to the first night of class:

- Copy of current American Heart Association healthcare provider CPR card (or take HLTH 124 Healthcare Provider CPR and First Aid (formerly FACPR 032) within first week of class).
- HEOC 120 Aids Education (or proof of minimum 7-hour AIDS Education Certificate).
- Copy of valid driver's license.
- Washington State Patrol criminal background check (within six [6] months of course date).
- MMR immunization (twice in lifetime or within last 10 years).
- Hepatitis B immunization (series of three) or signed waiver.
- Negative tuberculosis skin test or chest x-ray (within past six [6] months).
- Must be 18 years of age.
- Proof of high school completion (transcripts) or GED.

\*Students are required to purchase the course textbook prior to the first class. The textbook can be purchased at the Clark College Bookstore or NWRTC

\*\*Students are strongly encouraged to attend the EMT course orientation held the Friday before the quarter begins: 6-10 p.m., held at NWRTC.

Please call the NWRTC office at (360) 397-2100 if you have any questions about the above requirements.

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### Emergency Medical Technician Basic (CC)

To earn the Certificate of Completion, students must complete the courses listed below with a grade point average (GPA) of 2.0 or above in each offering.

#### Program Requirements

HLTH 124	HEALTHCARE PROVIDER CPR AND FIRST AID (formerly FACPR	1 cr.
EMT 103	EMERGENCY MEDICAL TECHNICIAN - BASIC	10 cr.
HEOC 100	BASIC CONCEPTS OF ANATOMY AND PHYSIOLOGY *	4 cr.
or BIOL 164	HUMAN BIOLOGY *	4 cr.
and BIOL 165	HUMAN BIOLOGY LAB *	1 cr.

HEOC 120	AIDS EDUCATION	1 cr.
BMED 110	MEDICAL TERMINOLOGY I (strongly recommended)	3 cr.
and BMED 111	MEDICAL TERMINOLOGY II (strongly recommended)	3 cr.

**Total Required Credits: 14-19**

\* HEOC 100 or BIOL 164 & 165, must be seven years current upon program entry.

#### **Affiliation**

Students who are not affiliated with an appropriate agency have 18 months after completing the program to gain affiliation and take the Washington state exam. All Emergency Medical Technician-Basics wishing to work in Washington must obtain state certification.

#### **Program Outcomes**

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Administer first aid treatment or life support care to sick or injured persons in prehospital settings.
- Perform emergency assessment and treatment procedures, observing, recording, and reporting to the receiving facility, the patient's condition or injury.
- Communicate effectively and professionally using verbal, nonverbal, and written language with patients, colleagues, the public, diverse populations, and other healthcare providers.
- Model professional behaviors and make appropriate decisions guided by ethical principles and core values.

## **Engineering**

Engineering is a profession where you are challenged to develop creative solutions to problems related to every aspect of life, through the application of mathematical and scientific principles, experience, creativity, and common sense.

Clark College offers the first two years of study of a four-year engineering degree program. The first two years main focus of study are preparatory courses in mathematics, chemistry, physics, and basic engineering courses required by the student's engineering field and transfer school.

Those who study engineering today can look forward to a rewarding career where they experience personal achievement, exercise their curiosity, give service to society, and realize financial success.

Engineers work on a wide variety of projects: basic and applied research, product development, design and modification of processes and equipment, and plant operation. Some enter sales, marketing, management, consulting, government agencies, or teaching.

Engineers plan, develop, and oversee the research and design of construction and manufacturing projects. They work on teams with engineers from other fields to design integrated systems and solve complex technical problems. Engineers also develop and use computer-aided design programs to simulate and test products and systems.

Engineers can specialize in many fields including:

Aeronautical/Aerospace  
 Bioengineering  
 Biomedical  
 Ceramic  
 Chemical/Pulp & Paper  
 Civil  
 Computer  
 Electrical/Electronics  
 Environmental  
 Forestry  
 Manufacturing/Industrial  
 Marine  
 Materials  
 Mechanical  
 Software

There are many other interdisciplinary fields including architecture, law, sports, human factors and acoustics.

### **Engineering (AST2)**

This is a suggested program for the first two years of a four-year Engineering program. These lower-division course requirements will vary depending on the math and English placement at Clark College, and the requirements of the four-year institution to which you transfer. It is critical that you work with an Engineering faculty advisor to ensure your program will give you the maximum benefit when you transfer. Additional courses are needed to satisfy graduation requirements for the Associate in Science degree.

### **General Education Requirements**



<b>Communication Skills (5 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
<b>Quantitative Skills (10 credits required)</b>		
MATH&151	CALCULUS I	5 cr.
MATH&152	CALCULUS II	5 cr.
<b>Health &amp; Physical Education (3 credits required)</b>		
<b>Humanities &amp; Social Sciences (15 credits required)</b>		

### Pre-Major Program Requirements

CHEM&141	GENERAL CHEMISTRY I	4 cr.
CHEM&151	GENERAL CHEMISTRY LABORATORY I	1 cr.
MATH&153	CALCULUS III	5 cr.
MATH 221	DIFFERENTIAL EQUATIONS	5 cr.
MATH&254	CALCULUS IV	5 cr.
PHYS&241	ENGINEERING PHYSICS I	4 cr.
and PHYS&231	ENGINEERING PHYSICS LAB I	1 cr.
PHYS&242	ENGINEERING PHYSICS II	4 cr.
and PHYS&232	ENGINEERING PHYSICS LAB II	1 cr.
PHYS&243	ENGINEERING PHYSICS III	4 cr.
and PHYS&233	ENGINEERING PHYSICS LAB III	1 cr.

### Elective Requirements\*

CHEM&142	GENERAL CHEMISTRY II	4 cr.
CHEM&143	GENERAL CHEMISTRY III	4 cr.
CHEM&152	GENERAL CHEMISTRY LABORATORY II	1 cr.
CHEM&153	GENERAL CHEMISTRY LABORATORY III	2 cr.
CS& 131	COMPUTER SCIENCE I C++	5 cr.
CS& 141	COMPUTER SCIENCE I JAVA	5 cr.
CSE 121	INTRODUCTION TO C	5 cr.
CSE 222	INTRODUCTION TO DATA STRUCTURES	5 cr.
ENGR 101	ENGINEERING AND COMPUTER SCIENCE ORIENTATION	1 cr.
ENGR&104	INTRODUCTION TO DESIGN	5 cr.
ENGR 107	INTRO TO AEROSPACE ENGINEERING	2 cr.
ENGR 109	INTRODUCTION TO ENGINEERING	5 cr.
ENGR 113	ENGINEERING SKETCHING AND VISUALIZATION	2 cr.
ENGR 115	GEOMETRIC DIMENSIONING AND TOLERANCING	2 cr.
ENGR 120	INTRO TO ELECTRICAL/COMPUTER SCI & ENGINEERING	5 cr.
ENGR 121	FIELD SURVEY I	5 cr.
ENGR 140	BASIC AUTOCAD	4 cr.
ENGR 150	BASIC SOLIDWORKS	4 cr.
ENGR 199	COOPERATIVE WORK EXPERIENCE	1-5 cr.
ENGR&204	ELECTRICAL CIRCUITS	5 cr.
ENGR&214	STATICS	5 cr.
ENGR&215	DYNAMICS	5 cr.
ENGR 221	MATERIALS SCIENCE	5 cr.
ENGR&224	THERMODYNAMICS	5 cr.
ENGR&225	MECHANICS OF MATERIALS	5 cr.
ENGR 239	MANUFACTURING PROCESSES	5 cr.
ENGR 250	DIGITAL LOGIC DESIGN	5 cr.
ENGR 252	ELECTRICAL CIRCUITS AND SIGNALS	5 cr.
ENGR 253	SIGNALS AND SYSTEMS	5 cr.
ENGR 270	DIGITAL SYSTEMS AND MICROPROCESSORS	5 cr.
ENGR 280	SELECTED TOPICS	1-5 cr.
ENGR 290	SPECIAL PROJECTS	1-6 cr.
ENGL&235	TECHNICAL WRITING	5 cr.
MATH 215	LINEAR ALGEBRA	5 cr.

**Total Required Credits: 90**

\* Requirements vary by school and program. See an Engineering faculty advisor regarding proper selection.

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate progress toward healthier behaviors.
- Acquire scientific and technological information from appropriate sources to examine issues, claims or situations.
- Analyze and solve multi-step problems using techniques through single-variable calculus.
- Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.

- Apply fundamental principles and relationships from the Natural Sciences to analyze technological or scientific problems.
- Apply scientific and technological knowledge and methodologies to creatively solve technological or scientific problems.
- Communicate with various audiences using a variety of methods.
- Demonstrate understanding of the derivative as an instantaneous rate of change and the definite integral as a limit of a sum.
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.
- Analyze patterns of power, privilege, and inequity in the United States. (GE)
- Obtain, evaluate, and ethically use information. (GE)
- Demonstrate understanding of the derivative as instantaneous rate of change and the definite integral as a limit of a Riemann sum in applied problems.
- Analyze and solve multi-step problems using techniques through single-variable calculus, and communicate the results.
- Apply fundamental principles and relationships from the Natural Sciences to analyze technological or scientific problems.
- Acquire scientific and technological information from appropriate sources to examine issues, claims or situations.
- Apply scientific and technological knowledge and methodologies to creatively solve technological or scientific problems.
- Communicate with various audiences using a variety of methods.
- Demonstrate progress toward healthier behaviors.
- Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Obtain, evaluate, and ethically use information.
- Analyze patterns of power, privilege and inequality.
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.

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## English (Area of Study)

The Clark College English department offers a myriad of courses ranging from composition to studies of Shakespeare.

The fundamental courses offered by Clark's English department are designed to teach students to use the library, conduct research, comprehend material, analyze information, evaluate ideas, develop and organize their own ideas, use correct word choice and grammar, proofread and edit, and improve both their verbal and their written communication.

A four-year degree in English can serve as the foundation for a career in writing, law, business, or education. Many students pursuing a career in secondary education have earned their Associate in Arts transfer degree in English at Clark and continued their coursework at WSU Vancouver, earning their Bachelor of Arts in English and a secondary education certificate, or a master's degree in teaching.

Exceptional English students can earn credit and gain valuable teaching experience working as English tutors. The College's Tutoring/Writing Center provides free assistance to students, aiding them in becoming more effective and evaluative writers.

Because course requirements vary at each institution, students interested in pursuing a four-year degree in English should work with advisors at Clark and their transfer institution to develop a course of study.

English department courses typically transfer to four-year institutions. However, students should contact their transfer institution to clarify each course's transferability.

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## Environmental Science

Environmental scientists apply mathematics and scientific principles to solve environmental problems. They develop ways to reduce, correct, or prevent damage to the environment.

Following the completion of a Bachelor of Arts or Science degree at a four-year institution of the student's choice, several avenues of employment or advancement are open. A few of these are:

- Environmental engineering
- Environmental law
- State and federal wildlife agencies
- Environmental science teaching at the elementary or secondary level
- Environmental research scientist
- Environmental planning/policy analyst
- Nonprofit environmental organizations

Environmental Science is a highly interdisciplinary field; students interested in careers in the Environmental Sciences will need a

fundamental understanding of a variety of sciences and social sciences. Depending on specific career objectives, students pursuing a four-year degree in Environmental Science may want to emphasize additional coursework in such fields as Biology, Chemistry, Physics, Geology, Oceanography, or the Atmospheric Sciences. Students planning careers in Environmental Studies, Environmental Regulation and Policy, or Regional Planning may want to emphasize additional coursework in the Social Sciences, Business, or Economics.

### Environmental Science (AST1)

This is a suggested program for the first two years of major study in Environmental Science. Lower-division course requirements will vary depending on the transfer institution. Contact an advisor at the transfer institution to determine required coursework as early as possible.

#### General Education Requirements

<b>Communication Skills (5 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
<b>Quantitative Skills (10 credits required)</b>		
MATH&151	CALCULUS I	5 cr.
MATH&152	CALCULUS II	5 cr.
<b>Health &amp; Physical Education (3 credits required)</b>		
<b>Humanities &amp; Social Sciences (15 credits required)</b>		
ENVS 231	ENVIRONMENTAL POLITICS	5 cr.
or POLS 231	ENVIRONMENTAL POLITICS	5 cr.
	Humanities List A	5 cr.
	Humanities or Social Sciences	5 cr.

#### Pre-Major Program Requirements

BIOL&221	MAJORS ECOLOGY/EVOLUTION	5 cr.
BIOL&222	MAJORS CELL/MOLECULAR	5 cr.
BIOL&223	MAJORS ORGANISMAL PHYS	5 cr.
CHEM&141	GENERAL CHEMISTRY I	4 cr.
CHEM&142	GENERAL CHEMISTRY II	4 cr.
CHEM&143	GENERAL CHEMISTRY III	4 cr.
CHEM&151	GENERAL CHEMISTRY LABORATORY I	1 cr.
CHEM&152	GENERAL CHEMISTRY LABORATORY II	1 cr.
CHEM&153	GENERAL CHEMISTRY LABORATORY III	2 cr.
MATH 203	DESCRIPTIVE STATISTICS	3 cr.
MATH 204	INFERENCE STATISTICS	3 cr.

#### Program Requirements

ENGL&102	ENGLISH COMPOSITION II	5 cr.
or ENGL 109	WRITING ABOUT THE SCIENCES	5 cr.
ENVS 211	INTRO TO ENVIRONMENTAL SYSTEMS	5 cr.
ENVS 221	ENVIRONMENTAL SCIENCE: PROBLEM SOLVING	5 cr.
GEOL 102	INTRO TO GEOL II: EARTH'S SURFACE PROCESSES	5 cr.
or PHYS&241	ENGINEERING PHYSICS I	4 cr.
and PHYS&231	ENGINEERING PHYSICS LAB I	1 cr.

#### Suggested Electives

GEOL&101	INTRO PHYSICAL GEOLOGY	5 cr.
or PHYS&242	ENGINEERING PHYSICS II	4 cr.
and PHYS&232	ENGINEERING PHYSICS LAB II	1 cr.
or PHYS&243	ENGINEERING PHYSICS III	4 cr.
and PHYS&233	ENGINEERING PHYSICS LAB III	1 cr.
SURV 125	INTRODUCTION TO GIS	3 cr.

**Total Required Credits: 90 minimum**

#### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate understanding of the derivative as instantaneous rate of change and the definite integral as a limit of a Riemann sum in applied problems.
- Analyze and solve multi-step problems using techniques through single-variable calculus, and communicate the results.
- Apply fundamental principles and relationships from the Natural Sciences to solve problems.
- Apply scientific methodologies to develop and answer questions about the natural world.
- Acquire scientific information from appropriate sources to analyze issues, claims or situations.
- Communicate with various audiences using a variety of methods.
- Demonstrate progress toward healthier behaviors.

- Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Obtain, evaluate, and ethically use information.
- Analyze patterns of power, privilege and inequality.
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.

## Fitness Trainer

The Fitness Trainer program at Clark College provides opportunities for students to pursue fitness related education. Fitness professionals have the opportunity to make a positive difference in people’s health and quality of life. The Fitness Trainer Associate of Applied Science degree is a 94-102 credit program that prepares students to become exceptional personal trainers. Other shorter-duration programs are available in Group Fitness, Yoga Teaching, and Corrective Exercise.

In order to progress from one course or quarter to the next, students enrolled in the Clark College Fitness Trainer program must earn at least a cumulative GPA of 2.0 (C average) for their General Education classes, and a 2.0 or higher in each Fitness Trainer Specialty class. Fitness Trainer Specialty classes have limited seats available.

Students who are interested in this program should refer to the Fitness Trainer website at [www.clark.edu/fitnesstrainer](http://www.clark.edu/fitnesstrainer) and follow the direction given on the "Get Started" page (right-hand menu item).

Clark College's Fitness Trainer Program has transfer articulation agreements with Concordia University's Bachelor of Arts in Exercise and Sport Science degree and Portland State University's bachelor's degree in Physical Activity/Exercise. Students may also opt to transfer to one of Central Washington University's Bachelor of Applied Science degree programs. Please see a faculty advisor for additional information about transfer options and requirements.

For information regarding the application process, preliminary requirements, and final admission process, please refer to [www.clark.edu/fitnesstrainer](http://www.clark.edu/fitnesstrainer) online.

## Fitness Trainer (AAS)

### General Education Requirements

<b>Communication Skills (6 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
BUS 211	BUSINESS COMMUNICATIONS	3 cr.
or ENGL&102	ENGLISH COMPOSITION II	5 cr.
or ENGL 109	WRITING ABOUT THE SCIENCES	5 cr.
<b>Health &amp; Physical Education (3 credits required)</b>		
HPE 258	FITNESS-WELLNESS	3 cr.
<b>Computational Skills (3 credits required)</b>		
MATH 090	ELEMENTARY ALGEBRA	5 cr.
or MATH 091	ALGEBRA II	5 cr.
<b>Human Relations (3 credits required)</b>		
CMST&210	INTERPERSONAL COMMUNICATION *	5 cr.
<b>Humanities (3 credits required) *</b>		
<b>Social Sciences (3 credits required)</b>		
PSYC&100	GENERAL PSYCHOLOGY	5 cr.
or PSYC&200	LIFESPAN PSYCHOLOGY	5 cr.
<b>Natural Sciences (3 credits required)</b>		
BIOL 164	HUMAN BIOLOGY **	4 cr.
BIOL 165	HUMAN BIOLOGY LAB **	1 cr.

### Major Area Requirements

FT 101	FITNESS TRAINER SEMINAR	1 cr.
FT 150	FUNDAMENTALS OF FITNESS	3 cr.
FT 151	FITNESS CENTER SKILLS	2 cr.
FT 152	FLEXIBILITY, POSTURE AND CORE	2 cr.
FT 153	EXERCISE TECHNIQUES	2 cr.
FT 154	POWER DEVELOPMENT	2 cr.
FT 200	NUTRITION FOR FITNESS	3 cr.
FT 210	WELLNESS COACHING	3 cr.
FT 220	FACILITY MANAGEMENT	3 cr.
FT 230	FITNESS TESTING	3 cr.
FT 250	STRUCTURAL KINESIOLOGY	3 cr.
FT 251	EXERCISE PHYSIOLOGY	4 cr.
FT 260	EXERCISE PRESCRIPTION I-HEALTHY POPULATIONS	5 cr.
FT 261	EXERCISE PRESCRIPTION II-SPECIAL POPULATIONS	5 cr.
FT 262	EXERCISE PRESCRIPTION III-PERFORMANCE TRAINING	4 cr.

FT 270	PROFESSIONAL ASPECTS OF FITNESS TRAINING	3 cr.
FT 275	FITNESS TRAINING INTERNSHIP	4 cr.
FT 290	SPECIAL PROJECTS (1 credit required)	1-5 cr.
FT 299	FINAL SKILL ASSESSMENT	2 cr.
HLTH 100	FOOD AND YOUR HEALTH	2 cr.
PE 291	CARE AND PREVENTION OF ATHLETIC INJURIES	3 cr.

### Specialty Area Courses

Required:	2 - 10 cr.
Choose up to 10 additional credits numbered FT 155-169, 290, or PE, PEDNC, PEMAR 100-283	
Swimming Class	1 cr.
At least one swimming course numbered PE 175, 176, 177, 179, 274, 275, or 279 (Prerequisite for FT 262 is ability to swim proficiently—students may need more than one swimming class to achieve the prerequisite standard of swimming ability).	

**Total Required Credits: 94-104**

\* CMST&210 fulfills Humanities and Human Relations requirements.

\*\* BIOL& 251, 252, and 253 can substitute for BIOL 164/165

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Apply knowledge, skills and abilities to be a competent personal trainer.
- Prepared for a nationally accredited Fitness Trainer certification exam.
- Apply appropriate strategies to motivate clients to adopt healthier behaviors.
- Perform health and fitness-related assessments on clients.
- Design and implement fitness plans to effectively train a variety of clients using a systematic approach to exercise prescription.
- Instruct clients to perform safe and effective exercise technique.
- Communicate exercise science related principles at levels appropriate to both clients and to professional peers.
- Exhibit a foundation of professional and business-related skills necessary for becoming a personal trainer.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.
- Health and PE: Demonstrate progress toward healthier behaviors as appropriate for a career and technical education program.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts as appropriate for a career and technical education program.
- Social Science: Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences as appropriate for a career and technical education program.
- Science: Apply fundamental principles and relationships from the Natural Sciences to solve problems as appropriate for a career and technical education program.

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### Group Fitness Instructor (CC)

The Fitness Trainer Program's Group Fitness Instructor Certificate of Completion program prepares students with the necessary knowledge, skills and abilities to become group fitness instructors. Students completing the program may take the ACE™ Group Fitness Instructor certification exam that is hosted at Clark College shortly after completing the program requirements listed below.

### Major Area Requirements

FT 150	FUNDAMENTALS OF FITNESS	3 cr.
FT 155	GROUP FITNESS INSTRUCTOR	2 cr.
HLTH 120	ADULT CPR AND FIRST AID	1 cr.
or FT 220	FACILITY MANAGEMENT	3 cr.

**Total Required Credits: 6-8**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Apply appropriate skills as a group fitness instructor.
- Successfully complete all criteria necessary for a nationally accredited Fitness Trainer certification exam.
- Apply basic principles of fitness.

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### Yoga Teacher (CC)

This program prepares students to teach yoga and consists of learning to demonstrate and lead a yoga class. Successful students

will receive a Certificate of Completion from Yogafit, which will prepare the student to teach Yogafit Level I, Seniors, Pre/Post Natal, and Yogaback classes. This program also provides students with some basic knowledge of exercise science and anatomy and alignment.

### Major Area Requirements

FT 150	FUNDAMENTALS OF FITNESS	3 cr.
or		
FT 250	STRUCTURAL KINESIOLOGY	3 cr.
FT 156	YOGA TEACHING	2 cr.

**Total Required Credits: 5**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Obtain certification by Yogafit as an entry level teacher of Yogafit Level I, Seniors, Pre/Post Natal, Yogaback, Anatomy and Alignment.

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### Corrective Exercise (CC)

Students completing the Corrective Exercise Certificate of Completion will learn to identify muscle imbalances and movement dysfunctions using key qualitative and quantitative assessments. Utilizing these assessment results allows the fitness professional to then create an individualized training program for clients by developing a plan of action for implementing corrective exercise solutions. General principles of fitness and structural kinesiology are emphasized in this curriculum to give fitness professionals the appropriate background needed to understand and prescribe appropriate corrective exercises. Curriculum also includes a review of pertinent content related to Corrective Exercise Specialist credentialing exam.

### Major Area Requirements

FT 150	FUNDAMENTALS OF FITNESS	3 cr.
FT 152	FLEXIBILITY, POSTURE AND CORE	2 cr.
FT 162	FLEXIBILITY, POSTURE & CORE II	2 cr.
FT 250	STRUCTURAL KINESIOLOGY	3 cr.

**Total Required Credits: 10**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Evaluate muscle imbalances and movement dysfunctions using appropriate qualitative and quantitative assessments.
- Create individualized training programs by utilizing assessment results to develop a plan of action for implementing corrective exercise solutions.
- Apply knowledge of structural kinesiology and principles of fitness in a corrective exercise setting.

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## Geology

Geology is the study of the Earth's chemistry, physics, and history. Geologists work to understand the complex systems at work in our planet and, through this work, to understand the origin and evolution of the landscapes that surround us. Geologists work in natural resource development, natural hazard management, environmental monitoring, and pollution mitigation. Research subjects encompass everything from glacier systems to volcanoes to the fossil history of the evolution of life.

### Career Opportunities

Careers in Geology generally require advanced degrees. Here at Clark College, you can begin a program that will lead to advanced degrees at any major university.

Job opportunities through private, federal, and state agencies exist in:

Climate Change Studies  
Energy  
Environmental Monitoring and Mitigation  
Geological Engineering  
Mining  
Petroleum

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### Geology (AST1)

This is a suggested program for the first two years of major study in Geology. Lower-division course requirements will vary depending on the transfer institution. Contact an advisor at the transfer institution to determine required coursework as early as possible. Additional courses are needed to satisfy graduation requirements for the Associate in Science or the Associate in Arts degree.

### Chemistry Sequence - minimum 16 credits

CHEM&141	GENERAL CHEMISTRY I	4 cr.
CHEM&142	GENERAL CHEMISTRY II	4 cr.
CHEM&143	GENERAL CHEMISTRY III	4 cr.
CHEM&151	GENERAL CHEMISTRY LABORATORY I	1 cr.
CHEM&152	GENERAL CHEMISTRY LABORATORY II	1 cr.
CHEM&153	GENERAL CHEMISTRY LABORATORY III	2 cr.

### Additional Science Sequence Requirements - 15 credits

PHYS&241	ENGINEERING PHYSICS I	4 cr.
and PHYS&231	ENGINEERING PHYSICS LAB I	1 cr.
PHYS&242	ENGINEERING PHYSICS II	4 cr.
and PHYS&232	ENGINEERING PHYSICS LAB II	1 cr.
PHYS&243	ENGINEERING PHYSICS III	4 cr.
and PHYS&233	ENGINEERING PHYSICS LAB III	1 cr.

### General Education Requirements

<b>Communication Skills (5 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
<b>Quantitative Skills (10 credits required)</b>		
MATH&151	CALCULUS I	5 cr.
MATH&152	CALCULUS II	5 cr.
<b>Health &amp; Physical Education (3 credits required)</b>		
HPE 258	FITNESS-WELLNESS	3 cr.
or HLTH	Health course	2 cr.
and PE	Activity Course	1 cr.
<b>Humanities &amp; Social Sciences (15 credits required)</b>		
CMST&220	PUBLIC SPEAKING	5 cr.

### Pre-Major Program Requirements

GEOL&101	INTRO PHYSICAL GEOLOGY	5 cr.
GEOL 102	INTRO TO GEOL II: EARTH'S SURFACE PROCESSES	5 cr.
GEOL 218	FIELD STUDIES IN GEOLOGY	1-6 cr.
MATH&153	CALCULUS III	5 cr.
ENGL&102	ENGLISH COMPOSITION II	5 cr.

**Total Required Credits: 90**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate understanding of the derivative as instantaneous rate of change and the definite integral as a limit of a Riemann sum in applied problems.
- Analyze and solve multi-step problems using techniques through single-variable calculus, and communicate the results.
- Apply fundamental principles and relationships from the Natural Sciences to solve problems.
- Apply scientific methodologies to develop and answer questions about the natural world.
- Acquire scientific information from appropriate sources to analyze issues, claims or situations.
- Communicate with various audiences using a variety of methods.
- Demonstrate progress toward healthier behaviors.
- Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Obtain, evaluate, and ethically use information.
- Analyze patterns of power, privilege and inequality.
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.

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### Health & Physical Education (Area of Study)

There are a wide variety of career opportunities available with a degree in Health and/or Physical Education. Students may seek jobs in fitness training, fitness center management, coaching, wellness promotion, preventative health care, or nutrition, for example.

Advanced degrees would prepare students for careers in sports medicine, athletic training, sports psychology, health education, physical education, physical therapy, biomechanics/kinesiology and integrative medicine. Qualified applicants usually have a strong science background with exemplary communication skills.

Students interested in careers in any of these fields may wish to see a member of the Health and Physical Education (HPE) Division for advising at the earliest possible time in their academic pursuits. It is important for students to make a decision about which four-year institution they will attend in order to expedite their college experience.

#### **Related Programs**

##### **Fitness Trainer**

Please see the Fitness Trainer program curriculum in the Career and Technical Programs section of the Clark College Catalog. Information is also available on the Clark College website at [www.clark.edu/fitnesstrainer](http://www.clark.edu/fitnesstrainer).

##### **Group Fitness Instructor**

Please find the requirements for this Certificate of Completion in the Program Information for Fitness Trainer.

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#### **Health Informatics**

Clark College offers an exciting new health care technology college transfer degree program in Health Informatics Information Technology (HIIT). Health care is a fast growing and increasingly information-intensive industry. More and more professionals are needed to keep pace as the technology continues to change and advance.

Health informatics Information Technology (HIIT) is the study of resources and methods for the management of health information. The field encompasses and utilizes advanced computer technology to coordinate the computer information systems used by hospitals, medical clinics and health care professionals. For those who are well prepared, health information technology offers a bright, rewarding and well-paying career pathway.

A newly developed Articulation Agreement between Clark College and Bellevue College allows students to earn a bachelor's degree in Health Informatics Information Technology (HIIT) from Bellevue College. Upon completion of Clark College's HIIT AA Option-B degree students can then attend and complete all additional bachelor's-level classes through Bellevue College using various online technologies without the need to relocate.

This new transfer AA Option-B degree provides students with a non-clinical care IT profession within the healthcare industry. Salaries have grown in recent years in keeping with the growth of career opportunities in the field. More detailed and related information in Health Informatics IT can be obtained using these helpful web links:

<http://www.clark.edu/academics/programs/health-informatics/index.php>

[www.bellevuecollege.edu/hctm/](http://www.bellevuecollege.edu/hctm/)

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#### **Honors Program**

The Transfer AA Honors Program is designed to promote excellence in learning and celebrate exceptional student achievement. Students admitted to the Honors Program have the opportunity to take intellectually enriching honors courses with other outstanding students, work closely with a faculty mentor, and complete an independent capstone project relevant to their area of interest.

##### **Program admission requirements**

Students must meet the following requirements for admission to the program:

- At least 12 college-level credits with a cumulative GPA of 3.50 or higher
- Completion of ENGL& 101 with a grade B+ or higher
- Eligibility for enrollment in MATH 093 or higher

One or more of the admission requirements above may be waived if a Clark faculty member submits a formal recommendation of admission on behalf of the student. An online application form is available at [www.clark.edu/honors](http://www.clark.edu/honors)

##### **Transfer AA Honors Certificate**

To earn the Honors Certificate, students must satisfy the following requirements:

- Completion of 20 credits of Honors-designated courses
- Completion of a 3-credit Honors capstone course
- 3.50 cumulative GPA



- Concurrent completion of Transfer AA, AST, or AFA degree requirements

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### Honors Certificate (AC)

To earn the Transfer AA Honors Certificate, students must complete the following courses and concurrently satisfy the degree requirements for an Associate in Arts degree, Associate in Science degree, or Associate in Fine Arts degree.

<b>20 credits selected from Honors-designated courses.</b>	20 cr.
HONS 290 SPECIAL PROJECTS: HONORS *	1-6 cr.

\*Students must complete at least 3-credits

**Total Required Credits: 23**

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### Industrial Maintenance Technology

The Industrial Maintenance Technology program is designed to provide the knowledge, skills and abilities to successfully respond to a broad range of work requirements and duties within industrial, manufacturing and processing environments. Students will learn industrial safety, blue print reading, and have the options to learn multiple weld processes, basic machining, electrical fundamentals, basic hydraulics and pneumatics. Students who choose to complete the AAT degree option will have the opportunity to customize their program to a specific area of focus in Machining, Mechatronics or Welding.

Labor statistic show that the industries demand for skilled Industrial Maintenance Technicians over the next decade is expected to grow. Both the certificate and degree programs in Industrial Maintenance Technology were developed as a response to local industry demand and with the input of local employers.

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### Industrial Maintenance Technician (CA)

The certificate program is designed to provide students with marketable entry level skills in machining, mechatronics and welding which can lead to employment as an installation, maintenance and repair worker helper or production worker within the manufacturing industry.

#### Major Area Requirements

BTEC 150	COMPUTER BUSINESS APPLICATIONS	5 cr.
HLTH 120	ADULT CPR AND FIRST AID	1 cr.
MACH 111	BASIC GENERAL MACHINING PROCESSES	5 cr.
MTX 100	INDUSTRIAL SAFETY	1 cr.
MTX 101	DC FUNDAMENTALS	3 cr.
MTX 102	AC FUNDAMENTALS	3 cr.
MTX 105	BASIC HYDRAULICS	2 cr.
MTX 107	BASIC PNEUMATICS	2 cr.
MTX 123	PICK AND PLACE ROBOT	3 cr.
or MTX 125	SERVO ROBOT	3 cr.
WELD 102	INTRODUCTION TO WELDING	6 cr.
WELD 140	GAS METAL ARC WELDING	6 cr.
or WELD 144	SHIELDED METAL ARC WELDING	6 cr.
MACH 235	ELEMENTARY METALLURGY	2 cr.
MACH 236	ELEMENTARY METALLURGY LAB	2 cr.

**Total Required Credits: 41**

#### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate compliance of all shop safety regulations.
- Interpret blueprints associated with project or machinery.
- Perform entry-level skills for setup and operation of manual machines.
- Operate, measure, and modify software-driven industrial control systems.
- Operate manual, semi-automatic, and automatic welding equipment to fuse metal joints.

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### Industrial Maintenance Technologies (AAT)

The degree program will build on the knowledge, skills and abilities developed in the certificate program and will provide student with higher level skills in Machining, Mechatronics and Welding. Students completing this program will be prepared for employment

as a maintenance technician within industrial, manufacturing and processing environments.

### General Education Requirements

<b>Communication Skills (5 credits required)</b>		
PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.
<b>Computational Skills (5 credits required)</b>		
<b>Human Relations (5 credits required)</b>		
CMST&230	SMALL GROUP COMMUNICATION (recommended)	5 cr.

### Major Area Requirements

BTEC 150	COMPUTER BUSINESS APPLICATIONS	5 cr.
HLTH 120	ADULT CPR AND FIRST AID	1 cr.
MACH 111	BASIC GENERAL MACHINING PROCESSES	5 cr.
MTX 100	INDUSTRIAL SAFETY	1 cr.
MTX 101	DC FUNDAMENTALS	3 cr.
MTX 102	AC FUNDAMENTALS	3 cr.
MTX 105	BASIC HYDRAULICS	2 cr.
MTX 107	BASIC PNEUMATICS	2 cr.
MTX 123	PICK AND PLACE ROBOT	3 cr.
or MTX 125	SERVO ROBOT	3 cr.
MTX 285	PROJECT MANAGEMENT AND LEAN MANUFACTURING	2 cr.
WELD 102	INTRODUCTION TO WELDING	6 cr.
WELD 140	GAS METAL ARC WELDING	6 cr.
or WELD 144	SHIELDED METAL ARC WELDING	6 cr.
WELD 240	GAS TUNGSTEN ARC WELDING	6 cr.
MACH 235	ELEMENTARY METALLURGY	2 cr.
MACH 236	ELEMENTARY METALLURGY LAB	2 cr.

### Program Specialty Area Requirements

Students must complete a minimum of 30 credits in specialty areas. Choose from the following list:

MACH 112	BASIC ENGINE LATHE PROCESSES I	5 cr.
MACH 113	BASIC VERTICAL MILLING PROCESSES I	5 cr.
MTX 110	ELECTRIC MOTOR CONTROL 1	4 cr.
MTX 130	PROGRAMMABLE LOGIC CONTROLLERS 1	4 cr.
MTX 165	ELECTRIC MOTOR CONTROL 2	4 cr.
MTX 207	THERMAL PROCESS CONTROL	5 cr.
MTX 225	SPEED CONTROL SYSTEMS	2 cr.
MTX 230	LASER ALIGNMENT	2 cr.
MTX 250	ADVANCED PROGRAMMABLE LOGIC CONTROLLERS	4 cr.
WELD 110	WELDING BLUEPRINT READING	5 cr.
WELD 241	GAS TUNGSTEN ARC FABRICATION	6 cr.

**Total Required Credits: 94**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate compliance of all shop safety regulations.
- Interpret blueprints associated with project or machinery.
- Perform inspection of machined parts, welds and/or equipment.
- Perform entry-level skills for setup and operation of manual machines.
- Operate, measure, and modify software-driven industrial control systems.
- Communicate with colleagues, supervisors, clients, using written and verbal technical and/or nontechnical language.
- Actively participate as an effective team member, completing prescribed project tasks and meeting project goals.
- Perform manual and semi-automatic oxyfuel cutting and plasma cutting operations required by skilled welders.
- Operate manual, semi-automatic, and automatic welding equipment to fuse metal joints.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

The International Studies Certificate Program recognizes the growing importance of global interdependence and diversity. It is of special interest to students planning careers in fields emphasizing backgrounds in such areas as foreign languages, regional studies, business, and economics.

### International Studies Certificate

For students in World Languages (French, German, Japanese, or Spanish) interested in emphasizing courses with a strong international focus as they complete the distribution requirements for their Associate of Arts degree. To earn the Certificate (which appears as a special notation on the transcript), students must complete 5 credits of a 200 level World Language Course and 20 credits of approved international courses. Students must complete the 200 level language class with a grade of C or above.

### International Studies (AC)

The International Studies Certificate Program allows students to earn two years of foreign language credit while meeting the distribution requirements for the Associate in Arts degree.

#### Required Core Courses (5 credits required)

##### World Language (5 credits required)

5 credits of &200-level courses in one language (French, German, Japanese or Spanish)

#### Approved International Electives (20 credits required)

The International Studies Certificate Program has identified certain courses in the Clark College catalog as having a strong international component. Students must complete 20 credits from the list below. The selected courses count toward the International Studies Certificate while at the same time meeting distribution requirements for the Associate of Arts degree. Students must complete each international elective class with a grade of C or above. See list of Approved International Courses below:

ANTH&206	INTRODUCTION TO CULTURAL ANTHROPOLOGY	5 cr.
ART 220	ART HISTORY: ANCIENT TO LATE ANTIQUE	5 cr.
or		
ART 221	ART HISTORY: MEDIEVAL-RENAISSANCE	5 cr.
or		
ART 222	ART HISTORY: BAROQUE-MODERN	5 cr.
BIOL 101	ENVIRONMENTAL BIOLOGY	5 cr.
CMST 216	INTERCULTURAL COMMUNICATION	5 cr.
ECON 110	INTRODUCTION TO THE GLOBAL ECONOMY	5 cr.
ECON 120	INTERNATIONAL ECONOMICS	3 cr.
ENGL 261	WORLD LITERATURE	3 cr.
or		
ENGL 262	WORLD LITERATURE	3 cr.
ENGL 264	BRITISH LITERATURE	3 cr.
or		
ENGL 265	BRITISH LITERATURE	3 cr.
or		
ENGL 266	BRITISH LITERATURE	3 cr.
ENGL 150	INTRODUCTION TO CLASSICAL MYTHOLOGY	3 cr.
GEOG&102	WORLD REGIONAL GEOGRAPHY	5 cr.
GEOG&207	ECONOMIC GEOGRAPHY	5 cr.
HIST 231	HISTORY OF GENOCIDE	3 cr.
HIST 260	AFRICAN HISTORY	5 cr.
HIST 285	HISTORY OF LATIN AMERICA	5 cr.
HIST&126	WORLD CIVILIZATIONS I	5 cr.
or		
HIST&127	WORLD CIVILIZATIONS II	5 cr.
or		
HIST&128	WORLD CIVILIZATIONS III	5 cr.
HIST 251	WOMEN IN WORLD HISTORY I	5 cr.
or		
HIST 252	WOMEN IN WORLD HISTORY II	5 cr.
HUM 200	THEMES THROUGH THE HUMANITIES	5 cr.
HUM& 101	INTRO TO HUMANITIES	5 cr.
JAPN 171	JAPANESE SOCIETY	3 cr.
MUSC 116	MUSIC HISTORY: MIDDLE AGES TO BAROQUE	5 cr.
or		
MUSC 117	MUSIC HISTORY: CLASSICAL/ROMANTIC	5 cr.
or		
MUSC 118	MUSIC HISTORY: TWENTIETH CENTURY	5 cr.
PHIL&101	INTRODUCTION TO PHILOSOPHY	5 cr.

POLS 151	MODEL UNITED NATIONS	2 cr.
POLS 152	MODEL UNITED NATIONS	2 cr.
POLS 153	MODEL UNITED NATIONS	2 cr.
POLS 161	WORLD WITHOUT WAR	3 cr.
POLS&203	INTERNATIONAL RELATIONS	5 cr.
POLS 220	THE GEOPOLITICS OF THE MIDDLE EAST	5 cr.
WS 201	WOMEN AROUND THE WORLD	3 cr.

**Total Required Credits:25**

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## Journalism

Journalism offers more opportunities to meet interesting people than just about any other career. At the same time, journalism provides experiences that can be useful in many other fields: technical writing, law, politics, publishing, and public relations.

Students interested in pursuing a career in journalism should take Clark's basic sequence of news writing and editing courses and should work on the student newspaper, *The Independent*.

Several paid positions are available each year for student editors; expertise in computer graphics is desirable.

In addition to Clark's journalism courses, students should take a variety of courses that offer a broad general education and prepare them to transfer to a four-year school offering a degree in journalism or a related field. CMST& 102 offers a foundation for understanding how the media function in our society and is highly recommended. ENGL& 101, 102 and ENGL 103 will improve the ability to write clearly and do documented research accurately. Courses in the social sciences (particularly political science), history, literature, and science will provide a background for accurate reporting and the interpretation of data.

Students should make every effort to develop relevant computer skills while at the community college. These skills include word processing, electronic publishing, computer graphics, and the Internet.

Because course requirements vary at each institution, students interested in pursuing a four-year degree in Journalism should work with advisors at Clark and their transfer institution to develop a course of study. Journalism courses typically transfer to four-year institutions. However, students should contact their transfer institution to clarify each course's transferability.

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## News Media Studies (AC)

For students who want expertise in journalism and news media, this certificate may be earned along with a regular AA degree, and will be awarded upon graduation.

### Core Courses

JOUR 101	INTRODUCTION TO JOURNALISM	5 cr.
JOUR 111	MULTIMEDIA NEWS REPORTING AND WRITING	5 cr.
JOUR 110	COLLEGE NEWS PRODUCTION (3 credits required between JOL	1-3 cr.
JOUR 120	COLLEGE NEWS PRODUCTION (3 credits required between JOL	1-3 cr.
JOUR 130	COLLEGE NEWS PRODUCTION (3 credits required between JOL	1-3 cr.
ENGL 160	WRITING FOR THE WEB	3 cr.
CMST&102	INTRO TO MASS MEDIA	5 cr.

### Additional Coursework

Choose one course from the following list:

CGT 103	INDESIGN PAGE LAYOUT	4 cr.
CGT 201	WEB VIDEO PRODUCTION	4 cr.
CGT 106	SOCIAL MEDIA EXPLORATION	3 cr.
ART 131	PHOTOGRAPHIC STORYTELLING	3 cr.

**Total Required Credits: 24-25**

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## Machining Technology

The machinist's craft is basic to all American industrial production. It is the machinist's task to interpret the engineer's drawings in

order to fabricate new machines and products.

Machinists operate various types of material-removing equipment such as lathes, milling machines, grinders, and computerized numerical control (CNC) machines. Some machinists specialize in the operation of one type of machine while others work in a shop where they are required to perform equally well on several different machines.

Clark College's program offers instruction in numerous machine processes including the set-up and operation of the engine lathe, surface grinders, vertical mill, CNC lathes, EDM and CNC milling machines.

All shop theory subjects have a direct bearing on the student's skill, safety, and attitude. In addition to shop theory and practice, the student studies math, blueprint reading, metallurgy, safety, and computer-aided manufacturing (CAM) programming.

MasterCAM programming classes teach basic CAM programming for mills, lathe, EDM, etc. The basic CNC class involves writing programs and learning to safely operate the HAAS CNC mills.

Students must complete all Major Area Requirements and specifically listed courses with a minimum grade of "C" or better in order to successfully complete the program and earn the award.

Refer to the Degree & Certificate Requirements Section of the Clark College Catalog to identify the courses needed to satisfy the General Education Requirements.

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## Machining Technician (CP)

### General Education Requirements

Communication Skills (3 credits required)

Computational Skills (3 credits required)

Human Relations (3 credits required)

### Major Area Requirements

MACH 111	BASIC GENERAL MACHINING PROCESSES	5 cr.
MACH 112	BASIC ENGINE LATHE PROCESSES I	5 cr.
MACH 113	BASIC VERTICAL MILLING PROCESSES I	5 cr.
MACH 121	BASIC SURFACE GRINDER PROCESSES I	5 cr.
MACH 122	BASIC ENGINE LATHE PROCESSES II	5 cr.
MACH 123	BASIC VERTICAL MILLING PROCESSES II	5 cr.
MACH 131	BASIC SURFACE GRINDER PROCESSES II	5 cr.
MACH 132	BASIC ENGINE LATHE PROCESSES III	5 cr.
MACH 133	BASIC VERTICAL MILLING PROCESSES III	5 cr.
MACH 241	ADVANCED PRECISION MEASUREMENT	5 cr.
MACH 242	INTRO TO CNC LATHE CONVERSATIONAL PROGRAMMING	5 cr.
MACH 243	INTRO TO CNC MILL CONVERSATIONAL PROGRAMMING	5 cr.
MACH 251	TOOLING CONCEPTS	5 cr.
MACH 252	CNC LATHE SETUP AND OPERATION	5 cr.
MACH 253	CNC MILLING SETUP AND OPERATION	5 cr.
MACH 261	ADVANCED EDM PROCESSES	5 cr.
MACH 262	ADVANCED CNC LATHE PROGRAMMING	5 cr.
MACH 263	ADVANCED MILLING 3D PROGRAMMING AND MACHINING	5 cr.

### Related Required Classes

MACH 235	ELEMENTARY METALLURGY	2 cr.
MACH 236	ELEMENTARY METALLURGY LAB	2 cr.

**Total Required Credits: 103**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate compliance of all machine shop safety regulations.
- Interpret blueprints and perform inspection of machined parts.
- Perform entry-level skills for setup and operation of manual machines.
- Perform entry-level skills to program, operate, and set up CNC machine tools.
- Communicate and interact in a team/group environment to perform multiple tasks in a professional and ethical manner.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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## Machining Technologies (AAS)

## General Education Requirements

Communication Skills (6 credits required)

Health & Physical Education (3 credits required)

Computational Skills (3 credits required)

Human Relations (3 credits required)

Humanities (3 credits required)

Social Sciences (3 credits required)

Natural Sciences (3 credits required)

## Major Area Requirements

MACH 111	BASIC GENERAL MACHINING PROCESSES	5 cr.
MACH 112	BASIC ENGINE LATHE PROCESSES I	5 cr.
MACH 113	BASIC VERTICAL MILLING PROCESSES I	5 cr.
MACH 121	BASIC SURFACE GRINDER PROCESSES I	5 cr.
MACH 122	BASIC ENGINE LATHE PROCESSES II	5 cr.
MACH 123	BASIC VERTICAL MILLING PROCESSES II	5 cr.
MACH 131	BASIC SURFACE GRINDER PROCESSES II	5 cr.
MACH 132	BASIC ENGINE LATHE PROCESSES III	5 cr.
MACH 133	BASIC VERTICAL MILLING PROCESSES III	5 cr.
MACH 241	ADVANCED PRECISION MEASUREMENT	5 cr.
MACH 242	INTRO TO CNC LATHE CONVERSATIONAL PROGRAMMING	5 cr.
MACH 243	INTRO TO CNC MILL CONVERSATIONAL PROGRAMMING	5 cr.
MACH 251	TOOLING CONCEPTS	5 cr.
MACH 252	CNC LATHE SETUP AND OPERATION	5 cr.
MACH 253	CNC MILLING SETUP AND OPERATION	5 cr.
MACH 261	ADVANCED EDM PROCESSES	5 cr.
MACH 262	ADVANCED CNC LATHE PROGRAMMING	5 cr.
MACH 263	ADVANCED MILLING 3D PROGRAMMING AND MACHINING	5 cr.

## Related Required Classes

MACH 235	ELEMENTARY METALLURGY	2 cr.
MACH 236	ELEMENTARY METALLURGY LAB	2 cr.

**Total Required Credits: 118**

## Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate compliance of all machine shop safety regulations.
- Interpret blueprints and perform inspection of machined parts.
- Perform entry-level skills for setup and operation of manual machines.
- Perform entry-level skills to program, operate, and set up CNC machine tools.
- Communicate and interact in a team/group environment to perform multiple tasks in a professional and ethical manner.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.
- Health and PE: Demonstrate progress toward healthier behaviors as appropriate for a career and technical education program.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts as appropriate for a career and technical education program.
- Social Science: Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences as appropriate for a career and technical education program.
- Science: Apply fundamental principles and relationships from the Natural Sciences to solve problems as appropriate for a career and technical education program.

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## Machining Technologies (AAT)

### General Education Requirements

Communication Skills (5 credits required)

Computational Skills (5 credits required)

Human Relations (5 credits required)

### Major Area Requirements

MACH 111	BASIC GENERAL MACHINING PROCESSES	5 cr.
MACH 112	BASIC ENGINE LATHE PROCESSES I	5 cr.

MACH 113	BASIC VERTICAL MILLING PROCESSES I	5 cr.
MACH 121	BASIC SURFACE GRINDER PROCESSES I	5 cr.
MACH 122	BASIC ENGINE LATHE PROCESSES II	5 cr.
MACH 123	BASIC VERTICAL MILLING PROCESSES II	5 cr.
MACH 131	BASIC SURFACE GRINDER PROCESSES II	5 cr.
MACH 132	BASIC ENGINE LATHE PROCESSES III	5 cr.
MACH 133	BASIC VERTICAL MILLING PROCESSES III	5 cr.
MACH 241	ADVANCED PRECISION MEASUREMENT	5 cr.
MACH 242	INTRO TO CNC LATHE CONVERSATIONAL PROGRAMMING	5 cr.
MACH 243	INTRO TO CNC MILL CONVERSATIONAL PROGRAMMING	5 cr.
MACH 251	TOOLING CONCEPTS	5 cr.
MACH 252	CNC LATHE SETUP AND OPERATION	5 cr.
MACH 253	CNC MILLING SETUP AND OPERATION	5 cr.
MACH 261	ADVANCED EDM PROCESSES	5 cr.
MACH 262	ADVANCED CNC LATHE PROGRAMMING	5 cr.
MACH 263	ADVANCED MILLING 3D PROGRAMMING AND MACHINING	5 cr.

### Related Required Classes

MACH 235	ELEMENTARY METALLURGY	2 cr.
MACH 236	ELEMENTARY METALLURGY LAB	2 cr.
MATH 085	INDUSTRIAL MATHEMATICS	5 cr.

**Total Required Credits: 114**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate compliance of all machine shop safety regulations.
- Interpret blueprints and perform inspection of machined parts.
- Perform entry-level skills for setup and operation of manual machines.
- Perform entry-level skills to program, operate, and set up CNC machine tools.
- Communicate and interact in a team/group environment to perform multiple tasks in a professional and ethical manner.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

### Manual Machining (CP)

#### General Education Requirements

Communication Skills (3 credits required)

Computational Skills (3 credits required)

Human Relations (3 credits required)

#### Major Area Requirements

MACH 111	BASIC GENERAL MACHINING PROCESSES	5 cr.
MACH 112	BASIC ENGINE LATHE PROCESSES I	5 cr.
MACH 113	BASIC VERTICAL MILLING PROCESSES I	5 cr.
MACH 121	BASIC SURFACE GRINDER PROCESSES I	5 cr.
MACH 122	BASIC ENGINE LATHE PROCESSES II	5 cr.
MACH 123	BASIC VERTICAL MILLING PROCESSES II	5 cr.
MACH 131	BASIC SURFACE GRINDER PROCESSES II	5 cr.
MACH 132	BASIC ENGINE LATHE PROCESSES III	5 cr.
MACH 133	BASIC VERTICAL MILLING PROCESSES III	5 cr.

**Total Required Credits: 54**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate compliance of all machine shop safety regulations.
- Interpret blueprints and perform inspection of machined parts.
- Perform entry-level skills for setup and operation of manual machines.
- Communicate and interact in a team/group environment to perform multiple tasks in a professional and ethical manner.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.

- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

## Math Education

The mathematics program at Clark College prepares students for successful study at four-year colleges and universities. At the university level, the student may prepare for a career in industry, government, or teaching. Students who intend to enter the job market before graduate school should have exposure to the natural, social, and applied sciences.

A variety of resources are available which help students with differing learning styles understand mathematical concepts. At Clark, computers, graphing calculators and other technology are integrated into classroom teaching and research.

The math department maintains a Web page that provides information about faculty members, course descriptions and online general advising for selecting a math course. Advice to help students succeed in math courses, along with instructional materials for some math classes, can be found on the website.

The Math Help Session is staffed 25-30 hours each week by department instructors to assist students who drop by for individual help with homework or understanding math concepts. New evening hours have also been added for night students at the Help Session.

Students who need to brush up on basic math skills will find classes in both the math and developmental education departments that prepare them for success before tackling college-level coursework. Single-credit classes to learn to use graphing calculators and for overcoming math anxiety are also offered.

### Math Education - DTA/MRP (AA)

This pathway is applicable to students planning to prepare for math education majors at the secondary level at universities in Washington. Students need to make early contact with their potential transfer institutions regarding the specific course choices in each area of the agreement where options are listed. Students also need to check with their potential transfer institutions regarding the requirement for overall minimum GPA, a higher GPA in a selected subset of courses, or a specific minimum grade in one or more courses such as math or English.

Though this degree does not require such, Clark College students should know that the standard Clark AA degree path has these differences from the MRP defined below:

1. Clark requires 3 credits of Health-Physical Education coursework, and
2. As of Fall 2011, Clark requires a course in Oral Communication, and
3. Clark's Social Science distribution requirement stipulates that students take courses from at least three different departments.

Students must also meet the residency requirements as established by Clark. While Clark College has approved offering the degree below, Clark students should keep these requirements in mind should their transfer pathways change.

Students are responsible for researching and preparing for specific major requirements of baccalaureate institutions as early as possible prior to transferring.

Please visit the Major Related Programs section of this catalog for more specific information.

### Generic DTA Requirements

<b>A. Basic Requirements</b>	
1. Communication Skills	10 cr.
2. Quantitative/Symbolic Reasoning Requirements	5 cr.
Intermediate algebra proficiency is required.	
<b>B. Distribution Requirements</b>	
1. Humanities	15 cr.
2. Social Sciences	15 cr.
3. Natural Sciences	3 cr.
<b>C. Major Requirements</b>	
1. Math courses	
2. Education courses	
3. Elective Courses	

### MRP Requirements

<b>A. Basic Requirements</b>	
1. English Composition	10 cr.
2. First-quarter Calculus	5 cr.
Intermediate algebra proficiency is required.	
<b>B. Distribution Requirements</b>	
1. Humanities	
Introductory Speech and 10 credits of other humanities	



Consistent with the requirements in all DTA degrees - no more than 10 credits per discipline area, 5 credits maximum in world languages or ASL. No more than 5 credits of performance/skills classes are allowed.

<b>2. Social Sciences</b>	15 cr.
Intro to Psychology (5 cr.)	
Other social sciences (10 cr.)	

<b>3. Natural Sciences</b>	15 cr.
2nd-quarter calculus	
10 credits physical, biological, and/or earth science, including at least one lab course	

**C. Major Requirements**

- 1. Math courses**  
3rd and 4th-quarter calculus  
Linear Algebra
- 2. Education Courses**  
Field Experience/Intro to Education
- 3. Elective Courses**

Other college-level courses, of which a maximum of 15 credits may be in college-level courses as defined by the community college, and the remainder shall be fully transferable as defined by the receiving institution. Where appropriate, preparation courses for the major, minor, or professional certification should ideally be included in this coursework.

**Clark College Equivalents**

**A. Basic Requirements**

- 1. Communication Skills**  
ENGL&101 ENGLISH COMPOSITION I 5 cr.  
ENGL&102 ENGLISH COMPOSITION II 5 cr.

- 2. Quantitative/Symbolic Reasoning Requirements**  
MATH&151 CALCULUS I 5 cr.

**B. Distribution Requirements**

- 1. Humanities**  
CMST&220 PUBLIC SPEAKING Fulfills oral communication requirement 5 cr.  
10 other credits of humanities meeting the stipulations for the DTA

- 2. Social Sciences**  
PSYC&100 GENERAL PSYCHOLOGY 5 cr.  
10 credits of social science (maximum of 5 cr. additional psychology)

- 3. Natural Sciences**  
MATH&152 CALCULUS II 5 cr.  
10 credits of natural science course work, including one lab, as defined by Clark College

**C. Major Requirements**

- 1. Math Courses**  
MATH&153 CALCULUS III 5 cr.  
MATH 215 LINEAR ALGEBRA 5 cr.  
MATH&254 CALCULUS IV 5 cr.

- 2. Education Courses**  
EDUC&201 INTRODUCTION TO EDUCATION 3 cr.  
EDUC 210 INTRODUCTORY FIELD EXPERIENCE 3 cr.

**D. Electives**

- 1. Elective Courses**  
9 credits of electives as defined under MRP Requirements/ C. Major Requirements /3.  
Elective Courses

**Total Required Credits: 90**

**Program Outcomes**

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate an effective strategy to solve a quantitative problem.
- Demonstrate progress toward healthier behaviors.
- Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Apply fundamental principles and relationships from the Natural Sciences to solve problems.
- Communicate with various audiences using a variety of methods.
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.
- Analyze and interpret quantitative information presented verbally, graphically, numerically, and/or symbolically. (GE)
- Analyze patterns of power, privilege, and inequity in the United States. (GE)
- Evaluate claims about the natural world using scientific methodology. (GE)
- Obtain, evaluate, and ethically use information. (GE)

- Information Literacy: Obtain, evaluate, and ethically use information.
- Communications: Communicate with various audiences using a variety of methods.
- Quantitative I: Perform mathematical calculations without the aid of a calculator.
- Quantitative II: Solve quantitative problems and interpret the solutions.
- Health & Physical Education: Demonstrate progress toward healthier behaviors.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Social Science: Evaluate, analyze and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.
- Power, Privilege, and Inequality: Analyze patterns of power, privilege and inequality.
- Natural Science I: Apply fundamental principles and relationships from the Natural Sciences to solve problems.
- Natural Science II: Evaluate claims about the natural world using scientific methodology.

## Mathematics (Area of Study)

Advances in science, technology, social science, business, industry, and government are dependent upon precise analysis and the extraction of information from large quantities of data. Environmental problems, for example, require careful analysis by persons with skills in mathematics, computer science, biology, geology, physics, and business.

The mathematics program at Clark College prepares students for successful study at four-year colleges and universities. At the university level, the student may prepare for a career in industry, government, or teaching. Students who intend to enter the job market before graduate school should have exposure to the natural, social, and applied sciences.

A variety of resources are available which help students with differing learning styles understand mathematical concepts. At Clark, computers, graphing calculators and other technology are integrated into classroom teaching.

The math department maintains a Web page that provides information about faculty members, course descriptions and online general advising for selecting a math course. Advice to help students succeed in math courses, along with instructional materials for some math classes, can be found on the website.

The math department staffs several help facilities to assist students on a drop-in basis. Assistance is provided by faculty and trained helpers.

Students who need to brush up on basic math skills will find classes in both the math and developmental education departments that prepare them for success before tackling college-level coursework.

## General - Mathematics (suggested) (AA)

This is a suggested program for the first two years of major study in Mathematics. Lower-division course requirements will vary depending on the transfer institution. Contact an advisor at the transfer institution to determine required coursework as early as possible.

### General Education Requirements

<b>Communication Skills (10 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
ENGL&102	ENGLISH COMPOSITION II	5 cr.
or ENGL 109	WRITING ABOUT THE SCIENCES	5 cr.
<b>Quantitative Skills (5 credits required)</b>		
MATH&151	CALCULUS I	5 cr.
<b>Health &amp; Physical Education (3 credits required)</b>		
HPE 258	FITNESS-WELLNESS	3 cr.
or HPE 266	MIND BODY HEALTH	3 cr.
<b>Oral Communications (5 credits required)</b>		
CMST&220	PUBLIC SPEAKING	5 cr.
<b>Humanities (15 credits required)</b>		
<b>Social Sciences (15 credits required)</b>		
ECON&201	MICRO ECONOMICS	5 cr.
or ECON&202	MACRO ECONOMICS	5 cr.
<b>Natural Sciences (15 credits required)</b>		

### Elective Requirements

MATH&152	CALCULUS II	5 cr.
MATH&153	CALCULUS III	5 cr.
MATH 205	DISCRETE MATHEMATICS	5 cr.
MATH 215	LINEAR ALGEBRA	5 cr.
MATH 221	DIFFERENTIAL EQUATIONS	5 cr.
MATH&254	CALCULUS IV	5 cr.

## Pre-100 Classes Required

PHYS 094	PHYSICS CALCULATIONS	1 cr.
PHYS 095	PHYSICS CALCULATIONS	1 cr.
PHYS 096	PHYSICS CALCULATIONS	1 cr.

**Total Required Credits: 106**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Information Literacy: Obtain, evaluate, and ethically use information.
- Communications: Communicate with various audiences using a variety of methods.
- Quantitative I: Perform mathematical calculations without the aid of a calculator.
- Quantitative II: Solve quantitative problems and interpret the solutions.
- Health & Physical Education: Demonstrate progress toward healthier behaviors.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Social Science: Evaluate, analyze and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.
- Power, Privilege, and Inequality: Analyze patterns of power, privilege and inequality.
- Natural Science I: Apply fundamental principles and relationships from the Natural Sciences to solve problems.
- Natural Science II: Evaluate claims about the natural world using scientific methodology.

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## Mechanical, Civil & Aeronautical Engineering

Engineering is a profession where you are challenged to develop creative solutions to problems related to every aspect of life, through the application of mathematical and scientific principles, experience, creativity, and common sense.

Mechanical engineering is a diverse discipline which can include robotics, consumer electronics, automotive, appliances, energy-sustainable and clean fuels, aerospace, medical innovations, amusement park rides, toys, and nanotechnology.

Civil engineers work in many areas essential to modern life such as construction, architecture, environmental engineering, power generation, public works and highway departments, or the federal government. Civil engineers are at the forefront of efforts to design inexpensive yet effective ways to ensure that people living in these regions have access to potable water.

Aeronautical engineering expertise is innovative in space exploration but also pioneering in other industries such as automobile manufacturing. Aerospace engineers are experts in aerodynamics, so some of them put their skills to use in making race cars go faster or golf balls fly further.

It is critical that you work with an Engineering faculty advisor to ensure your program will give you the maximum benefit when you transfer.

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### Mechanical, Civil & Aeronautical Engineering (AST2)

The following is a degree program designed by a consortium of two-year and four-year colleges in Washington. Students should be aware that baccalaureate institutions may have slightly different requirements for these degrees, and students should consult the transfer institution for exact questions.

Students should complete the entirety of any science sequence at the same school for best transferability. These degrees are not DTA degrees, and there are some general education requirements that students will need to finish upon transfer.

Though this degree does not require such, Clark College students should know that the standard Clark AST degree path has this difference from the Articulated Degree defined below:

- Clark requires 3 credits of Health-Physical Education coursework.

Students must also meet the residency requirements as established by Clark. While Clark College has approved offering the degree below, Clark students should keep these requirements in mind should their transfer pathways change.

Students completing this Associate of Science will receive the same priority consideration for admission to the baccalaureate institution as they would for completing the direct transfer associate degree and will be given junior status by the receiving institution.

Please visit the Major Related Programs section of this catalog to view a [printable PDF](#) of this document.

### Generic Requirements

<b>A. Basic Requirements</b>	
<b>1. Communication Skills</b>	5 cr.
<b>2. Mathematics</b>	10 cr.
Two courses at or above introductory calculus level. Third-quarter calculus or approved statistics course: 5 quarter credits chosen with the help of an Engineering faculty advisor based on the requirements of the specific discipline at the baccalaureate institution the student plans to attend.	
<b>3. Physics</b>	15 cr.
Calculus-based or non-calculus based sequence including laboratory. Students should be advised that some baccalaureate programs require physics with calculus.	
<b>4. Chemistry with Laboratory</b>	5 cr.
<b>5. Required Major Courses</b>	
<b>B. Distribution Requirements</b>	
<b>1. Humanities/Fine Arts/English &amp; Social Sciences</b>	15 cr.
<b>C. Electives</b>	
<b>1. Elective Courses</b>	
The remaining quarter credits should be planned with the help of an Engineering faculty advisor based on the requirements of the specific discipline at the baccalaureate institution the student selects to attend.	

For Engineering disciplines, these credits should include a design component consistent with ABET accreditation standards, as approved by the Engineering faculty advisor.

### Articulated Degree Requirements

<b>A. Basic Requirements</b>	
<b>1. English Composition</b>	5 cr.
<b>2. Mathematics</b>	
Calculus I, II, III - 15 credits	
Differential Equations - 5 credits	
Linear Algebra - 5 credits	
<b>3. Physics</b>	
Engineering Physics 1, 2, 3 + labs - 15 to 18 credits	
<b>4. Chemistry with Laboratory</b>	
General Chemistry 1, 2 + labs - 5 credits	
<b>5. Required Major Courses</b>	
<ul style="list-style-type: none"> <li>• Statics - 5 credits</li> <li>• Mechanics of Materials - 5 credits</li> <li>• Dynamics - 5 credits</li> </ul>	
<b>B. Distribution Requirements</b>	
<b>1. Humanities/Fine Arts/English &amp; Social Sciences</b>	15 cr.
Minimum 15 quarter credits:	
Minimum 5 credits in Humanities, minimum 5 credits in Social Science, plus an additional 5 credits in either Humanities or Social Science for a total of 15 credits.	
<b>C. Electives</b>	
<b>1. Math/Engr Electives</b>	15 cr.
Select 4 Electives (15-20 credits) as appropriate for intended major and intended baccalaureate institution. Requirements vary by school and program. See an Engineering faculty advisor for proper selection.	
<ul style="list-style-type: none"> <li>• Computer Programming - 4-5 credits</li> <li>• Innovation in Design</li> <li>• Calculus IV (Advanced or Multi-Variable Calculus)</li> <li>• 3-D Visualization and CAD (Engineering Graphics)</li> <li>• Technical Writing</li> <li>• Thermodynamics</li> <li>• Electrical Circuits</li> <li>• Materials Science</li> <li>• Applied Numerical Methods</li> </ul>	

**A. Basic Requirements****1. Communication Skills**

ENGL&101	ENGLISH COMPOSITION I	5 cr.
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**2. Mathematics**

MATH&151	CALCULUS I	5 cr.
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MATH&152	CALCULUS II	5 cr.
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MATH&153	CALCULUS III	5 cr.
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MATH 215	LINEAR ALGEBRA	5 cr.
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MATH 221	DIFFERENTIAL EQUATIONS	5 cr.
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**3. Physics**

PHYS&241	ENGINEERING PHYSICS I	4 cr.
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and PHYS&231	ENGINEERING PHYSICS LAB I	1 cr.
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PHYS&242	ENGINEERING PHYSICS II	4 cr.
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and PHYS&232	ENGINEERING PHYSICS LAB II	1 cr.
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PHYS&243	ENGINEERING PHYSICS III	4 cr.
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and PHYS&233	ENGINEERING PHYSICS LAB III	1 cr.
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**4. Chemistry with Laboratory**

CHEM&141	GENERAL CHEMISTRY I	4 cr.
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and	GENERAL CHEMISTRY LABORATORY I	1 cr.
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CHEM&151	CHEM&142	4 cr.
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GENERAL CHEMISTRY II	and	1 cr.
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CHEM&152
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GENERAL CHEMISTRY LABORATORY II	5 cr.
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<b>5. Required Major Courses</b>	5 cr.
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ENGR&214	STATICS	5 cr.
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ENGR&215	DYNAMICS	5 cr.
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ENGR&225	MECHANICS OF MATERIALS	<b>B.</b>
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**Distribution Requirements****1. Humanities/Fine Arts/English & Social Sciences**

A course in Economics is recommended (ECON&201 or 202).

PHIL&106 is strongly recommended as the Humanities course.

**C. Electives****1. Elective Courses**

Required at Clark:

MATH&254	CALCULUS IV	5 cr.
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Other electives as advised dependent on transfer institution.

**Notes****A. Basic Requirements****2. Mathematics**

Clark requires concurrent enrollment of completion in MATH&254 when taking MATH221.

MATH103 and MATH111 are required prerequisites for MATH&151 that may be needed if calculus placement is not met via COMPASS.

**3. Physics**

Clark requires concurrent enrollment in PHYS094, 095, and 096.

**B. Distribution Requirements****1. Humanities**

Courses taken must come from the current ICRC distribution list in order to count as General Education or General University Requirements (GER's/GUR's) at the receiving institution. Additional general educational requirements, cultural diversity requirements, and foreign language requirements, as required by the receiving institution, must be met prior to the completion of a baccalaureate degree.

**Total Required Credits: 102-110**

**Program Outcomes**

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate understanding of the derivative as instantaneous rate of change and the definite integral as a limit of a Riemann sum in applied problems.
- Analyze and solve multi-step problems using techniques through single-variable calculus, and communicate the results.
- Apply fundamental principles and relationships from the Natural Sciences to analyze technological or scientific problems.
- Acquire scientific and technological information from appropriate sources to examine issues, claims or situations.
- Apply scientific and technological knowledge and methodologies to creatively solve technological or scientific problems.
- Communicate with various audiences using a variety of methods.
- Demonstrate progress toward healthier behaviors.
- Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Obtain, evaluate, and ethically use information.

- Analyze patterns of power, privilege and inequality.
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.

## Mechatronics

Mechatronics Technology is a growing career field that deals with the integration of mechanical and electronic components managed by control systems. Mechatronics technicians troubleshoot, maintain and repair mechanical equipment controlled by electrical, electronic and computer systems. These types of systems are increasingly used in a wide variety of manufacturing and industrial settings. Clark College's Mechatronics Technology (MTX) classes emphasize current concepts and technology by providing practical, hands-on experiences with the latest, industry standard equipment. In addition to the technical know-how needed to maintain and repair equipment, the certificate and degree programs will help prepare students to think critically, function as a successful team member and communicate clearly to internal and external customers.

The multiple certificate and degree options available within this program allow students the option to stop-out and enter the workforce, and re-enter the program as needed, or complete their program of study without stopping.

### Mechanical Automation (AAT)

#### General Education Requirements

<b>Communication Skills (5 credits required)</b>		
PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING (recommen	5 cr.
<b>Computational Skills (5 credits required)</b>		
<b>Human Relations (5 credits required)</b>		
CMST&230	SMALL GROUP COMMUNICATION (recommended)	5 cr.

#### Major Area Requirements

MTX 100	INDUSTRIAL SAFETY	1 cr.
MTX 101	DC FUNDAMENTALS	3 cr.
MTX 102	AC FUNDAMENTALS	3 cr.
MTX 103	BASIC MEASUREMENT TOOLS	2 cr.
MTX 105	BASIC HYDRAULICS	2 cr.
MTX 107	BASIC PNEUMATICS	2 cr.
MTX 110	ELECTRIC MOTOR CONTROL 1	4 cr.
MTX 113	ELECTRICAL POWER DISTRIBUTION	2 cr.
MTX 117	MECHATRONICS 1	2 cr.
MTX 120	MECHANICAL DRIVES 1	3 cr.
MTX 121	SEMICONDUCTORS I	3 cr.
MTX 127	PIPING	2 cr.
MTX 130	PROGRAMMABLE LOGIC CONTROLLERS 1	4 cr.
MTX 150	MECHANICAL DRIVES 2	2 cr.
MTX 153	DC DRIVES	4 cr.
MTX 155	AC DRIVES	4 cr.
MTX 216	MECHATRONICS 2	5 cr.
MTX 220	WORKPLACE ORGANIZATION AND PRACTICES	2 cr.
MTX 223	WORK TEAMS AND PRODUCT DESIGN	3 cr.
MTX 227	MECHANICAL DRIVES 3	4 cr.
MTX 230	LASER ALIGNMENT	2 cr.
MTX 250	ADVANCED PROGRAMMABLE LOGIC CONTROLLERS	4 cr.
MTX 255	ADVANCED HYDRAULICS	3 cr.
MTX 260	ADVANCED PNEUMATICS AND VACUUM	3 cr.
MTX 270	CAPSTONE	3 cr.
MTX 285	PROJECT MANAGEMENT AND LEAN MANUFACTURING	2 cr.
MTX 295	ORGANIZATIONAL ENTREPRENEURSHIP	3 cr.

**Total Required Credits: 92**

#### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Assimilate/interpret technical and nontechnical descriptions to form a solution.
- Design, operate, and troubleshoot automation processes and systems.
- Communicate with colleagues, supervisors, and clients, using written and verbal technical and/or nontechnical language.
- Actively participate as an effective team member, completing prescribed project tasks and meeting project goals.

- Use computational skills to analyze physical parameters within automated processes and systems.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

## Mechanical Automation (CP)

### General Education Requirements

Communication Skills (3 credits required)

Computational Skills (3 credits required)

Human Relations (3 credits required)

### Major Area Requirements

MTX 100	INDUSTRIAL SAFETY	1 cr.
MTX 101	DC FUNDAMENTALS	3 cr.
MTX 102	AC FUNDAMENTALS	3 cr.
MTX 103	BASIC MEASUREMENT TOOLS	2 cr.
MTX 105	BASIC HYDRAULICS	2 cr.
MTX 107	BASIC PNEUMATICS	2 cr.
MTX 110	ELECTRIC MOTOR CONTROL 1	4 cr.
MTX 113	ELECTRICAL POWER DISTRIBUTION	2 cr.
MTX 117	MECHATRONICS 1	2 cr.
MTX 120	MECHANICAL DRIVES 1	3 cr.
MTX 121	SEMICONDUCTORS I	3 cr.
MTX 127	PIPING	2 cr.
MTX 130	PROGRAMMABLE LOGIC CONTROLLERS 1	4 cr.
MTX 150	MECHANICAL DRIVES 2	2 cr.
MTX 153	DC DRIVES	4 cr.
MTX 155	AC DRIVES	4 cr.
MTX 216	MECHATRONICS 2	5 cr.
MTX 220	WORKPLACE ORGANIZATION AND PRACTICES	2 cr.
MTX 223	WORK TEAMS AND PRODUCT DESIGN	3 cr.
MTX 227	MECHANICAL DRIVES 3	4 cr.
MTX 230	LASER ALIGNMENT	2 cr.
MTX 250	ADVANCED PROGRAMMABLE LOGIC CONTROLLERS	4 cr.
MTX 255	ADVANCED HYDRAULICS	3 cr.
MTX 260	ADVANCED PNEUMATICS AND VACUUM	3 cr.
MTX 270	CAPSTONE	3 cr.
MTX 285	PROJECT MANAGEMENT AND LEAN MANUFACTURING	2 cr.
MTX 295	ORGANIZATIONAL ENTREPRENEURSHIP	3 cr.

**Total Required Credits: 86**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Operate and maintain electrical, mechanical, hydraulic and pneumatic equipment in an industrial environment.
- Troubleshoot problems in electrical, mechanical, hydraulic and pneumatic equipment.
- Use computational skills to analyze physical parameters within automated processes and systems.
- Communicate with colleagues, supervisors and clients, using written and verbal technical and/or nontechnical language.
- Actively participate as an effective team member, completing prescribed project tasks and meeting project goals.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

## Instrumentation/Control Automation (AAT)

### General Education Requirements

Communication Skills (5 credits required)

PTWR 135 INTRODUCTION TO APPLIED TECHNICAL WRITING (recommended) 5 cr.

Computational Skills (5 credits required)

Human Relations (5 credits required)  
CMST&230 SMALL GROUP COMMUNICATION (recommended) 5 cr.

### Major Area Requirements

MTX 100	INDUSTRIAL SAFETY	1 cr.
MTX 101	DC FUNDAMENTALS	3 cr.
MTX 102	AC FUNDAMENTALS	3 cr.
MTX 103	BASIC MEASUREMENT TOOLS	2 cr.
MTX 105	BASIC HYDRAULICS	2 cr.
MTX 107	BASIC PNEUMATICS	2 cr.
MTX 110	ELECTRIC MOTOR CONTROL 1	4 cr.
MTX 113	ELECTRICAL POWER DISTRIBUTION	2 cr.
MTX 117	MECHATRONICS 1	2 cr.
MTX 121	SEMICONDUCTORS I	3 cr.
MTX 123	PICK AND PLACE ROBOT	3 cr.
MTX 125	SERVO ROBOT	3 cr.
MTX 130	PROGRAMMABLE LOGIC CONTROLLERS 1	4 cr.
MTX 135	INDUSTRIAL ELECTRICAL WIRING	3 cr.
MTX 165	ELECTRIC MOTOR CONTROL 2	4 cr.
MTX 205	FLOW PROCESS CONTROL	5 cr.
MTX 207	THERMAL PROCESS CONTROL	5 cr.
MTX 210	ELECTRO-FLUID POWER	4 cr.
MTX 216	MECHATRONICS 2	5 cr.
MTX 220	WORKPLACE ORGANIZATION AND PRACTICES	2 cr.
MTX 223	WORK TEAMS AND PRODUCT DESIGN	3 cr.
MTX 225	SPEED CONTROL SYSTEMS	2 cr.
MTX 250	ADVANCED PROGRAMMABLE LOGIC CONTROLLERS	4 cr.
MTX 270	CAPSTONE	3 cr.
MTX 285	PROJECT MANAGEMENT AND LEAN MANUFACTURING	2 cr.
MTX 295	ORGANIZATIONAL ENTREPRENEURSHIP	3 cr.

**Total Required Credits: 94**

#### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Collect data based on sensory input and system performance to analyze and interpret process capabilities.
- Operate, measure, and modify software-driven industrial control systems.
- Communicate with colleagues, supervisors, clients, using written and verbal technical and/or nontechnical language.
- Actively participate as an effective team member, completing prescribed project tasks and meeting project goals.
- Use computational skills to analyze physical parameters within automated processes and systems.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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#### Instrumentation/Control Automation (CP)

##### General Education Requirements

Communication Skills (3 credits required)

Computational Skills (3 credits required)

Human Relations (3 credits required)

##### Major Area Requirements

MTX 100	INDUSTRIAL SAFETY	1 cr.
MTX 101	DC FUNDAMENTALS	3 cr.
MTX 102	AC FUNDAMENTALS	3 cr.
MTX 103	BASIC MEASUREMENT TOOLS	2 cr.
MTX 105	BASIC HYDRAULICS	2 cr.
MTX 107	BASIC PNEUMATICS	2 cr.
MTX 110	ELECTRIC MOTOR CONTROL 1	4 cr.
MTX 113	ELECTRICAL POWER DISTRIBUTION	2 cr.
MTX 117	MECHATRONICS 1	2 cr.
MTX 121	SEMICONDUCTORS I	3 cr.
MTX 123	PICK AND PLACE ROBOT	3 cr.
MTX 125	SERVO ROBOT	3 cr.
MTX 130	PROGRAMMABLE LOGIC CONTROLLERS 1	4 cr.
MTX 135	INDUSTRIAL ELECTRICAL WIRING	3 cr.
MTX 165	ELECTRIC MOTOR CONTROL 2	4 cr.
MTX 205	FLOW PROCESS CONTROL	5 cr.
MTX 207	THERMAL PROCESS CONTROL	5 cr.



MTX 210	ELECTRO-FLUID POWER	4 cr.
MTX 216	MECHATRONICS 2	5 cr.
MTX 220	WORKPLACE ORGANIZATION AND PRACTICES	2 cr.
MTX 223	WORK TEAMS AND PRODUCT DESIGN	3 cr.
MTX 225	SPEED CONTROL SYSTEMS	2 cr.
MTX 250	ADVANCED PROGRAMMABLE LOGIC CONTROLLERS	4 cr.
MTX 270	CAPSTONE	3 cr.
MTX 285	PROJECT MANAGEMENT AND LEAN MANUFACTURING	2 cr.
MTX 295	ORGANIZATIONAL ENTREPRENEURSHIP	3 cr.

**Total Required Credits: 88**

#### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Operate, measure, and modify software-driven industrial control processes and systems.
- Operate and program servo and non-servo robotic equipment.
- Troubleshoot problems in automated processes and systems.
- Use computational skills to analyze physical parameters within automated processes and systems.
- Communicate with colleagues, supervisors and clients, using written and verbal technical and/or nontechnical language.
- Actively participate as an effective team member, completing prescribed project tasks and meeting project goals.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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#### Instrumentation/Control Automation (CA)

##### Major Area Requirements

MTX 100	INDUSTRIAL SAFETY	1 cr.
MTX 101	DC FUNDAMENTALS	3 cr.
MTX 102	AC FUNDAMENTALS	3 cr.
MTX 103	BASIC MEASUREMENT TOOLS	2 cr.
MTX 105	BASIC HYDRAULICS	2 cr.
MTX 107	BASIC PNEUMATICS	2 cr.
MTX 110	ELECTRIC MOTOR CONTROL 1	4 cr.
MTX 113	ELECTRICAL POWER DISTRIBUTION	2 cr.
MTX 117	MECHATRONICS 1	2 cr.
MTX 121	SEMICONDUCTORS I	3 cr.
MTX 123	PICK AND PLACE ROBOT	3 cr.
MTX 130	PROGRAMMABLE LOGIC CONTROLLERS 1	4 cr.
MTX 135	INDUSTRIAL ELECTRICAL WIRING	3 cr.
MTX 165	ELECTRIC MOTOR CONTROL 2	4 cr.

**Total Required Credits: 38**

#### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Troubleshoot problems in automated processes and systems.
- Communicate with colleagues, supervisors and clients, using written and verbal technical and/or nontechnical language.
- Actively participate as an effective team member, completing prescribed project tasks and meeting project goals.

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#### Mechanical Automation (CA)

##### Major Area Requirements

MTX 100	INDUSTRIAL SAFETY	1 cr.
MTX 101	DC FUNDAMENTALS	3 cr.
MTX 102	AC FUNDAMENTALS	3 cr.
MTX 103	BASIC MEASUREMENT TOOLS	2 cr.
MTX 105	BASIC HYDRAULICS	2 cr.
MTX 107	BASIC PNEUMATICS	2 cr.
MTX 110	ELECTRIC MOTOR CONTROL 1	4 cr.
MTX 113	ELECTRICAL POWER DISTRIBUTION	2 cr.
MTX 117	MECHATRONICS 1	2 cr.

MTX 120	MECHANICAL DRIVES 1	3 cr.
MTX 121	SEMICONDUCTORS I	3 cr.
MTX 127	PIPING	2 cr.
MTX 130	PROGRAMMABLE LOGIC CONTROLLERS 1	4 cr.
MTX 150	MECHANICAL DRIVES 2	2 cr.
MTX 153	DC DRIVES	4 cr.

**Total Required Credits: 39**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Troubleshoot problems in electrical, mechanical, hydraulic and pneumatic equipment.
- Communicate with colleagues, supervisors and clients, using written and verbal technical and/or nontechnical language.
- Actively participate as an effective team member, completing prescribed project tasks and meeting project goals.

## Medical Radiography

Designed to fulfill the educational objectives established by the American Society of Radiologic Technologists and the competencies outlined by the American Registry of Radiologic Technologists, students graduating from this program receive an Associate of Applied Science degree in Medical Radiography and are employed in hospitals, clinics, doctors' offices, and outpatient medical centers. Successful completion of the registry examination results in national certification as a Registered Radiologic Technologist, RT (R) ARRT.

Upon program completion, and having passed the national boards administered by the American Registry of Radiologic Technologists (ARRT), students may choose to practice as entry-level technologists or continue their education to specialize in CT, MRI, ultrasound, and therapeutic radiation techniques or prepare for administration or teaching.

### Application Guidelines

Applicants must be graduates of an accredited high school (or the equivalent). Students can apply to the Medical Radiography program any time; however, they will not be eligible for selection until all Preliminary Requirements are complete.

Clark College's Associate Degree in Medical Radiography is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT):

JRCERT  
 20 N. Wacker Drive Suite 2850  
 Chicago, IL 60606  
 312-704-5300  
 FAX: 312-704-5304  
 mail@jrcert.org  
 www.jrcert.org

### Candidates must:

- Complete the Clark College Application for Admission and Statement of Intent forms. Return to the Clark College Enrollment Services with the non-refundable program application fees (subject to change). For the current fee amounts, please visit the Medical Radiography website at [www.clark.edu/medicalradiography](http://www.clark.edu/medicalradiography).
- Submit official college transcripts from ALL colleges attended (an evaluation of transfer credits will not be completed until all transcripts are received).
- Earn a COMPASS Reading exam score of 74 or higher or completion of READ 087 or equivalent with a 2.0 grade or higher.
- Earn a 2.0 grade or higher on all required courses.
- Complete program Preliminary Requirements with a GPA of 2.75 or higher for all non-science courses and a science GPA of 2.0 or higher for BIOL& 251, 252 & 253.
  1. **BIOL&251**-Human A & P I (with lab)\*
  2. **BIOL&252**-Human A & P II (with lab)\*
  3. **BIOL&253**-Human A & P III (with lab)\*
  4. **BMED 110**-Medical Terminology I\*
  5. **BMED 111**-Medical Terminology II\*
  6. **ENGL&101**-English Composition I
  7. **MATH 093**-Algebra III\* or **MATH 095**-Intermediate Algebra\*
  8. **MRAD 101**-Fundamentals of Medical Radiography

\*There is a seven-year (7) limit on all math/science science courses (listed above) at the time of program entry.

### Final Program Admission

In preparing for entrance into the program, accepted students need to be aware of the following:

- The program requires a 40-hour per week commitment from students for classes and clinical rotations.
- Clinical facilities may require driving significant distances (with travel time up to 2.5 hours one way), so reliable transportation is an important consideration.
- Classes and/or clinicals may be offered at times other than weekday hours such as evenings and/or weekends.

Upon completion of preliminary requirements and application to the program, an evaluation will be completed, and the applicant will be notified by the Credential Evaluations Office of additional procedures necessary for program consideration.

Final admission to the Medical Radiography program is based on competitive entry for a limited number of positions. Students are ranked by:

- Applicable GPA (for all required courses)
- Number of required courses completed
- Science GPA
- Washington Residency

### Mandatory Orientation

All accepted Medical Radiography students will be required to attend an orientation session to secure their place in the class. Selected students will be sent information regarding the date, place, and time of the orientation. They will also need to submit a non-refundable \$200 deposit to reserve a position in the program.

Information regarding required Immunizations, physical exam, drug screening, health insurance, and criminal background check will be discussed in the mandatory orientation to the program.

Refer to the Clark College website for program entry requirements, program selection, deadlines, and application guidelines at [www.clark.edu/medicalradiography](http://www.clark.edu/medicalradiography).

Refer to the Degree & Certificate Requirements Section of the Clark College Catalog to identify the courses needed to satisfy the General Education Requirements.

### Disability Statement for Health Occupations

In accordance with the Americans with Disabilities Act and the Rehabilitation Act of 1973, accommodations for students with disabilities will be considered at the student's request. The student may need to provide documentation of disability to the Disability Support Services Office to support his/her accommodation requests. Documentation guidelines and procedures can be found at [www.clark.edu/dss](http://www.clark.edu/dss). Once the student is qualified by DSS as having a disability, requested accommodations will be considered. Accommodations for the classroom, laboratory, or clinical setting will be evaluated according to reasonableness. Accommodations that compromise patient care, or that fundamentally alter the essential functions of the program or activity, are not considered to be reasonable.

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### Medical Radiography (AAS)

#### Additional Requirements

CTEC 101	COMPUTING ESSENTIALS *	2 cr.
HLTH 124	HEALTHCARE PROVIDER CPR AND FIRST AID	1 cr.
HEOC 120	AIDS EDUCATION	1 cr.

#### Preliminary Requirements

BIOL&251	HUMAN A & P I *	5 cr.
BIOL&252	HUMAN A & P II *	5 cr.
BIOL&253	HUMAN A & P III *	5 cr.
BMED 110	MEDICAL TERMINOLOGY I	3 cr.
BMED 111	MEDICAL TERMINOLOGY II	3 cr.
ENGL&101	ENGLISH COMPOSITION I	5 cr.
MATH 093	ALGEBRA III *	5 cr.
or MATH 095	INTERMEDIATE ALGEBRA *	5 cr.
MRAD 101	INTRODUCTION TO RADIOLOGIC TECHNOLOGY	3 cr.

#### General Education Requirements

These courses are required to be completed prior to the start of the program

<b>Communication Skills (6 credits required)</b>		
ENGL 109	WRITING ABOUT THE SCIENCES	5 cr.
or ENGL&102	ENGLISH COMPOSITION II	5 cr.
<b>PE Activity (1 credit required)</b>		
Health course waived		
<b>Computational Skills (3 credits required)</b>		
Must be seven years current upon program entry.		
MATH 093	ALGEBRA III (or higher or by test) *	5 cr.
or MATH 095	INTERMEDIATE ALGEBRA (or higher or by test) *	5 cr.
<b>Human Relations (3 credits required) ***</b>		
<b>Humanities (3 credits required)</b>		
HUM 180	BIOETHICS (strongly recommended)	3 cr.
CMST&210	INTERPERSONAL COMMUNICATION (strongly recommended) *	5 cr.
<b>Social Sciences (3 credits required)</b>		
PSYC&200	LIFESPAN PSYCHOLOGY ***	5 cr.
or PSYC&100	GENERAL PSYCHOLOGY ***	5 cr.
<b>Natural Sciences (3 credits required)</b>		
BIOL&251	HUMAN A & P I	5 cr.

### First Year Major Area Requirements

<b>First Quarter</b>		
MRAD 011	RADIOGRAPHIC SKILL ENHANCEMENT LAB I	1 cr.
MRAD 102	INTRODUCTION TO PATIENT CARE (with lab)	5 cr.
MRAD 103	IMAGE PROCESSING	1 cr.
MRAD 104	RADIATION SAFETY AND RADIOBIOLOGY	2 cr.
MRAD 141	RADIOGRAPHIC POSITIONING I (with lab)	5 cr.
<b>Second Quarter</b>		
MRAD 011	RADIOGRAPHIC SKILL ENHANCEMENT LAB I	1 cr.
MRAD 108	RADIATION PHYSICS I	3 cr.
MRAD 121	CLINICAL EXPERIENCE I	7 cr.
MRAD 142	RADIOGRAPHIC POSITIONING II (with lab)	5 cr.
MRAD 151	IMAGE EVALUATION I	2 cr.
<b>Third Quarter</b>		
MRAD 011	RADIOGRAPHIC SKILL ENHANCEMENT LAB I	1 cr.
MRAD 109	RADIATION PHYSICS II	4 cr.
MRAD 122	CLINICAL EXPERIENCE II	6 cr.
MRAD 143	RADIOGRAPHIC POSITIONING III	5 cr.
<b>Fourth Quarter</b>		
MRAD 012	RADIOGRAPHIC SKILL ENHANCEMENT LAB II **	1-5 cr.
MRAD 123	CLINICAL EXPERIENCE III	7 cr.
MRAD 152	IMAGE EVALUATION II	1 cr.
MRAD 214	PHARMACOLOGY AND IV THERAPY (with lab)	3 cr.
MRAD 244	RADIOGRAPHIC POSITIONING IV (with lab)	3 cr.

### Second Year Major Area Requirements

<b>Fifth Quarter</b>		
MRAD 012	RADIOGRAPHIC SKILL ENHANCEMENT LAB II **	1-5 cr.
MRAD 153	IMAGE EVALUATION III	1 cr.
MRAD 216	RADIOGRAPHIC PATHOLOGY	3 cr.
MRAD 224	CLINICAL EXPERIENCE IV	7 cr.
MRAD 245	RADIOGRAPHIC POSITIONING V (with lab)	3 cr.
<b>Sixth Quarter</b>		
MRAD 013	RADIOGRAPHIC SKILL ENHANCEMENT LAB III	1 cr.
MRAD 154	IMAGE EVALUATION IV	1 cr.
MRAD 225	CLINICAL EXPERIENCE V	7 cr.
MRAD 255	ADVANCED MODALITIES	1 cr.
MRAD 279	CROSS SECTIONAL ANATOMY FOR IMAGING PROFESSIONAL	3 cr.
<b>Seventh Quarter</b>		
MRAD 226	CLINICAL EXPERIENCE VI	8 cr.
MRAD 251	RADIOGRAPHIC INFORMATION MANAGEMENT	2 cr.
MRAD 253	RADIOBIOLOGY	2 cr.
<b>Eighth Quarter</b>		
MRAD 227	CLINICAL EXPERIENCE VII	10 cr.
MRAD 270	LEADERSHIP AND MANAGEMENT	1 cr.
MRAD 275	MEDICAL RADIOGRAPHY REVIEW	2 cr.

**Total Required Credits: 162-163**

\*Must be seven years current upon program entry.

\*\* Enroll in MRAD 012 for 1 credit during both the fourth and fifth quarter.

\*\*\*Also fulfills Human Relations requirement.

### **Program Outcomes**

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Be clinically competent: Apply positioning skills, demonstrate radiation protection and patient care.
- Demonstrate communication skills: Accurately explain procedures, listen attentively and apply age-appropriate communication.
- Utilize critical thinking skills: Perform non-routine exams, evaluate image quality and recognize proper procedures for emergency situations.
- Demonstrate professionalism: Ethical behavior, a positive attitude in clinical situations, and initiative.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.
- Health and PE: Demonstrate progress toward healthier behaviors as appropriate for a career and technical education program.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts as appropriate for a career and technical education program.
- Social Science: Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences as appropriate for a career and technical education program.
- Science: Apply fundamental principles and relationships from the Natural Sciences to solve problems as appropriate for a career and technical education program.

**Program Progression** - Once accepted into the Medical Radiography program all students must achieve a GPA of 2.0 or higher in all required courses and maintain a cumulative GPA of 2.0 or higher to progress from one quarter to the next.

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### **Music (Area of Study)**

The Music program at Clark College offers a two-year college experience of music theory, instrumental and vocal performance training, music appreciation, and music history classes. Classes are designed to prepare the music major for advanced studies at a four-year institution while providing the non-major with the skills and background to fully enjoy music as a cultural pursuit.

Career opportunities for those with musical interests and talent are available in a number of areas: music education, music marketing, theory and history, composition, and vocal or instrumental performance. Students with professional goals should consult with a faculty advisor to plan a program leading to an Associate in Arts degree.

#### **Musical Opportunities**

Instrumentalists and vocal musicians have the opportunity to fine tune their talents while developing a professional stage presence by performing in their choice of quality college groups:

Orchestra	Concert Choir
Symphonic Band	Brass & Wind Ensembles
Jazz Band	Vocal Jazz Ensemble
Women's Choir	Pep Band

Performing groups present concerts each quarter, at various locations on and off campus, often with musical groups from other schools or from the community. Performing ensembles have toured in Canada, Mexico, Japan, Korea, China, and Hawaii.

Each January, Clark music students also experience first-hand the many activities involved in producing a major musical event as the college hosts the annual Clark College Jazz Festival. More than 80 high school bands and vocal jazz choirs from throughout the Northwest and Canada come to the campus to compete in this nationally recognized event. Clark jazz musicians perform during the three-day event, and all participants have the opportunity to interact with the professional musicians and educators who come to Vancouver as guest performers and adjudicators for the festival.

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### **Network Technology**

Designed to meet the ever-changing needs of the IT (Information Technology) field, Clark's Network Technology programs include extensive hands-on, real-world scenario-based learning in planning, designing, implementing, maintaining, and troubleshooting small-to-large scale computer networks.

The Network Technology department provides in-demand training for careers as a Network Administrator, Network Engineer, and Network Support Specialist in all aspects of modern computer networks, including traditional data, video conference, Voice over Internet Protocol (VoIP) telephone, wireless networks, and network security.

We are a Cisco Network Academy authorized by Cisco Systems, a leader in the networking industry. The Network Technology department offers training towards obtaining several well-recognized industry certifications, including:

- Cisco CCNA
- Cisco CCNA Security
- Cisco CCNA Voice
- CompTIA A+ PC Technician
- CompTIA Network+
- CompTIA Server+
- Microsoft MCITP Server Administrator on Windows Server 2008
- Microsoft MCTS Windows Server 2008 Network Infrastructure
- Microsoft MCTS Windows Server 2008 Active Directory

Our various Network Technology programs are designed with entry points both for the student just starting a new career, as well as for the computer networking or telecommunications professional seeking to improve and update their skills and achieve industry certifications. Classes are offered at convenient times for working people: days, nights, weekends.

We invite you to visit our website for more information, contact us with your questions, and schedule a tour of our classroom and leading-edge lab facility.

Email: [dnet@clark.edu](mailto:dnet@clark.edu)

**Program Preparation**

Math and English proficiency tests are required of all students before entry into the applied science degree program.

Students must complete all Major Area Requirements with a minimum grade of "C" or better in order to successfully complete the program and earn the award.

Refer to the Degree & Certificate Requirements Section of the Clark College Catalog to identify the courses needed to satisfy the General Education Requirements.

**Cisco Technician (CA)**

This program is designed for students who want to work as network administrators with local area network systems. Network administrators maintain network operations, conduct performance monitoring, network security, firewalls, VPNs, design networks, perform backup and recovery procedures, and perform troubleshooting.

**Major Area Requirements**

NTEC 103	IP SUBNETTING	2 cr.
NTEC 220	INTRODUCTION TO LINUX SERVERS	5 cr.
NTEC 221	CISCO CCNA 1:INTRODUCTION TO NETWORKS	6 cr.
NTEC 222	CISCO CCNA 2: ROUTING & SWITCHING ESSENTIALS	6 cr.
NTEC 223	CISCO CCNA 3: SCALING NETWORKS	6 cr.
NTEC 224	CISCO CCNA 4: CONNECTING NETWORKS	6 cr.
NTEC 225	CISCO CCNA SECURITY	6 cr.
NTEC 226	CISCO CCNA VOICE	6 cr.

**Total Required Credits: 43**

Note: Students will be required to have access to the Internet to complete their coursework.

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the [Gainful Employment Program Information page](#).

**Program Outcomes**

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Design converged networks to meet specific business needs.
- Implement converged networks to meet specific business needs.
- Maintain converged networks to meet specific business needs.
- Resolve common issues with converged networks.

**Cisco Technologies (AAT)**

**General Education Requirements**

**Communication Skills (5 credits required)**

ENGL&101	ENGLISH COMPOSITION I	5 cr.
or PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.

**Computational Skills (5 credits required)**

MATH&107	MATH IN SOCIETY	5 cr.
or MATH 111	COLLEGE ALGEBRA	5 cr.
or		
PTCS 110	PROFESSIONAL TECHNICAL COMPUTATIONAL SKILLS	5 cr.
or		
PHIL&120	SYMBOLIC LOGIC	5 cr.

**Human Relations (5 credits required)****Major Area Requirements**

NTEC 103	IP SUBNETTING	2 cr.
NTEC 221	CISCO CCNA 1:INTRODUCTION TO NETWORKS	6 cr.
NTEC 222	CISCO CCNA 2: ROUTING & SWITCHING ESSENTIALS	6 cr.
NTEC 223	CISCO CCNA 3: SCALING NETWORKS	6 cr.
NTEC 224	CISCO CCNA 4: CONNECTING NETWORKS	6 cr.
NTEC 225	CISCO CCNA SECURITY	6 cr.
NTEC 226	CISCO CCNA VOICE	6 cr.
NTEC 227	CISCO CCNP ROUTER: IMPLEMENTING IP ROUTING	6 cr.
NTEC 228	CISCO CCNP SWITCH: IMPLEMENTING IP SWITCHING	6 cr.
NTEC 229	CISCO CCNP TSHOOT: MAINTAINING IP NETWORKS	6 cr.
NTEC 299	CAPSTONE EXPERIENCE	3 cr.

**Program Specialty Area Requirements**

Students must complete a minimum of 16 credits in specialty areas. Choose from the following list:

BTEC 149	COMPUTER APPLICATIONS ESSENTIALS	3 cr.
CTEC 104	PC SUPPORT CUSTOMER SERVICE SKILLS	3 cr.
CTEC 121	INTRO TO PROGRAMMING & PROBLEM SOLVING	5 cr.
CTEC 122	HTML FUNDAMENTALS	4 cr.
CTEC 130	MICROSOFT MTA WINDOWS OS FUNDAMENTALS	3 cr.
CTEC 131	MICROSOFT MTA NETWORKING FUNDAMENTALS	3 cr.
CTEC 133	MICROSOFT MTA SECURITY FUNDAMENTALS	5 cr.
CTEC 134	MICROSOFT MTA DATABASE ADMIN	5 cr.
CTEC 140	INTRODUCTION TO UNIX	5 cr.
CTEC 141	UNIX SYSTEM ADMINISTRATION	5 cr.
CTEC 145	WEB SERVER TECHNOLOGY	5 cr.
NTEC 125	INFORMATION SECURITY FUNDAMENTALS	3 cr.
NTEC 132	WINDOWS MTA SERVER ADMINISTRATION FUNDAMENTALS	3 cr.
NTEC 142	CLOUD COMPUTING FUNDAMENTALS	3 cr.
NTEC 199	COOPERATIVE WORK EXPERIENCE	1-6 cr.
NTEC 220	INTRODUCTION TO LINUX SERVERS	5 cr.
NTEC 232	COMPTIA A+ COMPUTER SUPPORT TECHNICIAN	6 cr.
NTEC 234	MICROSOFT SERVER ADMINISTRATOR 1	6 cr.
NTEC 235	MICROSOFT SERVER ADMINISTRATOR 2	6 cr.
NTEC 236	MICROSOFT SERVER ADMINISTRATOR 3	6 cr.
NTEC 242	DATACENTER VIRTUALIZATION TECHNOLOGY	6 cr.

**Total Required Credits: 90**

**Program Outcomes**

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Design converged networks to meet specific business needs.
- Implement converged networks to meet specific business needs.
- Maintain converged networks to meet specific business needs.
- Resolve common issues with converged networks.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

**Microsoft Technologies (AAT)****General Education Requirements****Communication Skills (5 credits required)**

ENGL&101	ENGLISH COMPOSITION I	5 cr.
or PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.
<b>Computational Skills (5 credits required)</b>		
MATH&107	MATH IN SOCIETY	5 cr.
or MATH 111	COLLEGE ALGEBRA	5 cr.
or		
PTCS 110	PROFESSIONAL TECHNICAL COMPUTATIONAL SKILLS	5 cr.
or		
PHIL&120	SYMBOLIC LOGIC	5 cr.
<b>Human Relations (5 credits required)</b>		

### Major Area Requirements

CTEC 130	MICROSOFT MTA WINDOWS OS FUNDAMENTALS	3 cr.
NTEC 103	IP SUBNETTING	2 cr.
NTEC 132	WINDOWS MTA SERVER ADMINISTRATION FUNDAMENTALS	3 cr.
NTEC 220	INTRODUCTION TO LINUX SERVERS	5 cr.
NTEC 221	CISCO CCNA 1:INTRODUCTION TO NETWORKS	6 cr.
NTEC 234	MICROSOFT SERVER ADMINISTRATOR 1	6 cr.
NTEC 235	MICROSOFT SERVER ADMINISTRATOR 2	6 cr.
NTEC 236	MICROSOFT SERVER ADMINISTRATOR 3	6 cr.
NTEC 299	CAPSTONE EXPERIENCE	3 cr.

### Program Specialty Area Requirements

Students must complete a minimum of 35 credits in specialty areas. Choose from the following list:

BTEC 149	COMPUTER APPLICATIONS ESSENTIALS	3 cr.
CTEC 104	PC SUPPORT CUSTOMER SERVICE SKILLS	3 cr.
CTEC 121	INTRO TO PROGRAMMING & PROBLEM SOLVING	5 cr.
CTEC 122	HTML FUNDAMENTALS	4 cr.
CTEC 131	MICROSOFT MTA NETWORKING FUNDAMENTALS	3 cr.
CTEC 133	MICROSOFT MTA SECURITY FUNDAMENTALS	5 cr.
CTEC 134	MICROSOFT MTA DATABASE ADMIN	5 cr.
CTEC 140	INTRODUCTION TO UNIX	5 cr.
CTEC 141	UNIX SYSTEM ADMINISTRATION	5 cr.
NTEC 125	INFORMATION SECURITY FUNDAMENTALS	3 cr.
NTEC 142	CLOUD COMPUTING FUNDAMENTALS	3 cr.
NTEC 199	COOPERATIVE WORK EXPERIENCE	1-6 cr.
NTEC 222	CISCO CCNA 2: ROUTING & SWITCHING ESSENTIALS	6 cr.
NTEC 223	CISCO CCNA 3: SCALING NETWORKS	6 cr.
NTEC 224	CISCO CCNA 4: CONNECTING NETWORKS	6 cr.
NTEC 225	CISCO CCNA SECURITY	6 cr.
NTEC 226	CISCO CCNA VOICE	6 cr.
NTEC 232	COMPTIA A+ COMPUTER SUPPORT TECHNICIAN	6 cr.
NTEC 242	DATACENTER VIRTUALIZATION TECHNOLOGY	6 cr.

**Total Required Credits: 90**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Configure GUI and core servers.
- Manage and configure servers using PowerShell.
- Design Microsoft networks and domain structures to meet specific business needs.
- Implement Microsoft networks and domain structures to meet specific business needs.
- Maintain Microsoft networks and domain structures to meet specific business needs.
- Resolve common issues with Microsoft networks and domain structures.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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### Microsoft Technician (CA)

This program is designed for students who want to work as systems administrators with local area network systems. Systems administrators install workstation and server software, set up user accounts and restrictions; install, define, and maintain system resources such as file systems and printers; maintain network operations; perform backup and recovery procedures, and perform troubleshooting.

### Major Area Requirements



CTEC 130	MICROSOFT MTA WINDOWS OS FUNDAMENTALS	3 cr.
NTEC 103	IP SUBNETTING	2 cr.
NTEC 132	WINDOWS MTA SERVER ADMINISTRATION FUNDAMENTALS	3 cr.
NTEC 220	INTRODUCTION TO LINUX SERVERS	5 cr.
NTEC 221	CISCO CCNA 1:INTRODUCTION TO NETWORKS	6 cr.
NTEC 234	MICROSOFT SERVER ADMINISTRATOR 1	6 cr.
NTEC 235	MICROSOFT SERVER ADMINISTRATOR 2	6 cr.
NTEC 236	MICROSOFT SERVER ADMINISTRATOR 3	6 cr.

**Total Required Credits: 37**

#### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Design Microsoft networks and domain structures to meet specific business needs.
- Implement Microsoft networks and domain structures to meet specific business needs.
- Maintain Microsoft networks and domain structures to meet specific business needs.
- Resolve common issues with Microsoft networks and domain structures.

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#### Cisco Network Administrator (CA)

##### Major Area Requirements

NTEC 227	CISCO CCNP ROUTER: IMPLEMENTING IP ROUTING	6 cr.
NTEC 228	CISCO CCNP SWITCH: IMPLEMENTING IP SWITCHING	6 cr.
NTEC 225	CISCO CCNA SECURITY	6 cr.
NTEC 226	CISCO CCNA VOICE	6 cr.
NTEC 229	CISCO CCNP TSHOOT: MAINTAINING IP NETWORKS	6 cr.
NTEC 242	DATACENTER VIRTUALIZATION TECHNOLOGY	6 cr.

**Total Required Credits: 36**

#### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate the ability to plan a converged enterprise network infrastructure.
- Demonstrate the ability to implement a converged enterprise network infrastructure.
- Demonstrate the ability to maintain a converged enterprise network infrastructure.
- Demonstrate the ability to secure a converged enterprise network infrastructure.
- Demonstrate the ability to troubleshoot a a converged enterprise network infrastructure.

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#### Network Technologies (AAT)

##### General Education Requirements

###### Communication Skills (5 credits required)

ENGL&101	ENGLISH COMPOSITION I	5 cr.
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or

PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.
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###### Computational Skills (5 credits required)

MATH&107	MATH IN SOCIETY	5 cr.
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or

MATH 111	COLLEGE ALGEBRA	5 cr.
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or

PTCS 110	PROFESSIONAL TECHNICAL COMPUTATIONAL SKILLS	5 cr.
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or

PHIL&120	SYMBOLIC LOGIC	5 cr.
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###### Human Relations (5 credits required)

##### Major Area Requirements

NTEC 103	IP SUBNETTING	2 cr.
NTEC 132	WINDOWS MTA SERVER ADMINISTRATION FUNDAMENTALS	3 cr.
NTEC 220	INTRODUCTION TO LINUX SERVERS	5 cr.
NTEC 221	CISCO CCNA 1:INTRODUCTION TO NETWORKS	6 cr.
NTEC 222	CISCO CCNA 2: ROUTING & SWITCHING ESSENTIALS	6 cr.
NTEC 234	MICROSOFT SERVER ADMINISTRATOR 1	6 cr.

NTEC 235	MICROSOFT SERVER ADMINISTRATOR 2	6 cr.
NTEC 299	CAPSTONE EXPERIENCE	3 cr.

### Program Area Requirements

Students must complete a minimum of 38 credits in specialty areas. Choose from the following list:

BTEC 149	COMPUTER APPLICATIONS ESSENTIALS	3 cr.
CTEC 104	PC SUPPORT CUSTOMER SERVICE SKILLS	3 cr.
CTEC 121	INTRO TO PROGRAMMING & PROBLEM SOLVING	5 cr.
CTEC 122	HTML FUNDAMENTALS	4 cr.
CTEC 130	MICROSOFT MTA WINDOWS OS FUNDAMENTALS	3 cr.
CTEC 131	MICROSOFT MTA NETWORKING FUNDAMENTALS	3 cr.
CTEC 133	MICROSOFT MTA SECURITY FUNDAMENTALS	5 cr.
CTEC 134	MICROSOFT MTA DATABASE ADMIN	5 cr.
CTEC 140	INTRODUCTION TO UNIX	5 cr.
CTEC 141	UNIX SYSTEM ADMINISTRATION	5 cr.
CTEC 145	WEB SERVER TECHNOLOGY	5 cr.
CTEC 213	COMPTIA A+ FUNDAMENTALS	4 cr.
CTEC 214	COMPTIA A+ OPERATING SYSTEMS & NETWORKING	4 cr.
NTEC 125	INFORMATION SECURITY FUNDAMENTALS	3 cr.
NTEC 142	CLOUD COMPUTING FUNDAMENTALS	3 cr.
NTEC 199	COOPERATIVE WORK EXPERIENCE	1-6 cr.
NTEC 223	CISCO CCNA 3: SCALING NETWORKS	6 cr.
NTEC 224	CISCO CCNA 4: CONNECTING NETWORKS	6 cr.
NTEC 225	CISCO CCNA SECURITY	6 cr.
NTEC 226	CISCO CCNA VOICE	6 cr.
NTEC 227	CISCO CCNP ROUTER: IMPLEMENTING IP ROUTING	6 cr.
NTEC 228	CISCO CCNP SWITCH: IMPLEMENTING IP SWITCHING	6 cr.
NTEC 229	CISCO CCNP TSHOOT: MAINTAINING IP NETWORKS	6 cr.
NTEC 236	MICROSOFT SERVER ADMINISTRATOR 3	6 cr.
NTEC 242	DATACENTER VIRTUALIZATION TECHNOLOGY	6 cr.

**Total Required Credits: 90**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Design Windows and Linux networks to meet specific business needs.
- Implement Windows and Linux networks to meet specific business needs.
- Design converged networks to meet specific business needs.
- Implement converged networks to meet specific business needs.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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## Nursing

The registered nurse is a licensed health care professional able to work in hospitals, clinics, acute care, physicians' offices, emergency centers, long-term care facilities, and home health care agencies. Registered nurses work with patients from birth through old age in a variety of health care settings, including medical/surgical, obstetrics, mental health, long-term care, and in the community. They design care plans, perform patient assessments, administer medications, give injections, serve as advocates for patients, and refer patients to the proper resources. Critical-thinking and decision-making ability, as well as a life-long commitment to learning, are important assets in this demanding but rewarding profession.

Graduates of the Associate Degree Nursing program receive an Associate in Applied Science degree in Nursing, and are qualified to take the National Council Examination for licensure as a Registered Nurse. With additional credits, an Associate of Arts degree may be granted. (Students interested in transferring on to earn their Bachelor of Science in Nursing, please refer to the Clark College to WSU Vancouver Direct Transfer Agreement.)

Clark College's Associate Degree Nursing program is accredited by the Accreditation Commission for Education in Nursing (ACEN).

### ACEN

Accreditation Commission for Education In Nursing  
3343 Peachtree Road NE, Suite 850  
Atlanta, Georgia 30326

### **Preliminary Requirements**

To apply for the program, complete the Clark College Application for Admission and Statement of Intent forms. Return to the Clark College Enrollment Services with the non-refundable program application fees (subject to change). For the current fee amounts, please visit the Nursing website at [www.clark.edu/clarknursing](http://www.clark.edu/clarknursing).

Send all official college transcripts to the Credential Evaluations Office for complete transcript evaluation.

The following courses must be completed with a 3.0 applicable GPA (with at least a 2.0 in each program class) to qualify for selection to the Nursing program:

1. CHEM& 121 Introduction to Chemistry
2. BIOL& 251L Human Anatomy & Physiology I
3. BIOL& 252L Human Anatomy & Physiology II
4. BIOL& 253L Human Anatomy & Physiology III
5. BIOL& 260 Microbiology
6. NUTR 103 Nutrition
7. PSYC& 200 Lifespan Psychology
8. ENGL& 101 Composition 1
9. ENGL& 102 Composition 2 or ENGL 109 Writing about the Sciences

- There is a seven-year (7) limit on all science and social science courses listed above at the time of program entry.
- The following courses must be completed with a 2.0 or higher prior to graduation:
  - Humanities Elective 3 credits
  - PE Activity 1 credit

### **Final Program Admission**

Upon completion of preliminary requirements, an evaluation will be completed and the applicant will be notified by the Credential Evaluations Office of additional procedures necessary for program consideration.

Acceptance into the Clark College Nursing program is limited and competitive. Selection is based on a point system that includes science GPA, applicable GPA, Washington state residency, and other factors. For more information on the criteria and calculating your points, please refer to "Selection" on the Nursing program website at [www.clark.edu/clarknursing](http://www.clark.edu/clarknursing).

### **Mandatory Orientation**

A mandatory orientation will be held for admitted students and invited alternate students. Attendance is required or the next eligible alternate student may be given the assigned placement in the program. Students will be informed of the orientation date, time and location.

### **Upon Acceptance**

1. Upon notification of acceptance, students must pay a non-refundable \$200 deposit within the deadline stated in the acceptance letter.
2. Immediately notify the Clark College Nursing Program office at 360-992-6075 if for any reason your acceptance to the Clark College Nursing Program decision changes.

### **Physical Exam and Proof of Immunizations**

Accepted students and invited alternate students must submit proof of a physical exam and proof of immunizations by the stated deadline or their space will be given to the next eligible alternate. For a list of immunizations, please visit the website at [www.clark.edu/clarknursing](http://www.clark.edu/clarknursing).

### **Criminal Background Check**

All accepted students are required to complete and pass the FBI, Washington State Patrol/Oregon State Patrol (depending on state of residence) criminal background check process. The criminal background check requires a fee and the applicant's social security number.

### **NAC**

Students must have active NAC prior to enrolling in the Nursing Program.

### **Disability Statement for Health Occupations**

In accordance with the Americans with Disabilities Act and the Rehabilitation Act of 1973, accommodations for students with disabilities will be considered at the student's request. The student may need to provide documentation of disability to the Disability Support Services Office to support his/her accommodation requests. Documentation guidelines and procedures can be found at [www.clark.edu/dss](http://www.clark.edu/dss). Once the student is qualified by DSS as having a disability, requested accommodations will be considered. Accommodations for the classroom, laboratory, or clinical setting will be evaluated according to reasonableness. Accommodations that compromise patient care, or that fundamentally alter the essential functions of the program or activity, are not considered to be reasonable.

## Nursing (AAS)

### General Education Requirements

<b>Communication Skills (6 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
ENGL&102	ENGLISH COMPOSITION II	5 cr.
or ENGL 109	WRITING ABOUT THE SCIENCES	5 cr.
<b>Physical Education (1 credit required)</b>		
Health course waived		
<b>Computational Skills (3 credits required)</b>		
(Placement of MATH 090 or higher will satisfy this requirement)		
<b>Human Relations (3 credits required)</b>		
<b>Humanities (3 credits required)</b>		
<b>Social Sciences (3 credits required)</b>		
PSYC&200	LIFESPAN PSYCHOLOGY	5 cr.
(Lifespan Psychology also fulfills the Human Relations Requirement)		
<b>Natural Sciences (3 credits required)</b>		
CHEM&121	INTRO TO CHEMISTRY: PRE-HEALTH	5 cr.

### Additional Program Prerequisites

BIOL&251	HUMAN A & P I	5 cr.
BIOL&252	HUMAN A & P II	5 cr.
BIOL&253	HUMAN A & P III	5 cr.
BIOL&260	MICROBIOLOGY	5 cr.
NUTR 103	GENERAL NUTRITION	3 cr.

### Major Area Requirements

NURS 110	FOUNDATIONS OF NURSING CONCEPTS	3 cr.
NURS 111	FOUNDATIONS OF CLINICAL NURSING	4 cr.
NURS 113	LIFESPAN ASSESSMENT CONCEPTS	2 cr.
NURS 114	NURSING SKILLS APPLICATION I	1 cr.
NURS 115	NURSING SKILLS LAB I	2 cr.
NURS 122	FAMILY-CENTERED NURSING	2 cr.
NURS 123	FAMILY-CENTERED CLINICAL NURSING	5 cr.
NURS 124	INTRODUCTION TO MENTAL HEALTH NURSING	1 cr.
NURS 127	NURSING SKILLS APPLICATION II	1 cr.
NURS 128	NURSING SKILLS LAB II	2 cr.
NURS 135	MEDICAL SURGICAL NURSING CONCEPTS 1	3 cr.
NURS 136	MEDICAL-SURGICAL CLINICAL NURSING I	6 cr.
NURS 137	NURSING SKILLS APPLICATION III	1 cr.
NURS 138	NURSING SKILLS LAB III	2 cr.
NURS 241	MEDICAL-SURGICAL NURSING CONCEPTS II	3 cr.
NURS 242	MEDICAL/SURGICAL CLINICAL NURSING II	8 cr.
NURS 251	MEDICAL-SURGICAL NURSING CONCEPTS III	2 cr.
NURS 252	ADVANCED HOLISTIC CLINICAL NURSING	8 cr.
NURS 253	MENTAL HEALTH NURSING CONCEPTS ADVANCED	2 cr.
NURS 254	MENTAL HEALTH CLINICAL NURSING	4 cr.
NURS 261	PROFESSIONAL LEADERSHIP TRANSITION TO PRACTICE	2 cr.
NURS 262	PROFESSIONAL LEADERSHIP SENIOR PRACTICUM	8 cr.
NURS 263	PROFESSIONAL ROLE IN COMMUNITY SERVICE	1 cr.
NURS 264	CAPSTONE NCLEX PREPARATION	1 cr.

**Total Required Credits: 117**

### Program Progression

In order to progress from one course or quarter to the next after beginning the Nursing program, student must achieve a grade of 2.0 or higher in all required courses and maintain a cumulative GPA of 2.0 or higher.

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they*

are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:

- Knowledge: Integrate relevant theoretical and practical knowledge.
- Clinical Judgment: Demonstrate effective problem-solving and decision-making.
- Caring: Integrate principles of diversity, holism, stewardship, dignity, and respect to reflect an environment of caring.
- Teamwork and Interprofessional Collaboration: Model open communication, mutual respect and shared decision-making.
- Professionalism: Demonstrate personal accountability, ethical practices and continuing competence in nursing.
- Patient Safety: Minimize risk of harm to patients and providers through both clinical system effectiveness and individual performance.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.
- Health and PE: Demonstrate progress toward healthier behaviors as appropriate for a career and technical education program.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts as appropriate for a career and technical education program.
- Social Science: Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences as appropriate for a career and technical education program.
- Science: Apply fundamental principles and relationships from the Natural Sciences to solve problems as appropriate for a career and technical education program.

### Pre-Nursing -DTA/ MRP (AA)

This pathway is applicable to students planning to prepare for upper-division Bachelor of Science, Nursing (entry-to-practice/basic BSN pathway) by completing a broad selection of academic courses. Many students transfer to the BSN program after completing the Associate Degree Nursing (ADN) program (RN-to-BSN pathway); however, this agreement is not applicable to and does not alter those ADN-to-BSN articulation agreements.

Students planning a career pathway in Nursing should seek advisement from Clark College's Advising Department early. Besides this degree, Clark has several consortial agreements with regard to degrees in Nursing.

This pathway streamlines preparation for the basic BSN pathway across the state. It does not, however, address the issue of significantly inadequate capacity (faculty, clinical opportunities, etc.) at the BSN level relative to workforce needs or current student interest. Due to high interest and limited space in BSN programs, admission to all BSN programs is highly competitive, with many qualified applicants finding themselves on waiting lists for admission.

This document represents an agreement between the following baccalaureate institutions offering an entry-to-practice/basic BSN program and the community and technical colleges system. Baccalaureate institutions party to this agreement include: University of Washington, Seattle; Washington State University; Northwest University; Seattle University; Seattle Pacific University; Pacific Lutheran University; and Walla Walla University. The Washington State University Intercollegiate College of Nursing (WSU-ICN) is a consortium whose members include Eastern Washington University, Gonzaga, and Whitworth. Associate degree transfers to WSU-ICN are admitted through WSU, but not through the other consortium institutions. EWU participated in the development of this agreement.

Though this degree does not require such, Clark College students should know that the standard Clark AA degree path has these differences from the MRP defined below:

1. Clark requires 3 credits of Health-Physical Education coursework, and
2. Clark's Social Science distribution requirement stipulates that students take courses from at least three different departments.

Students must also meet the residency requirements as established by Clark. While Clark College has approved offering the degree below, Clark students should keep these requirements in mind should their transfer pathways change.

Students are responsible for researching and preparing for specific major requirements of baccalaureate institutions as early as possible prior to transferring.

Please visit the Major Related Programs section of this catalog to view a [printable PDF](#) of this document.

### Generic DTA Requirements

<b>A. Basic Requirements</b>	
1. Communication Skills	10 cr.
2. Quantitative/Symbolic Reasoning Requirements	5 cr.
Intermediate algebra proficiency is required.	
<b>B. Distribution Requirements</b>	
1. Humanities	15 cr.
2. Social Sciences	15 cr.
3. Natural Sciences	15 cr.
<b>C. Electives</b>	
Elective Courses	27 cr.

### MRP Requirements

<b>A. Basic Requirements</b>	
1. English Composition	10 cr.

- 2. Quantitative/Symbolic Reasoning Requirement** 5 cr.  
5 quarter credits Statistics (a course that includes descriptive and inferential statistics)

Intermediate algebra proficiency is required.

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**B. Distribution Requirements**

- 1. Humanities** 15 cr.  
5 quarter credits of Public Speaking  
10 quarter credits of other Humanities

Consistent with the requirements in all DTA degrees - no more than 10 credits per discipline area, 5 credits maximum in world languages or ASL. No more than 5 credits of performance/skills classes are allowed.

- 2. Social Sciences** 15 cr.

- 5 quarter credits, Introduction to Psychology
- 5 quarter credits, Human Development across the Life Span
- 5 credits from the Sociology discipline

- 3. Natural Sciences** 35 cr.

35 credits with at least 25 credits lab-based:

- 5 quarter credits General Biology, the course prerequisite to Anatomy/Physiology
- 10 quarter credits Anatomy and Physiology with lab
- 5 quarter credits Inorganic Chemistry with lab
- 5 quarter credits Organic/Biochemistry with lab (when Organic + Biochemistry are separate courses, both are required)
- 5 quarter credits Microbiology with lab
- 5 quarter credits Human Nutrition

- C. Electives** 10 cr.

Up to 10 additional quarter credits of which a maximum of 5 credits may be in college-level courses as defined by the community college, and the remainder shall be fully transferable as defined by the receiving institution.

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**Clark College Equivalents**

**A. Basic Requirements**

- 1. Communication Skills**
- |          |                        |       |
|----------|------------------------|-------|
| ENGL&101 | ENGLISH COMPOSITION I  | 5 cr. |
| ENGL&102 | ENGLISH COMPOSITION II | 5 cr. |
- 2. Quantitative/Symbolic Reasoning Requirement**
- |              |                        |       |
|--------------|------------------------|-------|
| MATH 203     | DESCRIPTIVE STATISTICS | 3 cr. |
| and MATH 204 | INFERENCE STATISTICS   | 3 cr. |

**B. Distribution Requirements**

- 1. Humanities**
- |          |   |       |
|----------|---|-------|
| CMST&220 | PUBLIC SPEAKING Fulfills oral communication requirement | 5 cr. |
|----------|---|-------|
- 10 quarter credits of other Humanities, 5 of which can be CMST
- 2. Social Sciences**
- |          |                     |       |
|----------|---------------------|-------|
| PSYC&100 | GENERAL PSYCHOLOGY  | 5 cr. |
| PSYC&200 | LIFESPAN PSYCHOLOGY | 5 cr. |
- 5 credits in Sociology
- 3. Natural Sciences**
- |              |                   |       |
|--------------|-------------------|-------|
| BIOL&100     | SURVEY OF BIOLOGY | 5 cr. |
| or BIOL 164  | HUMAN BIOLOGY     | 4 cr. |
| and BIOL 165 | HUMAN BIOLOGY LAB | 1 cr. |
- (BIOL 164 & BIOL 165 preferred)
- |          |                                |       |
|----------|--------------------------------|-------|
| BIOL&251 | HUMAN A & P I                  | 5 cr. |
| BIOL&252 | HUMAN A & P II                 | 5 cr. |
| BIOL&253 | HUMAN A & P III                | 5 cr. |
| BIOL&260 | MICROBIOLOGY                   | 5 cr. |
| CHEM&121 | INTRO TO CHEMISTRY: PRE-HEALTH | 5 cr. |
| CHEM&131 | INTRO TO ORGANIC/BIOCHEM       | 5 cr. |
| NUTR 103 | GENERAL NUTRITION *            | 3 cr. |

**C. Electives**

- 1. Elective Courses**

Up to 10 additional quarter credits of which a maximum of 5 credits may be in college-level courses as defined by the community college, and the remainder shall be fully transferable as defined by the receiving institution.

Students need to consult with the transfer institution to determine which course is "fully transferable."

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## Notes

### A. Basic Requirements

#### 1. Communication Skills

ENGL&102 is REQUIRED at Northwest University and Walla Walla University.

#### 2. Quantitative/Symbolic Reasoning Requirement

UW Seattle and Seattle University require 10 credits in quantitative/symbolic reasoning with the additional class in college algebra or pre-calculus (at UW Seattle, a class in Logic also serves for the additional class).

Students should make sure that the receiving institution will accept the business statistics sequence prior to starting.

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### B. Distribution Requirements

#### 1. Humanities

In order to better prepare for successful transfer, students are encouraged to consult with the institution(s) to which they wish to transfer regarding the humanities courses that best support or may be required as prerequisites to their nursing curriculum.

A curriculum that provides students with an understanding of and sensitivity to human diversity is encouraged (required by WSU). Credits in the humanities distribution area provide one opportunity for such a curriculum. See the humanities choices in the WSU "Diversity Course Identification Guidelines" for possible selection or choose courses that include minority, non-Western, ethnic or other "area" studies.

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#### 2. Social Sciences

Northwest University requires Cultural Anthropology and does not accept a course in the sociology discipline as a substitute. Students may be admitted to the BSN without Cultural Anthropology if they agree to complete the course at NU in the summer prior to the junior year.

A curriculum that provides students with an understanding of and sensitivity to human diversity is encouraged (required by WSU). The credits in sociology provide one opportunity for such a curriculum. See the sociology choices in the WSU "Diversity Course Identification Guidelines" for possible selection or choose courses that include minority, non-Western, ethnic or other "area" studies.

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#### 3. Natural Sciences

Introductory survey courses or review courses do not meet the content level expectations for these natural science requirements.

Northwest University requires 2 credits of Genetics as well. Students may be admitted to the BSN without Genetics if they agree to complete the course at NU in the summer prior to the junior year.

At the time of application, when some of the coursework may not yet be completed, UW Seattle requires a minimum GPA of 3.0 for 3 out of the 7 courses or 2.8 for 4 out of the 7.

\*Students need to be aware that Clark College's nutrition class is only 3 credits, not the required 5 credits.

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### C. Electives

#### 1. Elective Courses

See notes under humanities, social science and natural science.

A curriculum that provides students with an understanding of and sensitivity to human diversity is encouraged (required by WSU). The elective credits provide one opportunity for such a curriculum. See the choices in the WSU "Diversity Course Identification Guidelines" for possible course selection or select courses that include minority, non-Western, ethnic or other "area" studies.

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**Total Required Credits: 90**

## Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Information Literacy: Obtain, evaluate, and ethically use information.
- Communications: Communicate with various audiences using a variety of methods.

- Quantitative I: Perform mathematical calculations without the aid of a calculator.
- Quantitative II: Solve quantitative problems and interpret the solutions.
- Health & Physical Education: Demonstrate progress toward healthier behaviors.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Social Science: Evaluate, analyze and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.
- Power, Privilege, and Inequality: Analyze patterns of power, privilege and inequality.
- Natural Science I: Apply fundamental principles and relationships from the Natural Sciences to solve problems.
- Natural Science II: Evaluate claims about the natural world using scientific methodology.

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### Nursing - Transfer to WSU Vancouver (AA)

Students who complete the Nursing program at Clark College may choose to continue on to earn a Bachelor of Science in Nursing at Washington State University Vancouver. The following courses are required to meet graduation requirements for the Clark College/WSU Vancouver Direct Transfer Agreement (Associate in Arts).

For information regarding the application process, preliminary requirements, and final admission process, please visit the Clark College Nursing website at [www.clark.edu/clarknursing](http://www.clark.edu/clarknursing).

### General Education Requirements

#### Communication Skills (10 credits required)

ENGL&101	ENGLISH COMPOSITION I	5 cr.
ENGL&102	ENGLISH COMPOSITION II	5 cr.
or ENGL 109	WRITING ABOUT THE SCIENCES	5 cr.

#### Quantitative Skills (5 credits required)

MATH 203	DESCRIPTIVE STATISTICS	3 cr.
and MATH 204	INFERENTIAL STATISTICS	3 cr.

#### Physical Education Activity (1 credit required)

Health course waived

#### Oral Communications (5 credits required)\*

#### Humanities (15 credits required)

#### Social Sciences (15 credits required)

PSYC&100	GENERAL PSYCHOLOGY	5 cr.
PSYC&200	LIFESPAN PSYCHOLOGY	5 cr.
SOC& 101	INTRO TO SOCIOLOGY	5 cr.

#### Natural Sciences (15 credits required)

BIOL&251	HUMAN A & P I	5 cr.
BIOL&252	HUMAN A & P II	5 cr.
BIOL&253	HUMAN A & P III	5 cr.
BIOL&260	MICROBIOLOGY	5 cr.
CHEM&121	INTRO TO CHEMISTRY: PRE-HEALTH	5 cr.
NUTR 103	GENERAL NUTRITION	3 cr.

### Major Area Requirements

NURS 110	FOUNDATIONS OF NURSING CONCEPTS	3 cr.
NURS 111	FOUNDATIONS OF CLINICAL NURSING	4 cr.
NURS 113	LIFESPAN ASSESSMENT CONCEPTS	2 cr.
NURS 114	NURSING SKILLS APPLICATION I	1 cr.
NURS 115	NURSING SKILLS LAB I	2 cr.
NURS 122	FAMILY-CENTERED NURSING	2 cr.
NURS 123	FAMILY-CENTERED CLINICAL NURSING	5 cr.
NURS 124	INTRODUCTION TO MENTAL HEALTH NURSING	1 cr.
NURS 127	NURSING SKILLS APPLICATION II	1 cr.
NURS 128	NURSING SKILLS LAB II	2 cr.
NURS 135	MEDICAL SURGICAL NURSING CONCEPTS 1	3 cr.
NURS 136	MEDICAL-SURGICAL CLINICAL NURSING I	6 cr.
NURS 137	NURSING SKILLS APPLICATION III	1 cr.
NURS 138	NURSING SKILLS LAB III	2 cr.
NURS 241	MEDICAL-SURGICAL NURSING CONCEPTS II	3 cr.
NURS 242	MEDICAL/SURGICAL CLINICAL NURSING II	8 cr.
NURS 251	MEDICAL-SURGICAL NURSING CONCEPTS III	2 cr.
NURS 252	ADVANCED HOLISTIC CLINICAL NURSING	8 cr.
NURS 253	MENTAL HEALTH NURSING CONCEPTS ADVANCED	2 cr.
NURS 254	MENTAL HEALTH CLINICAL NURSING	4 cr.
NURS 261	PROFESSIONAL LEADERSHIP TRANSITION TO PRACTICE	2 cr.
NURS 262	PROFESSIONAL LEADERSHIP SENIOR PRACTICUM	8 cr.
NURS 263	PROFESSIONAL ROLE IN COMMUNITY SERVICE	1 cr.
NURS 264	CAPSTONE NCLEX PREPARATION	1 cr.

\*Can apply to Humanities

**Total Required Credits: 142**



## Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Knowledge: Integrate relevant theoretical and practical knowledge.
- Clinical Judgment: Demonstrate effective problem-solving and decision-making.
- Caring: Integrate principles of diversity, holism, stewardship, dignity, and respect to reflect an environment of caring.
- Teamwork and Interprofessional Collaboration: Model open communication, mutual respect and shared decision-making.
- Professionalism: Demonstrate personal accountability, ethical practices and continuing competence in nursing.
- Patient Safety: Minimize risk of harm to patients and providers through both clinical system effectiveness and individual performance.
- Information Literacy: Obtain, evaluate, and ethically use information.
- Communications: Communicate with various audiences using a variety of methods.
- Quantitative I: Perform mathematical calculations without the aid of a calculator.
- Quantitative II: Solve quantitative problems and interpret the solutions.
- Health & Physical Education: Demonstrate progress toward healthier behaviors.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Social Science: Evaluate, analyze and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.
- Power, Privilege, and Inequality: Analyze patterns of power, privilege and inequality.
- Natural Science I: Apply fundamental principles and relationships from the Natural Sciences to solve problems.
- Natural Science II: Evaluate claims about the natural world using scientific methodology.

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## Nursing Assistant Certified

The **Nursing Assistant Certificate** program provides instruction in basic nursing skills, HIV/AIDS, and clinical training in a long-term care facility. After successful completion of the Nursing Assistant Program, students are eligible to sit for the State of Washington Nursing Assistant examination for State certification. Students receiving their certification will be eligible to apply for employment in hospitals, clinics, long-term care facilities, and home or community health agencies.

### Participation Requirements

- 18 years of age or older
- High school diploma or GED is recommended, but not required
- Proof of 2-step TB test or clear chest x-ray within 6 months upon acceptance into the program
- Clear criminal background check. All accepted students are required to complete and pass the FBI, Washington State Patrol/Oregon State Patrol (depending on state residence) criminal background check process. The process requires a fee and the applicant's social security number.
- Upon successful selection, attendance at **mandatory** Nursing Assistant Orientation. Attendance is required or the next eligible alternate student will be given the assigned placement in the program. Students will be informed of the orientation date, time and place.

### Application Requirements

- All applicants must submit the following four (4) items to Enrollment Services by the stated deadline on the Statement of Intent form (can be obtained at Enrollment Services or Advising Services) in order to be considered for the quarter's NAC class.
  - Application for Admission to (if not already a student at) Clark College
  - Statement of Intent form
  - Criminal Background Check results
  - Copy of current driver's license or other legal photo ID

Classes are held at the Clark Center at Washington State University, Vancouver and Columbia Tech Center in east Clark County. Clinical skills training is in a supervised client care setting in the Clark County area.

### Disability Statement for Health Occupations

In accordance with the Americans with Disabilities Act and the Rehabilitation Act of 1973, accommodations for students with disabilities will be considered at the student's request. The student may need to provide documentation of disability to the Disability Support Services Office to support his/her accommodation requests. Documentation guidelines and procedures can be found at [www.clark.edu/dss](http://www.clark.edu/dss). Once the student is qualified by DSS as having a disability, requested accommodations will be considered. Accommodations for the classroom, laboratory, or clinical setting will be evaluated according to reasonableness. Accommodations that compromise patient care, or that fundamentally alter the essential functions of the program or activity, are not considered to be reasonable.

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## Paralegal

Paralegals, or legal assistants, have come to occupy a recognized place of importance in the legal profession. Responsibilities are broad and may include interviewing clients and witnesses; conducting investigations; developing evidence, legal research, legal document preparation, legal case management; and providing general litigation assistance in various agencies and in the courts.

Paralegals and other non-lawyers may not practice law or provide any kind of advice, explanation, opinion, or recommendation to a person/entity about possible legal rights, remedies, defenses, options, selection of forms, or strategies. Furthermore, he/she may not represent a client in court, set a fee, or accept a case, functions generally considered the practice of law. Furthermore, paralegals and other non-lawyers shall not hold themselves out to the public to be a lawyer, expert, or give the impression in any way that they are authorized to practice law.

Students must complete all specifically listed courses and Major Area Requirements with a minimum grade of "C" or better in order to successfully complete the program and earn the award.

Refer to the Degree & Certificate Requirements Section of the Clark College Catalog to identify the courses needed to satisfy the General Education Requirements.

### Paralegal (CP)

Designed for students with prior college and law office experience.

#### General Education Requirements

##### Communication Skills (3 credits required)

##### Computational Skills (3 credits required)

##### Human Relations (3 credits required)

CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or CMST&230	SMALL GROUP COMMUNICATION	5 cr.

#### Major Area Requirements

BTEC 120	INTRODUCTION TO WORD	3 cr.
or BTEC 122	WORD FOR BUSINESS	5 cr.
PRLE 101	INTRODUCTION TO LEGAL THEORY	3 cr.
PRLE 102	LEGAL ETHICS	3 cr.
PRLE 103	LEGAL RESEARCH	3 cr.
PRLE 106	LEGAL WRITING I	3 cr.
PRLE 109	CIVIL LITIGATION AND PROCEDURES	3 cr.
or PRLE 110	CRIMINAL LAW AND PROCEDURES	3 cr.
PRLE 150	INTERVIEWING, INVESTIGATION AND EVIDENCE	3 cr.
PRLE 151	CIVIL LITIGATION I: LEGAL DOCUMENT PREPARATION	3 cr.
PRLE 203	COMPUTER RESEARCH IN LAW	3 cr.
PRLE 209	CIVIL LITIGATION: INSURANCE CLAIMS	3 cr.
<i>Minimum of 2 credits is required from one or both of the courses below:</i>		
PRLE 295	CASA SPECIAL PROJECT	1-5 cr.
or PRLE 299	PARALEGAL INTERNSHIP	1-3 cr.

#### Additional Major Area Requirements

Select a minimum of 15 credits:

PRLE 109	CIVIL LITIGATION AND PROCEDURES	3 cr.
or PRLE 110	CRIMINAL LAW AND PROCEDURES	3 cr.
PRLE 115	LAW OFFICE PROCEDURES AND COMPUTER TECHNOLOGY	3 cr.
PRLE 204	FAMILY LAW	3 cr.
PRLE 205	ESTATE PLANNING AND PROBATE LAW	3 cr.
PRLE 206	REAL ESTATE AND PROPERTY LAW	3 cr.
PRLE 207	BUSINESS ORGANIZATIONS	3 cr.
PRLE 208	BANKRUPTCY LAW	3 cr.
PRLE 210	LEGAL WRITING II	3 cr.
PRLE 211	TORT LAW AND PROCEDURES	3 cr.
PRLE 212	LAW AND ECONOMICS	3 cr.
PRLE 290	SPECIAL PROJECTS	1-5 cr.
PRLE 295	CASA SPECIAL PROJECT	1-5 cr.
BUS& 201	BUSINESS LAW	5 cr.

#### Recommended Electives (Not Required)

Typing skills with at least 40 wpm.

BTEC 147	PROFESSIONAL SELF-DEVELOPMENT	2 cr.
BTEC 165	POWERPOINT PRESENTATION	3 cr.
BTEC 169	INTRODUCTION TO EXCEL	3 cr.

**Total Required Credits: 58-63**

## Program Outcomes

Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:

- Understand and use terminology common to the legal industry.
- Outline the basic principles of the American legal system, including the sources of law, jurisdiction, civil case procedure (including Local, State and Federal Rules), the structure of state and federal court systems, and the lawyers' role in the American legal system.
- Understand the business environment of a law firm and distinguish the duties performed by the attorney, the paralegal, and the legal management team.
- List the duties and define the skills of paralegals in various specialized areas of law.
- Possess the ability to read and comprehend legal documents, court documents and client letters, and to assist the attorney with the drafting of such documents through editing and proofreading.
- Demonstrate the ability to communicate effectively with attorneys, clients, court personnel, and co-workers, both orally and in writing.
- Describe the ethical rules and standards of practice pertaining to the paralegal.
- Identify and analyze legal ethical issues, including conflicts of interest, client confidentiality, and unauthorized practice of law.
- Select an appropriate framework for resolving ethical dilemmas around sound professionalism.
- Learn how to conduct effective factual and legal research, using primary sources (such as Federal, State and Local Rules of Procedure) and secondary sources.
- Prepare legal correspondence, memoranda, documents, and exhibits, and in that content properly interpret legal citation.
- Demonstrate analytical reasoning capability in making decisions and solving legal problems.
- Describe government regulation and the legal environment in which businesses organizations operate.
- Demonstrate competent legal writing skills, including the mechanics of grammar, punctuation, large-scale organization and small-scale organization of content.
- Demonstrate good quality organizational skills, time management skills, and effective interpersonal skills, including working calmly under pressure.
- Demonstrate a working knowledge of microcomputers, specialized legal office software, and other technological applications.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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## Paralegal (AAS)

Designed for students with no prior college and law office experience.

### General Education Requirements

<b>Communication Skills (6 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
ENGL 212	BUSINESS COMMUNICATIONS	3 cr.
<b>Health &amp; Physical Education (3 credits required)</b>		
3 cr.		
<b>Computational Skills (3 credits required)</b>		
BUS 102	BUSINESS MATH APPLICATIONS	5 cr.
<b>Human Relations (3 credits required)</b>		
CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or CMST&230	SMALL GROUP COMMUNICATION	5 cr.
<b>Humanities (3 credits required)</b>		
<b>Social Sciences (3 credits required)</b>		
PSYC&100	GENERAL PSYCHOLOGY	5 cr.
<b>Natural Sciences (3 credits required)</b>		

### Major Area Requirements

BTEC 120	INTRODUCTION TO WORD	3 cr.
or BTEC 122	WORD FOR BUSINESS	5 cr.
BTEC 165	POWERPOINT PRESENTATION	3 cr.
BTEC 169	INTRODUCTION TO EXCEL	3 cr.
BTEC 170	EXCEL FOR BUSINESS	3 cr.
or BTEC 180	ACCESS FOR BUSINESS	3 cr.
BUS 028	BASIC ACCOUNTING PROCEDURES	3 cr.
BUS& 201	BUSINESS LAW	5 cr.
POLS 111	AMERICAN NATIONAL GOVERNMENT AND POLITICS	5 cr.
or POLS 131	STATE AND LOCAL GOVERNMENT	5 cr.
or POLS 141	SURVEY OF STATE AND LOCAL GOVERNMENT	3 cr.
or POLS 171	SURVEY OF THE UNITED STATES CONSTITUTION	3 cr.
PRLE 101	INTRODUCTION TO LEGAL THEORY	3 cr.
PRLE 102	LEGAL ETHICS	3 cr.
PRLE 103	LEGAL RESEARCH	3 cr.
PRLE 106	LEGAL WRITING I	3 cr.
PRLE 109	CIVIL LITIGATION AND PROCEDURES	3 cr.
or PRLE 110	CRIMINAL LAW AND PROCEDURES	3 cr.
PRLE 150	INTERVIEWING, INVESTIGATION AND EVIDENCE	3 cr.
PRLE 151	CIVIL LITIGATION I: LEGAL DOCUMENT PREPARATION	3 cr.
PRLE 203	COMPUTER RESEARCH IN LAW	3 cr.
PRLE 209	CIVIL LITIGATION: INSURANCE CLAIMS	3 cr.

Minimum of 2 credits is required from one or both of the courses below:

PRLE 295	CASA SPECIAL PROJECT	1-5 cr.
or PRLE 299	PARALEGAL INTERNSHIP	1-3 cr.

### Additional Major Area Requirements

Select a minimum of 15 credits:

PRLE 109	CIVIL LITIGATION AND PROCEDURES	3 cr.
or PRLE 110	CRIMINAL LAW AND PROCEDURES	3 cr.
PRLE 115	LAW OFFICE PROCEDURES AND COMPUTER TECHNOLOGY	3 cr.
PRLE 204	FAMILY LAW	3 cr.
PRLE 205	ESTATE PLANNING AND PROBATE LAW	3 cr.
PRLE 206	REAL ESTATE AND PROPERTY LAW	3 cr.
PRLE 207	BUSINESS ORGANIZATIONS	3 cr.
PRLE 208	BANKRUPTCY LAW	3 cr.
PRLE 210	LEGAL WRITING II	3 cr.
PRLE 211	TORT LAW AND PROCEDURES	3 cr.
PRLE 212	LAW AND ECONOMICS	3 cr.
PRLE 290	SPECIAL PROJECTS	1-5 cr.
PRLE 295	CASA SPECIAL PROJECT	1-5 cr.

### Recommended Elective (Not required)

Typing skills with at least 40 wpm.

BTEC 147	PROFESSIONAL SELF-DEVELOPMENT	2 cr.
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**Total Required Credits: 96-103**

\* CMST courses may not count for more than two distribution areas of general education requirements.

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Understand and use terminology common to the legal industry.
- Outline the basic principles of the American legal system, including the sources of law, jurisdiction, civil case procedure (including Local, State and Federal Rules), the structure of state and federal court systems, and the lawyers' role in the American legal system.
- Understand the business environment of a law firm and distinguish the duties performed by the attorney, the paralegal, and the legal management team.
- List the duties and define the skills of paralegals in various specialized areas of law.
- Possess the ability to read and comprehend legal documents, court documents and client letters, and to assist the attorney with the drafting of such documents through editing and proofreading.
- Demonstrate the ability to communicate effectively with attorneys, clients, court personnel, and co-workers, both orally and in writing.
- Describe the ethical rules and standards of practice pertaining to the paralegal.
- Identify and analyze legal ethical issues, including conflicts of interest, client confidentiality, and unauthorized practice of law.
- Select an appropriate framework for resolving ethical dilemmas around sound professionalism.
- Learn how to conduct effective factual and legal research, using primary sources (such as Federal, State and Local Rules of Procedure) and secondary sources.
- Prepare legal correspondence, memoranda, documents, and exhibits, and in that content properly interpret legal citation.
- Demonstrate analytical reasoning capability in making decisions and solving legal problems.
- Describe government regulation and the legal environment in which businesses organizations operate.
- Demonstrate competent legal writing skills, including the mechanics of grammar, punctuation, large-scale organization and small-scale organization of content.
- Demonstrate good quality organizational skills, time management skills, and effective interpersonal skills, including working calmly under pressure.
- Demonstrate a working knowledge of microcomputers, specialized legal office software, and other technological applications.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.
- Health and PE: Demonstrate progress toward healthier behaviors as appropriate for a career and technical education program.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts as appropriate for a career and technical education program.
- Social Science: Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences as appropriate for a career and technical education program.
- Science: Apply fundamental principles and relationships from the Natural Sciences to solve problems as appropriate for a career and technical education program.

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## Pharmacy Technician

Pharmacy technicians in Washington and Oregon are employed in hospitals and outpatient facilities. They assist licensed pharmacists

in dispensing medications, assist with compounding and IV drug preparation, take inventory, stock supplies, type prescription labels, and perform other assignments as allowed by law. Pharmacy technicians, by law, are employed under the direct supervision of a licensed pharmacist. Both chain and community retail pharmacies, as well as all hospitals, employ pharmacy technicians.

The profession of pharmacy requires highly motivated and trained technicians to provide the drug preparation and distributive functions that support the medication management and pharmaceutical care duties of the pharmacist.

Clark College's program consists of classroom and practicum education and training. Students learn the theory in class, practice in a mock pharmacy mini-lab, and then apply their knowledge in actual pharmacy practicum settings.

The certificate program requires 66-67 credits, and includes preliminary requirements in addition to a three-quarter sequence of program classes. The practicum (direct pharmacy training) consists of two 120-hour experiences in different pharmacy sites under the supervision of a pharmacist.

#### **Application Process**

Admission to the program is outlined in two stages: preliminary requirements and final program admission.

Students must apply and pay an application fee to be included in selection. Application date is used in ranking students for selection, so it is beneficial to apply early.

#### **Preliminary Requirements**

- Complete the **Clark College Application for Admission** and the **Pharmacy Technician Application**. Return them to the Clark College Enrollment Services with the non-refundable program application fees (subject to change). For the current fee amounts, please visit the Pharmacy Technician website at [www.clark.edu/pharmacytech](http://www.clark.edu/pharmacytech). Date of Pharmacy Application (fee paid date) will be considered in selecting students for entry into the program.
- To comply with Washington State Law [WAC 246-901-030(2)], Clark College requires that students must submit proof of high school graduation, GED completion, or U.S. degree conferment to be eligible for selection into the Pharmacy Technician program. Students must submit official transcripts in a sealed envelope to the Clark College Welcome Center.
- Earn a COMPASS Testing score of 74 or higher in reading, or complete READ 087 or equivalent with a 2.0 grade or higher.
- Earn a COMPASS Testing score of 78 or higher in writing, or complete ENGL 098 or equivalent with a 2.0 grade or higher.
- Earn a COMPASS Testing score of 54 or higher in math numerical skills, or complete MATH 030 or equivalent with a 2.0 grade or higher (Math score or class must be seven [7] years current upon program entry).
- Complete program Preliminary Requirements with a 2.0 GPA or better:
  - **BMED 110** - Medical Terminology \*
  - **BTEC 149** - Computer Application Essentials (or BTEC 116, 117 AND 118)
  - **HEOC 104** - Health Care Delivery & Career Exploration (formerly HEOC 102)
  - **HEOC 120** - AIDS Education (or proof of 4-7 hour AIDS Education certificate)
- Obtain a minimum Clark College cumulative GPA of 2.5 or above.
- Accepted students must complete a Washington State Patrol and FBI criminal background check

The most recent educational experience will be used to meet these criteria. Applicants are responsible for requesting their official high school and college transcripts be sent to Clark College.

#### **Additional Requirements**

Prior to program entry students must complete additional course requirements with a 2.0 or above:

- HEOC 100- Basic Concepts of Anatomy and Physiology (must be seven years current upon program entrance).

#### **OR**

- BIOL 164 AND 165- Human Biology w/lab (must be seven years current upon program entrance).
- HLTH 124 Healthcare Provider CPR and First Aid
- BMED 138- Legal Aspects of the Medical Office

Completion of CMST&210 or CMST&230 and BMED 111 prior to entering the program is strongly encouraged, and is required no later than the first quarter of the Pharmacy Technician program (once accepted).

#### **Final Program Admission**

Upon completion of preliminary requirements and application to the program, an evaluation will be completed, and the applicant will

be notified by the Credential Evaluations Office of additional procedures necessary for program consideration.

#### Program Progression

In order to progress from one course or quarter to the next after beginning the Pharmacy Technician program, the student must:

- Achieve a GPA of 2.0 or higher in all courses

Graduates of the Clark College Pharmacy Technician program will be eligible for:

- Clark College Certificate of Proficiency
- Washington Board of Pharmacy Certificate
- Oregon Board of Pharmacy Registration
- National Pharmacy Technician Certification Exam

Please note: Completion of the Pre-Pharmacy Technician requirements does not guarantee entrance into the program. The Pharmacy Technician program has limited enrollment and Clark College reserves the right to determine admission status.

#### Disability Statement for Health Occupations

In accordance with the Americans with Disabilities Act and the Rehabilitation Act of 1973, accommodations for students with disabilities will be considered at the student's request. The student may need to provide documentation of disability to the Disability Support Services Office to support his/her accommodation requests. Documentation guidelines and procedures can be found at [www.clark.edu/dss](http://www.clark.edu/dss). Once the student is qualified by DSS as having a disability, requested accommodations will be considered. Accommodations for the classroom, laboratory, or clinical setting will be evaluated according to reasonableness. Accommodations that compromise patient care, or that fundamentally alter the essential functions of the program or activity, are not considered to be reasonable.

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### Pharmacy Technician (CP)

#### Preliminary Requirements

BMED 110	MEDICAL TERMINOLOGY I *	3 cr.
BTEC 149	COMPUTER APPLICATIONS ESSENTIALS	3 cr.
or BTEC 116	APPLICATION ESSENTIALS: WORD	1 cr.
and BTEC 117	APPLICATION ESSENTIALS: EXCEL	1 cr.
and BTEC 118	APPLICATION ESSENTIALS: POWERPOINT	1 cr.
HEOC 104	HEALTH CARE DELIVERY & CAREER EXPLORATION	3 cr.
HEOC 120	AIDS EDUCATION	1 cr.

#### Additional Requirements

BMED 138	LEGAL ASPECTS OF THE MEDICAL OFFICE	2 cr.
HEOC 100	BASIC CONCEPTS OF ANATOMY AND PHYSIOLOGY *	4 cr.
or BIOL 164	HUMAN BIOLOGY *	4 cr.
and BIOL 165	HUMAN BIOLOGY LAB *	1 cr.

#### General Education Requirements

<b>Communication Skills (3 credits required)</b>		3 cr.
<b>Computational Skills (3 credits required)</b>		
PHAR 110	PHARMACY CALCULATIONS	3 cr.
<b>Human Relations (3 credits required)</b>		
CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or CMST&230	SMALL GROUP COMMUNICATION	5 cr.

#### Major Area Requirements

BMED 111	MEDICAL TERMINOLOGY II *	3 cr.
PHAR 105	INTRODUCTION TO PHARMACY	4 cr.
PHAR 112	PHARMACOLOGY I	5 cr.
PHAR 114	PHARMACY PRACTICE AND TECHNOLOGY	4 cr.
PHAR 118	PHARMACY EXTERNSHIP I	4 cr.
PHAR 119	PHARMACY EXTERNSHIP SEMINAR I	2 cr.
PHAR 122	PHARMACOLOGY II	5 cr.
PHAR 123	PHARMACY LAW	2 cr.
PHAR 127	PHARMACY COMPOUNDING	4 cr.
PHAR 128	PHARMACY EXTERNSHIP II	4 cr.

**Total Required Credits: 67-68**

\* Must be seven years current upon program entry and must be completed by the end of the first quarter

**General Information**

Selection criteria is subject to change. For complete updated information, please refer to the application materials, available online at [www.clark.edu/pharmacytech](http://www.clark.edu/pharmacytech).

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the [Gainful Employment Program Information page](#).

**Program Outcomes**

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Successfully complete all criteria necessary for registration as a pharmacy tech in any state.
- Exhibit effective communication skills in interactions with patients and other healthcare professionals.
- Demonstrate knowledge of pharmacy processes and information technology to accurately and safely prepare and dispense medications in a variety of pharmacy settings.
- Demonstrate professional clinical skills in the workplace while complying with laws, regulations, and ethical standards of practice.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

**Pharmacy Technician Leadership (AAT)**

The Associate in Applied Technology (AAT) in Pharmacy Technician Leadership is intended for those students who would like to continue their education beyond the Pharmacy Technician Certificate of Proficiency. Currently, the Certificate of Proficiency is a one-year program. Courses required for the AAT focus on developing skill sets in leadership, business relations, and professional development. These additional skill sets will provide students with a significant advantage in securing entry-level positions as well as progressing within their career field.

**Preliminary Requirements**

BMED 110	MEDICAL TERMINOLOGY I *	3 cr.
BMED 138	LEGAL ASPECTS OF THE MEDICAL OFFICE	2 cr.
BTEC 149	COMPUTER APPLICATIONS ESSENTIALS	3 cr.
or BTEC 116	APPLICATION ESSENTIALS: WORD	1 cr.
and BTEC 117	APPLICATION ESSENTIALS: EXCEL	1 cr.
and BTEC 118	APPLICATION ESSENTIALS: POWERPOINT	1 cr.
FACPR032	FIRST AID AND HEALTH CARE PROVIDER CPR	1 cr.
HEOC 100	BASIC CONCEPTS OF ANATOMY AND PHYSIOLOGY *	4 cr.
or BIOL 164	HUMAN BIOLOGY *	4 cr.
and BIOL 165	HUMAN BIOLOGY LAB *	1 cr.
HEOC 104	HEALTH CARE DELIVERY & CAREER EXPLORATION	3 cr.
HEOC 120	AIDS EDUCATION	1 cr.

**General Education Requirements**

<b>Communication Skills (5 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
or ENGL 135	INTRODUCTION TO TECHNICAL WRITING	5 cr.
<b>Computational Skills (5 credits required)</b>		
<b>Human Relations (5 credits required)</b>		
CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or CMST&230	SMALL GROUP COMMUNICATION	5 cr.

**Major Area Requirements**

BMED 111	MEDICAL TERMINOLOGY II *	3 cr.
PHAR 105	INTRODUCTION TO PHARMACY	4 cr.
PHAR 110	PHARMACY CALCULATIONS	3 cr.
PHAR 112	PHARMACOLOGY I	5 cr.
PHAR 114	PHARMACY PRACTICE AND TECHNOLOGY (with lab)	4 cr.
PHAR 118	PHARMACY EXTERNSHIP I	4 cr.
PHAR 119	PHARMACY EXTERNSHIP SEMINAR I	2 cr.
PHAR 122	PHARMACOLOGY II	5 cr.
PHAR 123	PHARMACY LAW	2 cr.
PHAR 127	PHARMACY COMPOUNDING	4 cr.

PHAR 128	PHARMACY EXTERNSHIP II	4 cr.
PHAR 129	PHARMACY EXTERNSHIP SEMINAR II	2 cr.

### Additional Requirements

HDEV 120	PRACTICAL REASONING AND DECISION MAKING	3 cr.
HDEV 200	PROFESSIONAL DEVELOPMENT	2 cr.
MGMT 101	PRINCIPLES OF MANAGEMENT	3 cr.
MGMT 133	PRODUCTION AND OPERATIONS MANAGEMENT	3 cr.

### Electives

Select a minimum of two(2) courses from the following list:

ACED 101	SURVEY OF ADDICTIONOLOGY	3 cr.
BMED 222	HEALTH INFORMATION PROCEDURES	5 cr.
BUS 110	CUSTOMER SERVICE	3 cr.
BUS 211	BUSINESS COMMUNICATIONS	3 cr.
or ENGL 212	BUSINESS COMMUNICATIONS	3 cr.
HUM 180	BIOETHICS	3 cr.
MGMT 106	MOTIVATION AND PERFORMANCE	3 cr.

**Total Required Credits: 91-94**

\* Must be seven years current upon program entry.

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Successfully complete all criteria necessary for registration as a pharmacy tech in any state.
- Exhibit effective communication skills in interactions with patients and other healthcare professionals.
- Demonstrate knowledge of pharmacy processes and information technology to efficiently manage pharmacy staffing issues and activities.
- Demonstrate professional and clinical leadership skills in the workplace while complying with laws, regulations, and ethical standards of practice.
- Demonstrate knowledge of pharmacy processes and information technology to accurately and safely prepare and dispense medications in a variety of pharmacy settings.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

## Phlebotomy

The Phlebotomy curriculum prepares students to perform skin and venipunctures, to obtain laboratory specimens, and to function as a member of a medical laboratory team.

The program curriculum includes a one-quarter lab practicum (PHLE 197) that gives students actual practice working in a health care facility.

A Certificate of Achievement is awarded to those who successfully complete the program requirements. Graduates are also eligible to apply for certification through the National Accrediting Agency for Clinical Laboratory Sciences (NAA-CLS) by formal examination offered on a biannual basis. Prior to the exam, a review course is offered at Clark to graduates of the program.

### Application Process

The Phlebotomy Program is a two-quarter clinical program with preliminary requirements that must be completed before program entry. Admission to the program is outlined in two stages: preliminary requirements and final program admission.

### Disability Statement for Health Occupations

In accordance with the Americans with Disabilities Act and the Rehabilitation Act of 1973, accommodations for students with disabilities will be considered at the student's request. The student may need to provide documentation of disability to the Disability Support Services Office to support his/her accommodation requests. Documentation guidelines and procedures can be found at [www.clark.edu/dss](http://www.clark.edu/dss). Once the student is qualified by DSS as having a disability, requested accommodations will be considered. Accommodations for the classroom, laboratory, or clinical setting will be evaluated according to reasonableness. Accommodations that compromise patient care, or that fundamentally alter the essential functions of the program or activity, are not considered to be reasonable.

## Phlebotomy (CA)

### Candidates must:

- Complete the Clark College Application for Admission and the Phlebotomy Application. Return to the Clark College Enrollment



Services with the non-refundable program application fees (subject to change). For current fee amounts, please visit the Phlebotomy website at [www.clark.edu/phlebotomy](http://www.clark.edu/phlebotomy). Date of Phlebotomy Application (fee paid date) will be considered in selecting students for entry into the program.

- To comply with Washington State Law [WAC 246-901-030(2)], Clark College requires that students must submit proof of high school graduation, GED completion, or U.S. degree conferment to be eligible for selection into the Phlebotomy program.
- Submit official college transcripts if you have transfer credits you wish to apply to the program. Students who do not plan to apply transfer credits toward the program are not required to submit official transcripts.
- Take the Clark College Compass Test to determine writing and reading levels. Call 360-992-2588 for Assessment Center hours.
- Obtain a minimum Clark College cumulative GPA of 2.5 or above.
- Complete **Preliminary Requirements with a 2.0 or higher**

The most recent educational experience will be used to meet these criteria. Applicants are responsible for requesting that college transcripts be sent to Clark College.

#### Final Program Admission

Upon completion of preliminary requirements, an evaluation will be completed, and the applicant will be notified by the Credential Evaluations Office of additional procedures necessary for program consideration. Application (fee paid) date is used in ranking students for selection, so it is beneficial to apply early.

#### Program Progression

To successfully complete the Phlebotomy program, keep in mind the following:

- Students may be included in selection 3 times, after which their file becomes inactive.
- All students must successfully complete PHLE 115/115L with a grade "C" or better as well as the required venipunctures and lab hours to progress into the clinical portion of the program.
- If a student is unable to continue with the clinical portion immediately following PHLE 115/115L, they must reapply to begin again with the next available cohort (and retake PHLE 115/115L). Students who wish to be considered for their second opportunity must notify the Credential Evaluations office in writing (letter or email). Students will be accepted on a space-available basis.
- PHLE 115/115L may be repeated one time only.

#### General Information

Selection criteria are subject to change. For complete updated information, please refer to the application materials, available online at [www.clark.edu/phlebotomy](http://www.clark.edu/phlebotomy).

#### Preliminary Requirements

BMED 110	MEDICAL TERMINOLOGY I *	3 cr.
ENGL 098	WRITING FUNDAMENTALS	5 cr.
or COMPASS score of 78 or higher		
FACPR032	FIRST AID AND HEALTH CARE PROVIDER CPR	1 cr.
HEOC 104	HEALTH CARE DELIVERY & CAREER EXPLORATION	3 cr.
HEOC 120	AIDS EDUCATION	1 cr.
READ 087	CRITICAL READING	4 cr.
or COMPASS score of 74 or higher		
HEOC 100	BASIC CONCEPTS OF ANATOMY AND PHYSIOLOGY *	4 cr.
or BIOL 164	HUMAN BIOLOGY *	4 cr.
and BIOL 165	HUMAN BIOLOGY LAB	1 cr.

#### Program Requirements

BMED 111	MEDICAL TERMINOLOGY II *	3 cr.
BMED 138	LEGAL ASPECTS OF THE MEDICAL OFFICE	2 cr.
CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or		
CMST&230	SMALL GROUP COMMUNICATION	5 cr.
PHLE 115	PHLEBOTOMY EDUCATION W/LAB	3 cr.
PHLE 116	BASIC LABORATORY FOR THE PHLEBOTOMIST	3 cr.
PHLE 197	PHLEBOTOMY CLINICAL EXPERIENCE	5 cr.
PHLE 198	PHLEBOTOMY CLINICAL SEMINAR	1 cr.

## Recommended Additional Coursework

BMED 103    MATH FOR HEALTH CARE PROFESSIONALS    3 cr.

**Total Required Credits: 34-44**

\* Course must be seven years current upon program entry.

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Communicate effectively, correctly, and professionally, using verbal, non-verbal, and written language with patients, colleagues, the public, diverse populations, and other healthcare providers.
- Conduct self in an ethical and professional manner to support colleagues and associates in providing quality patient care.
- Apply safety and infection-control standards in the health care environment to maintain a safe and clean environment for patients and self.
- Identify the human conditions that require different methodology of sample collection.
- Demonstrate knowledge of the "order of draw," collection equipment and their specific uses, precautions associated with the equipment, and where to correctly deliver and properly store each specimen in order to maintain its quality, potency, and purity within the clinical laboratory.

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## Phlebotomy/Nursing Assistant (CP)

The Phlebotomy with Nursing Assistant Certified (NAC) Certificate of Proficiency is a combination of the Phlebotomy Certificate of Achievement and the Nursing Assistant program of study offered at Clark College. The certificate program provides students with training in phlebotomy, skin and venipunctures, and how to obtain laboratory specimens, as well as basic functions of a nursing assistant, basic nursing care, safety, and emergency nursing procedures. The program offers a blend between classroom instruction, to include the six-course healthcare core curriculum, and on-site clinical experiences in both phlebotomy and nursing assistant. Upon completion of the Certificate of Proficiency at Clark College, students are eligible to apply for two separate certifications: a national phlebotomy certification through the National Accrediting Agency for Clinical Laboratory Sciences (NAA-CLS), and the state certification for nursing assistants.

Note: Students must apply to Phlebotomy and NAC programs separately. Please see entrance requirements for Phlebotomy listed on the tab above. Please see the Nursing Assistant Certified link for NAC program.

### Preliminary Requirements

BMED 110	MEDICAL TERMINOLOGY I *	3 cr.
FACPR032	FIRST AID AND HEALTH CARE PROVIDER CPR	1 cr.
HEOC 104	HEALTH CARE DELIVERY & CAREER EXPLORATION	3 cr.
HEOC 120	AIDS EDUCATION	1 cr.
READ 087	CRITICAL READING	4 cr.
or COMPASS score of 74 or higher		
HEOC 100	BASIC CONCEPTS OF ANATOMY AND PHYSIOLOGY *	4 cr.
or BIOL 164 HUMAN BIOLOGY *		
and BIOL 165 HUMAN BIOLOGY LAB *		

### General Education Requirements

<b>Communication Skills (3 credits required)</b>		
ENGL 098	WRITING FUNDAMENTALS	5 cr.
or COMPASS score of 78 or higher		
<b>Computational Skills (3 credits required)</b>		
BMED 103	MATH FOR HEALTH CARE PROFESSIONALS	3 cr.
<b>Human Relations (3 credits required)</b>		
CMST&210	INTERPERSONAL COMMUNICATION	5 cr.

### Program Requirements

BMED 111	MEDICAL TERMINOLOGY II *	3 cr.
BMED 138	LEGAL ASPECTS OF THE MEDICAL OFFICE	2 cr.
PHLE 115	PHLEBOTOMY EDUCATION W/LAB	3 cr.
PHLE 116	BASIC LABORATORY FOR THE PHLEBOTOMIST	3 cr.
PHLE 197	PHLEBOTOMY CLINICAL EXPERIENCE	5 cr.
PHLE 198	PHLEBOTOMY CLINICAL SEMINAR	1 cr.
NAC 103	NURSING ASSISTANT FOUNDATIONS/CLINICAL	9 cr.

**Total Required Credits: 46-56**

\* Course must be seven years current upon program entry.

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Behave in a professional and ethical manner when interacting with patients, health care professionals, and peers.
- Consistently use aseptic technique as determined by the NNAAP (National Nurse Aide Assessment Program) skills listing and the CDC.
- Perform vital-sign measurements according to the NNAAP skills requirement.
- Apply basic skin care and pressure-sore prevention with all patients.
- Possess basic knowledge of the body's systems and disease processes.
- Successfully complete all criteria for the NAC State Exam.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

## Physics

Physics is the study of the fundamental nature of our universe. This knowledge is applicable to a wide variety of disciplines in the biological and physical sciences, engineering, medicine, and technology. By taking physics at Clark College, you will get the benefits of small class size, up-to-date laboratory equipment, and instructors who place their emphasis on quality learning.

Physics majors can choose from a variety of courses and are encouraged to explore a wide sample of offerings to obtain a well-rounded education. Students wishing to major in physics should contact the Physics Department for program guidance.

### Physics (AST2)

This is a suggested program for the first two years of major study in Physics. Lower-division course requirements will vary depending on the transfer institution. Contact an advisor at the transfer institution to determine required coursework as early as possible. Additional courses are needed to satisfy graduation requirements for the Associate in Science or the Associate in Arts degree.

#### General Education Requirements

<b>Communication Skills (5 credits required)</b>		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
<b>Quantitative Skills (10 credits required)</b>		
MATH&151	CALCULUS I	5 cr.
MATH&152	CALCULUS II	5 cr.
<b>Health &amp; Physical Education (3 credits required)</b>		
	Health Requirement	2 cr.
	Physical Education Activity	1 cr.
<b>Humanities &amp; Social Sciences (15 credits required)</b>		
CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or CMST&220	PUBLIC SPEAKING	5 cr.
or CMST&230	SMALL GROUP COMMUNICATION	5 cr.
	Humanities and Social Sciences Requirements	10 cr.

#### Pre-Major Program Requirements

ENGL&102	ENGLISH COMPOSITION II	5 cr.
or ENGL 109	WRITING ABOUT THE SCIENCES	5 cr.
MATH 111	COLLEGE ALGEBRA	5 cr.
MATH&153	CALCULUS III	5 cr.
MATH 221	DIFFERENTIAL EQUATIONS	5 cr.
MATH&254	CALCULUS IV	5 cr.
	Electives	1-5 cr.

#### Science Sequence Requirements

CHEM&141	GENERAL CHEMISTRY I	4 cr.
CHEM&142	GENERAL CHEMISTRY II	4 cr.
CHEM&143	GENERAL CHEMISTRY III	4 cr.
CHEM&151	GENERAL CHEMISTRY LABORATORY I	1 cr.
CHEM&152	GENERAL CHEMISTRY LABORATORY II	1 cr.
CHEM&153	GENERAL CHEMISTRY LABORATORY III	2 cr.
PHYS&241	ENGINEERING PHYSICS I	4 cr.
and PHYS&231	ENGINEERING PHYSICS LAB I	1 cr.
PHYS&242	ENGINEERING PHYSICS II	4 cr.
and PHYS&232	ENGINEERING PHYSICS LAB II	1 cr.
PHYS&243	ENGINEERING PHYSICS III	4 cr.
and PHYS&233	ENGINEERING PHYSICS LAB III	1 cr.

**Program Outcomes**

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate understanding of the derivative as instantaneous rate of change and the definite integral as a limit of a Riemann sum in applied problems.
- Analyze and solve multi-step problems using techniques through single-variable calculus, and communicate the results.
- Apply fundamental principles and relationships from the Natural Sciences to analyze technological or scientific problems.
- Acquire scientific and technological information from appropriate sources to examine issues, claims or situations.
- Apply scientific and technological knowledge and methodologies to creatively solve technological or scientific problems.
- Communicate with various audiences using a variety of methods.
- Demonstrate progress toward healthier behaviors.
- Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts.
- Obtain, evaluate, and ethically use information.
- Analyze patterns of power, privilege and inequality.
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.

**Power, Privilege, and Inequity Certificate**

In the contemporary United States, we are increasingly called upon to simultaneously engage with multiple ideas and diverse peoples while addressing complex problems related to power, privilege, and inequity. When unprepared to address these issues, we often, unknowingly, perpetuate these problems.

This Certificate prepares students to identify power, privilege, and inequity as central organizing principles of human experience within the United States. Students who complete this certificate will be able to do the following.

- Identify and deconstruct the individual, institutional, and ideological systems of power, privilege and inequity.
- Critically analyze one’s own multiple identities within the context of power, privilege and inequity.
- Critically examine and describe the social, political and historical construction of identity and difference with regard to sex, gender, race, class, sexuality, age, and ability.

This certificate would be earned along with any two-year degree, and would be awarded upon graduation.

**Power, Privilege, and Inequity (AC)**

**Core Courses**

Each core course below is required. Students must earn a minimum grade of C.

ECE 133	REFLECTIVE PRACTICES IN EARLY LEARNING	3 cr.
HUM 175	INTRODUCTION TO LGBTQ STUDIES	5 cr.
SOC 131	RACE AND ETHNICITY IN THE U.S.	3 cr.
WS 101	INTRODUCTION TO WOMEN'S STUDIES	5 cr.
WS 220	RACE, CLASS, GENDER AND SEXUALITY	5 cr.
WS 225	RACISM & WHITE PRIVILEGE IN THE U.S.	3 cr.

**Elective Courses**

Choose one of the following:

ASL 125	AMERICAN DEAF CULTURE	5 cr.
ENGL 140	WOMEN IN LITERATURE	3 cr.
ENGL 254	INTRODUCTION TO QUEER LITERATURE	3 cr.
ENGL 267	AMERICAN MULTIETHNIC LIT	3 cr.
HIST&215	WOMEN IN U.S. HISTORY	5 cr.
HIST&219	NATIVE AMERICAN HISTORY	5 cr.
HIST 275	AFRICAN-AMERICAN HISTORY	5 cr.
HUM 112	NATURE AND THE HUMANITIES	4 cr.

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## Surveying & Geomatics

### Degree Requirements

The Surveying and Geomatics program is designed to meet entry-level field and office skills in a variety of land surveying and geomatics occupations. Training will utilize precision electronic surveying instruments, including Global Positioning System equipment and sophisticated computerized drafting, mapping, design, and analysis software.

An Associate in Applied Science degree will be awarded upon successful completion of the course requirements. All core and general education list requirements must be met, with any additional credits to be selected as electives. Students are encouraged to complete basic skills at the beginning of their education. Refer to the Degree & Certificate Requirements Section of the Clark College Catalog to identify the courses needed to satisfy the General Education Requirements.

Full-time students seeking an Associate in Applied Science degree typically complete this program in a minimum of six quarters, if basic skills and prerequisites are complete. Students interested in pursuing a baccalaureate degree in a Surveying or GIS field, a formal articulation agreement between Clark College and the Oregon Institute of Technology in Klamath Falls, Oregon is in place. Please consult with an advisor for additional requirements regarding this specific educational path.

### Student Preparation

It is recommended that students prepare for entrance into the program by emphasizing mathematics and science in high school. Two years of algebra and one year each of geometry, trigonometry, and physics are desirable prerequisites.

### Career Opportunities

Completion of this program prepares students for work as Surveying Technicians and can lead to a career as a Professional Land Surveyor. The employment forecast for graduates in this field are exceptional. As increasing number of licensed surveyors across the nation retire, a personnel shortage has been created within this profession.

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## Surveying/Geomatics (AAS)

### General Education Requirements

<b>Communication Skills (6 credits required)</b>		
CMST&210	INTERPERSONAL COMMUNICATION (recommended)	5 cr.
ENGL 135	INTRODUCTION TO TECHNICAL WRITING (recommended)	5 cr.
<b>Health &amp; Physical Education (3 credits required)</b>		
HPE 220	INDUSTRIAL HEALTH AND FITNESS (recommended)	3 cr.
<b>Computational Skills (3 credits required)</b>		
MATH 103	COLLEGE TRIGONOMETRY	5 cr.
<b>Human Relations (3 credits required)</b>		
CMST&210	INTERPERSONAL COMMUNICATION (recommended)	5 cr.
<b>Humanities (3 credits required)</b>		
<b>Social Sciences (3 credits required)</b>		
<b>Natural Sciences (3 credits required)</b>		
PHSC 101	GENERAL PHYSICAL SCIENCE (recommended)	5 cr.

### Major Area Requirements

BTEC 169	INTRODUCTION TO EXCEL	3 cr.
CADD 140	BASIC AUTOCAD	4 cr.
or ENGR 140	BASIC AUTOCAD	4 cr.
CADD 143	CIVIL DRAFTING 1 WITH CIVIL 3D	4 cr.
ENGR 113	ENGINEERING SKETCHING AND VISUALIZATION	2 cr.
MATH 111	COLLEGE ALGEBRA (or higher)	5 cr.
MATH&151	CALCULUS I (or higher)	5 cr.
SURV 100	INTRODUCTION TO GPS	2 cr.
SURV 102	FUNDAMENTALS OF SURVEY (recommended)	2 cr.
SURV 104	COMPUTATION AND PLATTING	5 cr.
SURV 121	FIELD SURVEY I	5 cr.
or ENGR 121	FIELD SURVEY I	5 cr.
SURV 122	FIELD SURVEY II	5 cr.
SURV 123	PROFESSIONAL ETHICS	1 cr.
SURV 125	INTRODUCTION TO GIS	3 cr.
SURV 163	ROUTE SURVEYING	5 cr.
SURV 202	BOUNDARY SURVEYS	4 cr.
SURV 203	LEGAL DESCRIPTIONS	3 cr.
SURV 223	BOUNDARY LAW I	3 cr.
SURV 225	SUBDIVISION PLANNING A & PLATTING	3 cr.
SURV 250	ARC GIS I	3 cr.
SURV 264	SURVEY SOFTWARE APPLICATIONS	4 cr.

**Program Outcomes**

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate use of modern technology, industry standard software, and tools to collect, analyze and interpret data for surveying solutions.
- Apply problem-solving skills as a member of a professional team in a field crew.
- Communicate in written form, verbally, and graphically with surveyors and engineers.
- Solve applied mathematical problems related to land surveying.
- Prepare complete field records.
- Practice a code of ethics prescribed by professional organizations and state codes.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.
- Health and PE: Demonstrate progress toward healthier behaviors as appropriate for a career and technical education program.
- Humanities: Analyze, interpret, and evaluate works and ideas in the Humanities within appropriate global and historical contexts as appropriate for a career and technical education program.
- Social Science: Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences as appropriate for a career and technical education program.
- Science: Apply fundamental principles and relationships from the Natural Sciences to solve problems as appropriate for a career and technical education program.

**Welding Technology**

The Welding Technology program prepares students for entry-level welder employment in production, job shop, or maintenance positions. Students master basic and advanced welding skills while operating heavy industrial fabrication equipment and state-of-the-art welding equipment. The curriculum places equal focus on the development of fabrication skills and techniques. Student will be expected to not only demonstrate their proficiency with various weld processes but their ability to fabricate projects within specified tolerances using those processes.

The multiple certificates and degree options available within this program allow students the option to stop-out and enter the workforce, and re-enter the program as needed, or complete their program of study without stopping. Students enrolled in a welding program will have the opportunity to earn multiple American Welding Society certifications.

**Welded Sculpture/Fabrication (CC)**

**Major Area Requirements**

ART 295	WELDED SCULPTURE THEORY I	1 cr.
ART 296	WELDED SCULPTURE THEORY II	1 cr.
ART 297	WELDED SCULPTURE THEORY III	1 cr.
WELD 120	WELDED SCULPTURE LAB I	3 cr.
WELD 121	WELDING SCULPTURE LAB II	3 cr.
WELD 122	WELDED SCULPTURE LAB III	3 cr.

**Total Required Credits: 12**

**Program Outcomes**

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Use personal-protection safety equipment and demonstrate safe work habits.
- Operate state-of-the-art welding equipment used in today's fabrication industries.
- Weld components in the flat, horizontal, vertical, and overhead positions.
- Utilize CNC software for plasma shape-cutting.

**Flux Core Arc Welding (CA)**

**Major Area Requirements**

HLTH 120	ADULT CPR AND FIRST AID	1 cr.
WELD 102	INTRODUCTION TO WELDING	6 cr.
WELD 110	WELDING BLUEPRINT READING	5 cr.
WELD 142	FLUX CORE ARC WELDING	6 cr.

**Total Required Credits: 24****Program Outcomes**

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate Welding Technology principles of operation, terminology and safe practices related to Flux Core Arc Welding (FCAW) and cutting processes.
- Explain the use of FCAW electrodes.
- Demonstrate the functions of FCAW power sources, electrical parameters, output characteristics and auxiliary controls.
- Describe the criteria for visual inspection of FCAW weldments.
- Demonstrate Oxy Fuel Cutting and Plasma Arc Cutting principles of operation.

**Gas Metal Arc Welding (CA)****Major Area Requirements**

HLTH 120	ADULT CPR AND FIRST AID	1 cr.
WELD 102	INTRODUCTION TO WELDING	6 cr.
WELD 110	WELDING BLUEPRINT READING	5 cr.
WELD 140	GAS METAL ARC WELDING	6 cr.
WELD 141	GAS METAL ART FABRICATION	6 cr.

**Total Required Credits: 24****Program Outcomes**

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate Welding Technology principles of operation, terms and safe practices related to Gas Metal Arc Welding (GMAW) and cutting processes.
- Explain the use of GMAW electrodes.
- Describe the functions of GMAW power sources, electrical parameters, output characteristics and auxiliary controls.
- Describe the criteria for visual inspection of GMAW weldments.
- Demonstrate Oxy/fuel Cutting and Plasma Arc Cutting principles of operation.

**Gas Tungsten Arc Welding (CA)****Major Area Requirements**

HLTH 120	ADULT CPR AND FIRST AID	1 cr.
WELD 102	INTRODUCTION TO WELDING	6 cr.
WELD 110	WELDING BLUEPRINT READING	5 cr.
WELD 240	GAS TUNGSTEN ARC WELDING	6 cr.
WELD 241	GAS TUNGSTEN ARC FABRICATION	6 cr.

**Total Required Credits: 24****Program Outcomes**

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate Welding Technology principles of operation, terms and safe practices related to Gas Tungsten Arc Welding (GTAW) and cutting processes.
- Explain the use of GTAW electrodes.
- Describe the functions of GTAW power sources, electrical parameters, output characteristics and auxiliary controls.
- Describe the criteria for visual inspection of GTAW weldments.
- Demonstrate Plasma Arc Welding and Plasma Arc Cutting principles of operation.

**Shielded Metal Arc Welding (CA)****Major Area Requirements**

HLTH 120	ADULT CPR AND FIRST AID	1 cr.
WELD 102	INTRODUCTION TO WELDING	6 cr.
WELD 110	WELDING BLUEPRINT READING	5 cr.
WELD 144	SHIELDED METAL ARC WELDING	6 cr.
WELD 145	SHIELDED METAL ARC FABRICATION	6 cr.

**Program Outcomes**

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Demonstrate Welding Technology principles of operation, terms and safe practices related to Shielded Metal Arc Welding (SMAW) and cutting processes.
- Explain the use of SMAW electrodes.
- Describe the functions of SMAW power sources, electrical parameters, output characteristics and auxiliary controls.
- Describe the criteria for visual inspection of SMAW weldments.
- Demonstrate Plasma Arc Welding and Plasma Arc Cutting principles of operation.

**Welding Technologies (AAT)**

**General Education Requirements**

Communication Skills (5 credits required)

Computational Skills (5 credits required)

Human Relations (5 credits required)

**Major Area Requirements**

HLTH 120	ADULT CPR AND FIRST AID	1 cr.
WELD 102	INTRODUCTION TO WELDING	6 cr.
WELD 110	WELDING BLUEPRINT READING	5 cr.
WELD 140	GAS METAL ARC WELDING	6 cr.
WELD 141	GAS METAL ART FABRICATION	6 cr.
WELD 142	FLUX CORE ARC WELDING	6 cr.
WELD 143	FLUX CORE ARC FABRICATION	6 cr.
WELD 144	SHIELDED METAL ARC WELDING	6 cr.
WELD 145	SHIELDED METAL ARC FABRICATION	6 cr.
WELD 156	WELDING CERTIFICATION	2 cr.
MACH 235	ELEMENTARY METALLURGY	2 cr.
MACH 236	ELEMENTARY METALLURGY LAB	2 cr.
WELD 240	GAS TUNGSTEN ARC WELDING	6 cr.
WELD 241	GAS TUNGSTEN ARC FABRICATION	6 cr.
WELD 242	ADVANCED WIRE FEED WELDING	6 cr.
WELD 243	ADVANCED WIRE FEED FABRICATION	6 cr.
WELD 244	ADVANCED GAS TUNGSTEN ARC WELDING	6 cr.
WELD 245	ADVANCED GAS TUNGSTEN ARC FABRICATION	6 cr.

**Total Required Credits: 105**

**Program Outcomes**

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Examine work pieces for defects and measure work pieces with straightedges or templates to ensure conformance with specifications.
- Interpret blueprints and specifications.
- Operate automatic CNC plasma cutting equipment.
- Apply material classifications and identifications to metal fabrication methods.
- Apply physical metallurgy oriented toward the metalworking trades.
- Operate manual, semi-automatic, and automatic welding equipment to fuse metal joints.
- Perform manual and semi-automatic oxyfuel cutting and plasma cutting operations required by skilled welders.
- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

**Welding Technician (CP)**

**General Education Requirements**

Communication Skills (3 credits required)

Computational Skills (3 credits required)

human RELations (3 credits required)

**Major Area Requirements**



HLTH 120	ADULT CPR AND FIRST AID	1 cr.
WELD 102	INTRODUCTION TO WELDING	6 cr.
WELD 110	WELDING BLUEPRINT READING	5 cr.
WELD 140	GAS METAL ARC WELDING	6 cr.
WELD 141	GAS METAL ART FABRICATION	6 cr.
WELD 142	FLUX CORE ARC WELDING	6 cr.
WELD 143	FLUX CORE ARC FABRICATION	6 cr.
WELD 144	SHIELDED METAL ARC WELDING	6 cr.
WELD 145	SHIELDED METAL ARC FABRICATION	6 cr.
WELD 156	WELDING CERTIFICATION	2 cr.
WELD 240	GAS TUNGSTEN ARC WELDING	6 cr.
WELD 241	GAS TUNGSTEN ARC FABRICATION	6 cr.

**Total Required Credits: 71**

### Program Outcomes

*Program outcomes are overarching skills that are emphasized and reinforced throughout several courses in a specific program; they are measurable statements that define what students should know or be able to do by the end of a certificate or degree at Clark College. After successful completion of this program, students will be able to:*

- Communications: Communicate with various audiences using a variety of methods as appropriate for a career and technical education program.
- Human Relations: Demonstrate interpersonal/human relations skills as appropriate for a career and technical education program.
- Computational Skills: Solve quantitative problems and interpret the solutions as appropriate for a career and technical education program.

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### Women's Studies

Women's Studies is an interdisciplinary field that identifies gender as one of the central organizing principles of human experience. Grounded in feminist theory and centered around feminist scholarship, Women's Studies confronts and challenges institutional, individual and ideological systems of power, privilege and inequity. Women's Studies analyzes socially constructed power imbalances based on gender, race, class, sexual identity, ability, age and other differences, allowing students profound insights into the origins of their own experience.

Because Women's Studies seeks to understand how our gendered experience affects every aspect of our lives, course topics may include: gender socialization, family, work, politics, health, sexuality, body image, violence, spirituality, art and culture. We may also discuss feminists' roles in social justice movements of the past as well as current and future trends in scholarship and activism.

Since other aspects of identity influence how individuals understand gender, we can't assume we all share the same experiences. Women's Studies creates opportunities to understand how and why we assign value to our differences and suggests strategies for resisting the power imbalances that result. By acknowledging that we don't have to be the same to be equal, Women's Studies provides a platform for exploring our differences as a potential source of strength rather than only a source of conflict. Students are encouraged to explore their relationship to individual and institutional power and to make visible the social and political forces at work. What advantages and obstacles do we each experience as a result of our socially constructed identities? Whose experience is understood as "normal" and why might it matter? What individual and communal action can we take?

Women's Studies students learn new and exciting ways to interpret the world around them, and their place within it. Most students find that their worldview undergoes profound changes as a result of taking a Women's Studies class. What new things will you notice?

Are you ready to:

- Think critically
- View popular culture in ways you've never imagined
- Gain a new self-awareness
- Transform your interpersonal relationships
- Confront our shared legacy of privilege and oppression
- Take action!

If so, Women's Studies at Clark College is ready to help you take that next step...

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### Women's Studies (AC)

For students who want expertise in women's issues, this certificate may be earned along with a regular A.A. degree, and will be

awarded upon graduation.

### Core Courses (13 credits)

Core courses must be completed with a grade of "C" or better.

WS 101	INTRODUCTION TO WOMEN'S STUDIES	5 cr.
WS 201	WOMEN AROUND THE WORLD	3 cr.
WS 220	RACE, CLASS, GENDER AND SEXUALITY	5 cr.

### Electives (9-11 credits)

At least 3 elective credits must be WS prefix courses

ART 250	WOMEN ARTISTS THROUGH HISTORY	5 cr.
ENGL 140	WOMEN IN LITERATURE	3 cr.
ENGL 254	INTRODUCTION TO QUEER LITERATURE	3 cr.
HIST&215	WOMEN IN U.S. HISTORY	5 cr.
HIST 251	WOMEN IN WORLD HISTORY I	5 cr.
HIST 252	WOMEN IN WORLD HISTORY II	5 cr.
HLTH 207	WOMEN'S HEALTH	2 cr.
HUM 210	INTRO TO GAY, LESBIAN, BISEXUAL & TRANS STUDIE	5 cr.
SOC 230	DOMESTIC VIOLENCE	5 cr.
WS 210	WOMEN'S CULTURE	3 cr.
WS 225	RACISM & WHITE PRIVILEGE IN THE U.S.	3 cr.
WS 280	SELECTED TOPICS	1-3 cr.
WS 290	SPECIAL PROJECTS	1-5 cr.

**Total Required Credits: 22-24**

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## World Languages

Language proficiency is an important skill for more and more Americans who must compete professionally in a global economy. It is a marketable skill in such diverse fields as medicine, government, science, technology, banking, trade, industry, communications, teaching, and social work. Clark College language students apply their skills not only to employment but also to upper-division transfer studies at four-year universities.

Classes emphasize learning strategies that are necessary to communicate in the real world. Language clubs provide active support and opportunities for using the language ranging from film series and round-table discussion groups to field trips and cultural presentations.

### Program Options

Students who intend to major in a world language at a four-year institution should consider two years of study in one language. Clark offers two-year programs (elementary, intermediate) in the following areas:

- German
- Spanish
- Japanese
- American Sign Language
- French

### Summer Study Abroad for Language Students

The departments provide the following language and cultural opportunities:

- French Study Abroad opportunity
- German immersion/study every summer with the German Studies in Berlin program
- Spanish immersion/study at the University of Valladolid in Valladolid, Spain
- Japanese immersion/study at Tokyo Institute of Japanese in Tokyo and visiting Kyoto and Jojo

### Other Study Abroad

Clark College is a member of the Washington Community College Consortium for Study Abroad (WCCCSA), which offers quarter-long programs in London, England; Paris, France; Florence, Italy; and Alajuela, Costa Rica. Contact an advisor in the International Center for more information.

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### **American Sign Language (AC)**

For students who want expertise in American Sign Language, this certificate may be earned along with a regular A.A. degree, and will be awarded upon graduation.

#### **Core Courses**

ASL 125	AMERICAN DEAF CULTURE	5 cr.
ASL& 221	AM SIGN LANGUAGE IV	5 cr.
ASL& 222	AM SIGN LANGUAGE V	5 cr.
ASL& 223	AM SIGN LANGUAGE VI	5 cr.
CMST&220	PUBLIC SPEAKING	5 cr.

**Total Required Credits: 25**

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## Adult Basic Education

### ADULT BASIC EDUCATION SPECIAL TOPICS

ABE 005

1 - 10 Credits

88 hours of lecture - 44 hours of lab

Monthly seminars conducted by various college and local professionals for the purpose of enhancing the social, personal, and academic skills of the ABE student participant.

#### Course Outcomes:

- Special Topics Course.

### ABE WRITING FUNDAMENTALS A

ABE 012

1 - 6 Credits

66 hours of lecture

Practice writing simple, compound and some complex sentences to accomplish life purposes in structured writing activities in a range of familiar settings. Practice organizing information and sentences with correct word order to complete simple forms, notes, letters, and paragraphs. Practice spelling common everyday and significant personal words and using correct capitalization, punctuation, and subject-verb agreement for simple verb tenses. Practice proofreading and editing writing using writing aids, (checklists, dictionaries, etc.). Prerequisite: Appropriate CASAS score.

#### Course Outcomes:

- W 1.1 Determine the purpose and audience for communicating in writing.
- W 1.2 Follow a highly structured, externally developed plan (or text model) to organize information about self and/or related to immediate needs in very simple structures such as lists or responses to prompts for everyday information.
- W 1.3 Write all letters of the alphabet and numbers and appropriately use simple, everyday, highly familiar words (personal names, signatures, addresses), numbers (dates, phone #s, addresses, prices, etc) and simple phrases to convey information with mini
- W 1.4 Make a few simple content changes based on review and feedback from others.
- W 1.5 Make a few simple edits of handwriting, spelling, punctuation and capitalization.

### ABE WRITING FUNDAMENTALS B

ABE 014

1 - 6 Credits

66 hours of lecture

Practice writing one to five understandable and well-constructed paragraphs easily and with few errors to independently accomplish well-defined and structured writing activities for varied reasons (such as for personal expression, to inform, to persuade or to complete a task) and for audiences in a range of comfortable and familiar settings.

#### Course Outcomes:

- W 4.1 Determine the purpose and audience for communicating in writing.
- W 4.2 Use multiple planning and pre-writing strategies to identify and organize a limited number of ideas to support a single purpose (such as writing to inform, to get things done, to express feelings and ideas or to persuade others) and produce a legibl
- W 4.3 Appropriately use both everyday and specialized vocabulary and a limited variety of simple and complex sentence structures in multiple coherent steps or a few well-constructed

- and linked paragraphs to convey ideas, with several supporting facts/data
- W 4.4 Use several simple revision strategies to monitor one's own writing, make revisions based on review and feedback from others, and produce rough and final drafts. Demonstrate some attention to clarity, descriptiveness, personal voice and appropriaten
  - W 4.5 Make many edits of grammar (verb tense forms) , spelling, sentence structure (simple/compound/complex with appropriate capitalization and punctuation) , language usage and text structure, often with the help of tools such as simplified dictionaries,

## **ADULT BASIC EDUCATION MATH I**

ABE 021

1 - 6 Credits

66 hours of lecture

Practice recalling and using a few simple mathematical procedures such as very basic estimating, counting, sorting, ordering, grouping, adding and subtracting numbers up to three digits, and beginning multiplication of 2s, 5s, and 10s. Practice reading, writing, and interpreting simple benchmark fractions ( $\frac{1}{2}$ ,  $\frac{1}{4}$ ), common monetary values, mathematical relationships (more, less, etc.), high frequency measurement (months, days, etc.), concepts of length and width, interpret simple charts and graphs, and communicate solutions to math tasks. Prerequisite: Entry level students with appropriate scaled CASAS placement scores.

### **Course Outcomes:**

- M 1.1 Read, write, and interpret very simple types of mathematical information such as Numbers and number sense: whole numbers (three digit numbers), common monetary values, and benchmark fractions ( $\frac{1}{2}$ ,  $\frac{1}{4}$ ). Patterns/Functions/Relationships: very simple
- M 1.2 Recall and use a few simple mathematical procedures such as very basic estimating, counting, sorting, ordering, grouping, adding on (using counting or a calculator) , orally counting by 2s, 5s and 10s, addition and subtraction and beginning multipli
- M 1.3 Evaluate the degree of precision needed for the solution.
- M 1.4 Extract discrete information from simple and concrete data and graphs, describe patterns, and/or use basic computational procedures effectively to solve a problem and to verify that the solution is reasonable.
- M 1.5 Communicate the solution to the problem orally, in role plays, with pictures, or by entries on a simple chart.

## **ADULT BASIC EDUCATION MATH II**

ABE 022

1 - 6 Credits

66 hours of lecture

Building skills for evaluating solutions, adding and subtracting whole numbers through three digits, multiplying and dividing three digits numbers by one digit numbers, recall/use mathematical procedures such as estimating, counting, sorting, grouping, and measuring length and weight using calibrated instruments (rulers, scales). Practice reading, writing, and interpreting simple benchmark fractions and percents ( $\frac{1}{2}$ ,  $\frac{1}{4}$ , 50%), common monetary values, simple proportions (2:1), very simple data in charts and graphs, and communicate solutions to math related tasks. Prerequisite: ABE MATH 021 or appropriate scaled CASAS placement score.

### **Course Outcomes:**

- M 2.1 Read, write, and interpret very simple types of mathematical information such as Numbers and number sense: whole numbers (three digit numbers), common monetary values, and benchmark fractions ( $\frac{1}{2}$ ,  $\frac{1}{4}$ ) and percents (50%). Patterns/Functions/Relatio
- M 2.2 Begin to evaluate reasonableness of solutions. Add and subtract whole numbers through three digits, and multiply and divide three digit numbers by one digit numbers.

- Recall and use mathematical procedures such as basic estimating, counting, sorting,
- M 2.3 Evaluate the degree of precision needed for the solution.
- M 2.4 Extract discrete information from simple and concrete data and graphs, and measure with appropriate tools, describe patterns, and/or use computational procedures effectively to solve a problem and to verify that the solution is reasonable.
- M 2.5 Communicate the solution to the problem orally, in role plays, with pictures, or by entries on a simple chart.

### **ADULT BASIC EDUCATION MATHEMATICS III**

ABE 023

1 - 6 Credits

66 hours of lecture

Building skills to read, write, interpret, and use mathematical information and procedures for life purposes. Concepts and skills include: computing with whole numbers; converting and using benchmark fractions, decimals and percents (halves, quarters, tenths); determining simple patterns and proportions (4:1, etc); grouping, comparing, estimating numbers; using calibrated tools with benchmark units to measure; determining the area of common geometric shapes; selecting and organizing data into simple graphic arrangements; and communicating problem-solving strategies. Prerequisite: ABE MATH 022 or appropriate CASAS placement score.

#### **Course Outcomes:**

- M 3.1 Read, write, and interpret some common types of mathematical information such as Numbers and number sense: whole numbers, monetary values and prices, benchmark Data/Statistics: simple ways to interpret and represent data (tables, bar graphs with and
- M 3.2 Recall and use mathematic procedures such as addition, subtraction, multiplication and division on whole numbers, benchmark decimals and fractions (with or without use of calculator) , grouping, comparing 2 numbers, and basic estimating; and measure
- M 3.3 Evaluate the degree of precision needed for the solution.
- M 3.4 Define, select, and organize simple data, and measure with appropriate tools, describe patterns, and/or use computational procedures effectively to solve a problem and to verify that the solution is reasonable.
- M 3.5 Communicate the solution to the problem orally, in pictures, or in writing.

### **ADULT BASIC EDUCATION MATHEMATICS IV**

ABE 024

1 - 6 Credits

66 hours of lecture

Building skills to read, write, interpret, and apply a variety of mathematical information such as the following: monetary values, extensions of benchmark fractions ( $\frac{1}{8}$ ,  $\frac{1}{3}$ ,  $\frac{1}{5}$ , etc.), decimals, and percents (15%, 30%, etc.), patterns and simple formulas (such as  $d=rt$ ,  $A=lw$ ), standard units of measurement including fractional units and benchmark angle measurements (90 degrees, 360 degrees, etc), geometric shapes, a combination of common shapes, concept of pi, converting between units of measurement, and ways to interpret and represent data (graphs). Prerequisite: ABE MATH 023 or appropriate CASAS placement score.

#### **Course Outcomes:**

- M 4.1 Read, write, and interpret a variety of common mathematical information such as Numbers and number sense: monetary values, extensions of benchmark fractions ( $\frac{1}{8}$ ,  $\frac{1}{3}$ ,  $\frac{1}{5}$ , etc.) , decimals, and percents (15%, 30%, etc.) . Patterns/Functions/Relatio
- M 4.2 Recall and use a good store of mathematical procedures such as estimation, rounding, multiplication and division (with and without use of a calculator) , adding and subtracting, multiplying and dividing common fractional amounts and decimals, measur

- M 4.3 Evaluate the degree of precision needed for the solution.
- M 4.4 Define, select and organize a variety of common mathematical data and measure with appropriate tools, describe patterns, and/or use appropriate procedures effectively to solve a problem and verify that the solution is reasonable.
- M 4.5 Communicate the solution to the problem orally, with visual representations, in writing, by entries in a table or appropriate graph, or with basic statistics (range, mode, mean, median) .

## **ABE READING FUNDAMENTALS A**

ABE 032

1 - 6 Credits

66 hours of lecture

Building skills in the four components of skilled reading: alphabets, vocabulary, fluency, and comprehension. Students will recognize common everyday words and practice print-sound correspondence to decode simple texts. Developing simple strategies to increase vocabulary. Activities include reading simple texts accurately with appropriate phrasing and rates; practicing comprehension strategies to understand simplified informational and literary texts and connect the knowledge to personal experiences. Prerequisite: Appropriate CASAS score.

### **Course Outcomes:**

- R 2.1 Decode and recognize everyday and some unfamiliar words in short text by drawing on content knowledge, oral vocabulary and sight words, breaking words into parts for the purpose of aiding decoding and comprehension, applying pronunciation rules, and
- R 2.2 Demonstrate familiarity with simple, everyday content knowledge and vocabulary.
- R 2.3 Locate important items of information in simplified text using some simple strategies.
- R 2.4 Monitor and enhance comprehension using various strategies, such as rereading, restating, recalling, copying and rephrasing text; or using a simplified dictionary.
- R 2.5 Apply prior knowledge to assist in selecting texts and in understanding the information they contain.

## **ABE READING FUNDAMENTALS B**

ABE 034

1 - 6 Credits

66 hours of lecture

Developing skills in the 4 components of skilled reading: alphabets, vocabulary, fluency, and comprehension. Skills include decoding and recognizing common syllable patterns and developing strategies to increase vocabulary. Activities include reading intermediate texts accurately with appropriate phrasing and rates; practicing a variety of comprehension strategies for different reading purposes and various types of texts; analyzing and evaluating information in connection with previous knowledge in a range of informational and literary texts. Prerequisite: ABE 032 or appropriate CASAS score.

### **Course Outcomes:**

- R 4.1 Recognize unfamiliar and some specialized words and abbreviations using word analysis or inference.
- R 4.2 Demonstrate familiarity with everyday and some specialized content knowledge and vocabulary.
- R 4.3 Locate important information, read for detail and determine missing information using a wide range of strategies.
- R 4.4 Monitor and enhance comprehension using a wide range of strategies, such as posing and answering questions, trial and error, and adjusting reading pace.
- R 4.5 Actively apply prior knowledge to assist in understanding information in texts.

- R 4.6 Organize information using some strategies, such as recall, restatement, simple sequencing and simple categorization.

## **ABE LANGUAGE ARTS I**

ABE 041

1 - 6 Credits

66 hours of lecture

Skills for decoding and recognizing all of the letters of the alphabet and everyday words and word groups in short, simple texts by breaking words into parts, and applying pronunciation rules (decoding letter-sound correspondence, isolating first and last sounds, etc.). Activities include appropriately using everyday, high frequency vocabulary to produce a few sentences on a familiar topic with minimal attention to audience, recalling prior knowledge to assist in understanding information in the text students read/write, and making a few simple edits of handwriting, spelling, punctuation, and capitalization based on review and feedback from others. Prerequisite: Appropriate CASAS scores.

### **Course Outcomes:**

- R 1.1 Decode and recognize everyday words and word groups in short, simple texts by breaking words into parts, tapping out/sounding out syllables, applying pronunciation rules (decoding letter-sound correspondence, isolating and saying first and last sound)
- R 1.2 Demonstrate familiarity with concepts of print, letter shapes, letter names and sounds (individual consonants and vowels, digraphs and blends) , and simple, everyday content knowledge and common vocabulary in simple sentences.
- R 1.3 Locate important items of information in texts.
- R 1.4 Monitor accuracy of decoding and word recognition and enhance comprehension using various strategies, such as rereading, restating, copying and rephrasing text; making a list of new words, or using a picture dictionary.
- R 1.5 Recall prior knowledge to assist in selecting texts and in understanding the information they contain.
- W 1.1 Determine the purpose and audience for communicating in writing.
- W 1.2 Follow a highly structured, externally developed plan (or text model) to organize information about self and/or related to immediate needs in very simple structures such as lists or responses to prompts for everyday information.
- W 1.3 Write all letters of the alphabet and numbers and appropriately use simple, everyday, highly familiar words (personal names, signatures, addresses), numbers (dates, phone #s, addresses, prices, etc) and simple phrases to convey information with mini
- W 1.4 Make a few simple content changes based on review and feedback from others.
- W 1.5 Make a few simple edits of handwriting, spelling, punctuation and capitalization.

## **ADULT BASIC EDUCATION LANGUAGE ARTS II**

ABE 042

6 Credits

66 hours of lecture

Skills for learning to decode and recognize common/some unfamiliar words in short text, for demonstrating familiarity with simple, everyday content knowledge and vocabulary, for locating important information in simplified text, and for monitoring/enhancing reading comprehension. Skills for determining the purpose and audience for student writing, for following a highly-structured plan to organize ideas in order to support a single purpose and for producing a legible and comprehensible draft. Skills for appropriately using familiar vocabulary, and demonstrating beginning attention to revision strategies in order to make basic edits of grammar and syntax based on feedback from others. Prerequisite: ABE Language Arts II requires Language Arts I completion or the appropriate CASAS reading score upon entrance to the program.



## Course Outcomes:

- R 2.1 Decode and recognize everyday and some unfamiliar words in short text by drawing on content knowledge, oral vocabulary and sight words, breaking words into parts for the purpose of aiding decoding and comprehension, applying pronunciation rules, and
- R 2.2 Demonstrate familiarity with simple, everyday content knowledge and vocabulary.
- R 2.3 Locate important items of information in simplified text using some simple strategies.
- R 2.4 Monitor and enhance comprehension using various strategies, such as rereading, restating, recalling, copying and rephrasing text; or using a simplified dictionary.
- R 2.5 Apply prior knowledge to assist in selecting texts and in understanding the information they contain.
- W 2.1 Determine the purpose and audience for communicating in writing.
- W 2.2 Follow a highly structured plan to identify and organize a limited number of ideas to support a single purpose and produce a legible and comprehensible draft.
- W 2.3 Appropriately use familiar vocabulary (based on personal experience and learning) and basic text structure of simple steps/instructions/commands or a single paragraph to convey an idea with supporting details and examples.
- W 2.4 Demonstrate beginning attention to revision strategies including rereading and revising based on review and feedback from others.
- W 2.5 Make basic edits of grammar (verb tenses, subject/verb agreement) , simple and compound sentences, capitalization, spelling and punctuation (end periods, some commas) .

## ADULT BASIC EDUCATION LANGUAGE ARTS III

ABE 043

1 - 6 Credits

66 hours of lecture

Practice writing simple, compound, and some complex sentences to construct simple paragraphs to accomplish well-defined and structured writing activities for varied life purposes. Skills for simple planning and editing strategies including generating and organizing ideas and proofreading for simple writing conventions in grammar, spelling, punctuation, and sentence structure. Skills for reading and comprehending most everyday words and some specialized vocabulary, adjust their reading pace, and use various comprehension strategies to accomplish well-defined activities in short to medium length texts in literature, science, and social studies. Prerequisite: Completion of Language Arts 042 or the appropriate reading/writing score on entrance to the program.

### Course Outcomes:

- R 3.1 Decode and recognize most everyday and some unfamiliar and specialized words and abbreviations in short to medium-length text by drawing on content knowledge and oral vocabulary, breaking words into parts, applying pronunciation rules, and adjusting
- R 3.2 Demonstrate familiarity with common, high-interest content knowledge and related vocabulary.
- R 3.3 Locate important information in short to medium-length text using some simple strategies.
- R 3.4 Monitor and enhance comprehension by using a range of simple strategies, such as posing and answering questions, recalling, restating, rephrasing, explaining the content of the text or using simple examples.
- R 3.5 Actively apply prior knowledge to assist in understanding information in texts.
- W 3.1 Determine the purpose and audience for communicating in writing.
- W 3.2 Use simple planning strategies to identify and organize a limited number of ideas to support a single purpose (to convey personal experience, meet a specific need, or respond to recent learning) , and produce a legible and comprehensible draft.
- W 3.3 Appropriately use mostly familiar vocabulary (based on personal experience and learning) and basic text structure of simple steps/instructions/commands or a paragraph to convey ideas with several supporting details/examples reflecting some attention
- W 3.4 Use simple revision strategies to monitor effectiveness by re-reading and revising

during the writing process and making revisions to a first and final draft based on review and feedback from others. Demonstrate beginning attention to clarity, desc

- W 3.5 Make several simple edits of grammar (such as simple tense agreement) , spelling, and punctuation (such as periods, capital letters, and some commas) , sentence structure (such as compound and some complex sentences) , language usage, and text struc

## **ADULT BASIC EDUCATION LANGUAGE ARTS IV**

ABE 044

1 - 6 Credits

66 hours of lecture

Practicing the steps in writing a few well-constructed and connected paragraphs to independently accomplish well-defined and structured writing activities for varied purposes. Practicing multiple writing and pre-writing strategies with everyday and specialized vocabulary in science, social studies, and literature. Practicing revision and editing strategies which include mechanics, grammar, and usage. Practice reading and comprehending a variety of texts to establish an appropriate pace and good comprehension for reading and writing in science, social studies, and literature. Prerequisite: Completion of Language Arts 043 or the appropriate reading/writing score on entrance to the program.

### **Course Outcomes:**

- R 4.1 Recognize unfamiliar and some specialized words and abbreviations using word analysis or inference.
- R 4.2 Demonstrate familiarity with everyday and some specialized content knowledge and vocabulary.
- R 4.3 Locate important information, read for detail and determine missing information using a wide range of strategies.
- R 4.4 Monitor and enhance comprehension using a wide range of strategies, such as posing and answering questions, trial and error, and adjusting reading pace.
- R 4.5 Actively apply prior knowledge to assist in understanding information in texts.
- R 4.6 Organize information using some strategies, such as recall, restatement, simple sequencing and simple categorization.
- W 4.1 Determine the purpose and audience for communicating in writing.
- W 4.2 Use multiple planning and pre-writing strategies to identify and organize a limited number of ideas to support a single purpose (such as writing to inform, to get things done, to express feelings and ideas or to persuade others) and produce a legibl
- W 4.3 Appropriately use both everyday and specialized vocabulary and a limited variety of simple and complex sentence structures in multiple coherent steps or a few well-constructed and linked paragraphs to convey ideas, with several supporting facts/deta
- W 4.4 Use several simple revision strategies to monitor one's own writing, make revisions based on review and feedback from others, and produce rough and final drafts. Demonstrate some attention to clarity, descriptiveness, personal voice and appropriaten
- W 4.5 Make many edits of grammar (verb tense forms) , spelling, sentence structure (simple/compound/complex with appropriate capitalization and punctuation) , language usage and text structure, often with the help of tools such as simplified dictionaries,

## **I-BEST SUPPORT**

ABE 071

1 - 10 Credits

110 hours of lecture

Additional instruction and support for student success in I-BEST designated classes. Review of important concepts and vocabulary introduced during I-BEST classes. Skills to communicate clearly and accurately using vocabulary and expressions commonly used in the I-BEST work place

and job search environment. Activities to strengthen basic skills while studying in an I-BEST program. Students must be concurrently enrolled in an I-BEST designated class. Prerequisite: Admission into an I-BEST program.

**Course Outcomes:**

- Demonstrate an understanding of the core concepts of the IBEST selected topic.

## Accounting

### PRINCIPLES OF ACCOUNTING I

ACCT&201

5 Credits

55 hours of lecture

Accounting theory and practice including the entire accounting cycle and accounting for merchandising operations, receivables, current liabilities, and payroll. Formerly BUS 231. Credit not allowed for both BUS 231 and ACCT& 201. Prerequisite: Eligibility for ENGL& 101 and MATH 095 or consent of Instructional Unit. [SE]

**Course Outcomes:**

- Complete the accounting cycle using double-entry accounting practices for both a service and a merchandising business.
- Produce financial statements consistent with generally accepted accounting principles
- Analyze, record, and report transactions in the balance sheet areas of cash, accounts receivable, and inventories
- Understand and perform calculations using the Time Value of Money concepts,

### PRINCIPLES OF ACCOUNTING II

ACCT&202

5 Credits

55 hours of lecture

Continuation of ACCT& 201 with emphasis on payroll, partnership and corporation accounting, statement of cash flow, analysis and interpretation of financial statements, plant assets, depreciation, time value of money, long-term liabilities, and investments. Formerly BUS 232. Credit not allowed for both BUS 232 and ACCT& 202. Prerequisite: A grade of "C" or better in ACCT& 201. [SE]

**Course Outcomes:**

- Long Term Assets – Students will be able to depreciate using three different methods of depreciation and calculate the gain or loss on sale of long term assets.
- Payroll and Current Liabilities – Students will be able to calculate payroll deductions and employer payroll taxes, and calculate vacation and warranty accruals.
- Partnerships – Students will be able to perform the journals entries for an admission of a partner, withdrawal of a partner, and a liquidation of a partnership.
- Corporations – Students will be able to perform journal entries for the issuance of common and preferred stock, stock and cash dividends, purchase and sale of treasury stock, convert bonds to stock, and retire stock.
- Long-Term Liabilities – Students will be able to account for all bond transactions including valuing bonds based on market rates, sale of bonds, and accounting for discounts and premiums.
- Investments and International Operations – Students will be able to account for exchange rates, held to maturity securities, trading securities, and controlling and non-controlling interests.

- Analysis of Financial Statements – Students will use ratio analysis to analyze financial statements and complete a Statement of Cash Flow using the indirect method.

### **PRINCIPLES OF ACCOUNTING III**

ACCT&203

5 Credits

55 hours of lecture

Continuation of ACCT& 201 with emphasis on responsibility and departmental accounting, manufacturing operations, cost accounting, budgeting and standard costs, cost-volume-profit analysis, incremental analysis and capital budgeting. Prerequisite: A grade of "C" or better in ACCT& 201. Formerly BUS 233. [SE]

#### **Course Outcomes:**

- Use an activity-based-costing accounting system.
- Calculate variances, delivery cycle time, throughput time, manufacturing cycle efficiency and understand the use of the balance scorecard.
- Set up sales, production, direct materials, direct labor, manufacturing overhead, selling-and-administrative, and cash budgets.
- Account for costs in an organizational environment.
- Utilize cost-volume relationships to predict contribution margin, net operating income, the margin of safety and operating leverage.
- Apply fixed and variable costs to predict costs.
- Prepare flexible budgets, predetermined overhead rates, fixed budget overhead and volume variances.
- Organize segmented income statements and compute ROI and residual income.
- Operate a job-order cost accounting system.
- Understand the role of managerial accounting in making decisions.
- Use a process costing accounting system.
- Identify relevant costs and benefits of alternative courses of action in regard to dropping or retaining product lines or other organizational segments, make-or-buy decisions, special orders, use of constrained resource, and joint products.
- Use variable and absorption costing accounting system.

### **Addiction Counselor Education**

#### **SURVEY OF ADDICTIONOLOGY**

ACED 101

3 Credits

33 hours of lecture

Biological, psychological, and sociological theories of the use of major drugs of abuse, as well as addictive behaviors. Explores the distinction between use, abuse and addiction. For majors and non-majors. Prerequisite: ENGL& 101 (or ENGL 101). [GE, SE]

#### **Course Outcomes:**

- Understand a variety of models and theories of addiction and other problems related to substance use.
- Recognize the social, political, economic, and cultural context within which addiction and substance abuse exist, including risk and resiliency factors that characterize individuals and groups and their living environments.
- Describe the behavioral, psychological, physical health, and social effects of psychoactive substances on the user and significant others.
- Recognize the potential for substance use disorders to mimic a variety of medical and

psychological disorders and the potential for medical and psychological disorders to co-exist with addiction and substance abuse.

- Describe the philosophies, practices, policies, and outcomes of the most generally accepted and scientifically supported models of treatment, recovery, relapse prevention, and continuing care for addiction and other substance-related problems.
- Recognize the importance of family, social networks, and community systems in the treatment and recovery process.
- Understand the importance of research and outcome data and their application in clinical practice.
- Understand the value of an interdisciplinary approach to addiction treatment.

## **INTRODUCTION TO ADDICTIONS COUNSELING SKILLS**

ACED 122

3 Credits

33 hours of lecture

Application of basic counseling theories, including relapse prevention, to an addiction client population. Group, individual and family counseling. Other cultures also addressed. Prerequisite: ACED 101 or CDEP 101, and consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Establish a helping relationship with the client characterized by warmth, respect, genuineness, concreteness, and empathy.
- Facilitate the client's engagement in the treatment and recovery process.
- Work with the client to establish realistic, achievable goals consistent with achieving and maintaining recovery.
- Promote client knowledge, skills, and attitudes that contribute to a positive change in substance use behaviors.
- Encourage and reinforce client actions determined to be beneficial on progressing toward treatment goals.

## **GROUP COUNSELING IN ADDICTIONS**

ACED 125

3 Credits

33 hours of lecture

Use of group process for modifying individual attitudes and actions. Application of group counseling theories to an addiction client population. Prerequisite: ACED 201 or CDEP 120/201, and consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Describe, select, and appropriately use strategies from accepted and culturally appropriate models for group counseling with clients with substance use disorders.
- Carry out the actions necessary to form a group, including, but not limited to: determine group type, purpose, and leadership; recruiting and selecting members; establishing group goals and clarifying behavioral ground rules for participating; identifying
- Facilitate the entry of new members and the transition of existing members.
- Facilitate group growth within the established ground rules and movement toward group and individual goals by using methods consistent with group type.
- Understand the concepts of process and content, and shift the focus of the group when such an intervention will help the group move toward its goal.
- Describe and summarize client behavior within the group for the purpose of documenting the client's progress and identifying needs and issues that may require a modification in the treatment plan.

## **INTRODUCTION TO COUNSELING FAMILY MEMBERS**

ACED 132

3 Credits

33 hours of lecture

Knowledge and skills for working with significant persons in the addicted client's environment. Emphasis on counseling immediate family members. Prerequisite: ACED 201 or CDEP 201 (or 120), and consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Understand the characteristics and dynamics of families, couples, and significant others affected by substance abuse.
- Appropriately use models of diagnosis and intervention for families, couples and significant others including extended kinship or tribal family structures.
- Facilitate the engagement of selected members of the family, couple, or significant others in treatment and recovery process.
- Assist families, couples, and significant others to understand the interactions between the family system and substance use behaviors.
- Assist families, couples, and significant others to adopt strategies and behaviors that sustain recovery and maintain healthy relationships.

## **LAW AND ETHICS IN ADDICTIONS COUNSELING**

ACED 136

3 Credits

33 hours of lecture

Examination of state and federal laws governing the addictions field, including the Washington Administrative Code for CDP's. Legal and ethical duties in the client-counselor relationship. Prerequisite: ACED 101 or CDEP 101, and consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Understand the importance of self-awareness in one's personal, professional, and cultural life.
- Understand the addiction professional's obligations to adhere to ethical and behavioral standards of conduct in the helping relationship.
- Apply confidentiality regulations appropriately.
- Demonstrate respect and nonjudgmental attitudes toward clients in all contacts with community professional agencies.
- Adhere to established professional codes of ethics that define the professional context, within which the counselor works, in order to maintain professional standards and safeguard the client.
- Conduct self-evaluations of professional performance applying ethical, legal, and professional standards to enhance self-awareness and performance.
- Obtain appropriate continuing professional education.
- Participate in ongoing supervision and consultation.
- Develop and utilize strategies to maintain one's own physical and mental health.

## **ADDICTIONS AND MENTAL ILLNESS**

ACED 137

3 Credits

33 hours of lecture

Differential and dual diagnosis. Use of current edition of Diagnostic and Statistical Manual.

Referral and networking with mental health professionals; relapse prevention techniques; screening that includes comorbidity. Prerequisite: ACED 101 or CDEP 101, and consent of Instructional Unit. [GE]

**Course Outcomes:**

- Understand the established diagnostic criteria for substance use disorders and describe treatment modalities and placement within the continuum of care.
- Describe a variety of helping strategies for reducing the negative effects of substance use, abuse, and dependence.
- Tailor helping strategies and treatment modalities to the client's stage of dependence, change, or recovery.
- Provide treatment services appropriate to the personal, cultural identity, and language of the client.
- Adapt practice to the range of treatment settings and modalities.
- Be familiar with the medical and pharmacological resources in the treatment of substance disorders.
- Understand the variety of insurance and health maintenance options available and the importance of helping clients access these benefits.
- Recognize that crisis may indicate an underlying substance use disorder and may be a window of opportunity for change.
- Understand the need for use of methods for measuring treatment outcome.
- Establish rapport, including management of crisis situation and determination of need for additional professional assistance
- Gather data systematically from the client and other available collateral sources, using screening instruments and other methods that are sensitive to age, developmental level, culture, and gender. At minimum, data should include current history of substance use.
- Screen for psychoactive substance toxicity, intoxication, and withdrawal symptoms, aggression or danger to others, potential for self-inflicted harm or suicide, and coexisting mental health problems.
- Assist the client in identifying the impact of substance use on his or her current life problems and the effects of continued harmful use or abuse.
- Determine the client's readiness for treatment and change as well as the needs of others involved in the current situation.
- Review the treatment options that are appropriate for the client's needs, characteristics, goals, and financial resources.
- Apply accepted criteria for diagnosis of substance abuse disorders in making treatment recommendations.
- Construct with client and appropriate others an initial action plan on client needs, preferences, and resources available.
- Based on initial action plan, take specific steps to initiate an admission or referral and ensure follow-through.

**PREVENTION AND EDUCATION IN THE COMMUNITY**

ACED 138

3 Credits

33 hours of lecture

Application of the Public Health and Social Development models to prevention activities. Knowledge of community resources in developing community education and prevention programs. Prerequisite: ACED 101 or CDEP 101, and consent of Instructional Unit. [GE]

**Course Outcomes:**

- Provide culturally relevant formal and informal education programs that raise awareness and support substance abuse prevention and/or the recovery process.
- Describe factors that increase the likelihood for an individual, community, or group to be at-

risk for, or resilient to, psychoactive substance use disorders.

- Sensitize others to issues of cultural identity, ethnic background, age, and gender in prevention, treatment, and recovery.
- Describe warning signs, symptoms, and the course of substance use disorders.
- Describe how substance use disorders affect families and concerned others.
- Describe the continuum of care and resources available to family and concerned others.
- Describe principles and philosophy of prevention, treatment, and recovery.
- Teach life skills, including but not limited to, stress management, relaxation, communication, assertiveness, and refusal skills.

## **PHARMACOLOGY OF DRUGS OF ABUSE**

ACED 160

3 Credits

33 hours of lecture

Pharmacological effects of alcohol and drugs on the human body and mind. Prerequisite: ENGL& 101 (or ENGL 101) and consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Describe the behavioral, psychological, physical health, and social effects of psychoactive substances on the user and significant others.
- Be familiar with medical and pharmacological resources in the treatment of substance use disorders.

## **ADOLESCENT ADDICTION ASSESSMENT & TREATMENT**

ACED 164

3 Credits

33 hours of lecture

An examination of adolescent development and the detrimental impact of addiction on youth development. The assessment process and treatment modalities for adolescents are presented. Prerequisite: ACED 101 and 122, or CDEP 101 and 122, and consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Establish rapport, including management of crisis situations and determination of need for additional professional assistance.
- Gather data systematically from the client and other available collateral sources, using instruments and other methods that are sensitive to age, developmental levels, culture and gender. At a minimum data should include current historic substance use, he
- Assist the client in identifying the impact of substance use on his or her current life problems and the effect of continued harmful use or abuse.
- Determine the client's readiness for treatment and change as well as the needs of others involved in the current situation.
- Apply accepted criteria for diagnosis of substance use disorders in making treatment recommendations.
- Coordinate treatment activities and community resources with prioritized client's needs in a manner consistent with the client's diagnosis and existing placement criteria.

## **AIR- AND BLOOD-BORNE PATHOGENS**

ACED 170

2 Credits

22 hours of lecture



Skills to reduce impact of air- and blood-borne pathogens on addiction clients. HIV/AIDS brief risk intervention for the addiction client population. Community resources available to clients. Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Promote client knowledge, skills and attitudes consistent with the maintenance of health and prevention of human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS), tuberculosis, (TB), sexually transmitted diseases (STD s), and other in

**THEORIES OF COUNSELING**

ACED 201

3 Credits

33 hours of lecture

Introduces the major counseling theories and techniques focusing on individual counseling within a Human Services framework. Students are encouraged to develop a counseling orientation based on these theories which include their own personal and professional ethical orientation. For majors and non-majors. Prerequisite: ACED 101 or CDEP 101 and PSYC 101, and consent of Instructional Unit. [GE]

**Course Outcomes:**

- Establish a helping relationship with the client characterized by warmth, respect, genuineness, concreteness, and empathy.
- Facilitate the client's engagement in the treatment and recovery process.

**MULTI-CULTURAL ADDICTIONS COUNSELING**

ACED 202

3 Credits

33 hours of lecture

Culturally learned assumptions that shape a counseling interview. Culture as the heart of any counseling relationship. The impact of culture on treatment planning with an addiction client population. Prerequisite: ACED 122 or CDEP 122 and ACED 201 or CDEP 120/201, and consent of Instructional Unit. [GE]

**Course Outcomes:**

- Understand a variety of models and theories of addiction and other problems related to substance use.
- Recognize the social, political, economic, and cultural context within which addiction and substance abuse exist, including risk and resiliency factors that characterize individuals and groups and their living environments.
- Adapt counseling strategies to the individual characteristics of the client, including but not limited to, disability, gender, sexual orientation, developmental level, culture, ethnicity, age, and health status.

**CASE MANAGEMENT IN ADDICTION MEDICINE**

ACED 203

3 Credits

33 hours of lecture

Requirements for managing cases in treatment clinics: treatment and aftercare plans, notes, testing, preparation of accurate reports and other documents, confidentiality, and advocacy. ASAM criteria and treatment. Prerequisite: ACED 201 or CDEP 120/201, and ACED 122 or CDEP

122, and consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate knowledge of accepted principles of client record management.
- Protect client rights to privacy and confidentiality in the preparation and handling of records, especially in relation to the communication of client information with third parties.
- Prepare accurate and concise screening, intake, and assessment reports.
- Record treatment and continuing care plans that are consistent with agency standards and comply with applicable administrative rules.
- Record progress of client in relation to treatment goals and objectives.
- Prepare accurate and concise discharge summaries.
- Document treatment outcome using acceptable methods and instruments.

**ADVANCED TECHNIQUES FOR ADDICTION COUNSEL**

ACED 205

3 Credits

33 hours of lecture

Development of skills needed to establish and maintain effective helping relationships with clients. Integration of relapse prevention counseling in treatment. Prerequisite: ACED 101 or CDEP 101, ACED 201 or CDEP 120/201, ACED 122 or CDEP 122, and consent of Instructional Unit. [GE]

**Course Outcomes:**

- Establish a helping relationship with the client characterized by warmth, respect, genuineness, concreteness and empathy.
- Facilitate the client's engagement in the treatment and recovery process.
- Work with the client to establish realistic, achievable goals consistent with achieving and maintaining recovery.
- Promote client knowledge, skills and attitudes that contribute to a positive change in substance use behaviors.
- Encourage and reinforce client actions determined to be beneficial in progressing toward treatment goals.
- Work appropriately with the client to recognize and discourage all behaviors inconsistent with progress toward treatment goals.
- Recognize how, when and why to involve the client's significant others in the enhancing or supporting the treatment plan.
- Promote client knowledge, skills and attitudes consistent with the maintenance of health and prevention of human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS), tuberculosis (TB), sexually transmitted diseases (STDs) and other infec
- Facilitate the development of basic and life skills associated with recovery.
- Adapt counseling strategies to the individual characteristics of the client, including but not limited to, disability, gender, sexual orientation, developmental level, culture, ethnicity, age and health status.
- Make constructive therapeutic responses when client's behavior is inconsistent with stated goals.
- Apply crisis management skills.
- Facilitate the client's identification, selection and practice of strategies that help sustain the knowledge, skills and attitudes needed for maintaining treatment progress and preventing relapse.

**FIELD PLACEMENT I**

ACED 210

1 - 6 Credits

198 hours of clinical

Ten or twenty hours weekly of on-the-job supervised experience applying counseling theories and practiced. Addiction Counselor Competencies are used as a framework for assessment.

Prerequisite: 30 hours of ACED or CDEP courses including ACED 136 or CDEP 135 and ACED 122, possession of the WA state CDPT credential and instructor's permission. [GE]

**Course Outcomes:**

- 1. Summarize the client's personal and cultural background, treatment plan, recovery progress, and problems inhibiting progress of purposes of assuring quality of care, gaining feedback, and planning changes in the course of treatment.
- Understand terminology, procedures, and roles of other disciplines related to the treatment of substance abuse disorders.
- Contribute as part of a multi-disciplinary treatment team.
- Apply confidentiality regulations appropriately.
- Demonstrate respect and non-judgmental attitudes toward clients in all contacts with community professionals and agencies.

**FIELD PLACEMENT II**

ACED 211

1 - 6 Credits

198 hours of clinical

Ten or twenty hours weekly of on-the-job supervised experience applying counseling theories and practices. Addiction Counselor Competencies will be used as a framework for assessment.

Prerequisite: Grade of "C" or better in ACED 210 or CDEP 210 and instructor's permission. [GE]

**Course Outcomes:**

- Demonstrate the achievement of a beginning competency in basic treatment skills consistent with the necessary knowledge, skills, and attitudes of standard practice in the field of chemical dependency counseling.
- Document progress toward meeting the competency requirements under the Washington Department of Health criteria for certification as a Chemical Dependency Professional.
- Work with the Agency to formulate a Learning Plan designed to ensure valid evaluation of progress toward attaining designated competency levels. Also evaluate his/her own learning, in regards to knowledge, skills and attitudes in the field experience.

**SELECTED TOPICS**

ACED 280

1 - 3 Credits

33 hours of lecture

Special topics in chemical dependence as listed in the quarterly class schedule. May be repeated for credit. Prerequisite: ENGL 101. [GE]

**Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this topic.

**SPECIAL PROJECTS**

ACED 290

1 - 5 Credits

Opportunity to plan, organize, and complete special projects approved by the instructional unit.  
Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## Anthropology

### INTRODUCTION TO ARCHAEOLOGY

ANTH&204

5 Credits

55 hours of lecture

Study of ancient and prehistoric cultures of the world. Introduction to theories and techniques of archaeological investigation. Formerly ANTH 102. [SE,SS]

**Course Outcomes:**

- Outline the history of the discipline of archaeology, from social theory to its current science-based applications.
- Describe how the diversity of human social behavior is illustrated through archaeological finds.
- Demonstrate appreciation of the processes of human cultural change and common threads in human cultural development.
- Demonstrate understanding of how anthropologists apply the scientific method using modern archaeological techniques and technology in pre-field research, site survey, and excavation.
- Evaluate archaeological texts and films critically.
- Demonstrate understanding multiple perspectives and controversies regarding the ethical use of archaeological practices and remains.

### INTRODUCTION TO CULTURAL ANTHROPOLOGY

ANTH&206

5 Credits

55 hours of lecture

The concept of culture, a study of cultures directed toward a broad understanding of how people view their world, cope with their environments, and organize their lives. Formerly ANTH 103. [SE, SS]

**Course Outcomes:**

- Demonstrate understanding of how anthropology's holistic and relativistic perspectives have developed since the founding of the discipline to its current theoretical focus.
- Explain the significance and controversies of accepted anthropological terms regarding religion, politics, subsistence, kinship, gender and other issues of cultural diversity.
- Describe the institutions and practices governing human societies in the context of a culture's global and historical circumstances.
- Describe how modern inequalities between economic classes, genders and "races" developed historically and perpetuate cultural misunderstandings today.
- Acquire, analyze, and evaluate written source material critically.

### BIOANTHROPOLOGY

ANTH&215

5 Credits

44 hours of lecture - 22 hours of lab

The biological study of human beings and primates, past and present: human genetics, biological adaptation and variation, evolutionary principles, the primate order, human origins, and applied biological anthropology. Fulfills social science or laboratory science (lab) distribution credit. Formerly ANTH 101. [SE, SS, NS]

**Course Outcomes:**

- Apply scientific method to describe and explain human and non-human primate behavioral and biological variation.
- Demonstrate understanding of the forces of evolution and their impact on genes, DNA, and species variation.
- Demonstrate knowledge of dominant theories regarding human and primate evolution.
- Identify key associations between biology and behavior in both living and extinct species.
- Trace anatomical changes occurring throughout human evolutionary and cultural history.
- Develop familiarity with the techniques and research methods practicing bioanthropologists employ today.

**PRIMATOLOGY**

ANTH&245

5 Credits

55 hours of lecture

Reviews current understandings of behavioral and biological diversity in the Primate order. Focus is on living primates and how they are distributed across the globe, the major biological differences between primate groups and what field and captive research has discovered regarding the range of social behaviors, group patterns, foods, communication systems and cognitive abilities they display. Students practice basic research techniques used to study primate behavior in the wild and examine the major challenges faced by modern conservation efforts in protecting wild primate habitats. [NS, SE]

**Course Outcomes:**

- Evaluate current scientific theories regarding the origin of existing primate biological variation.
- Use observations of primate behavior to identify connections between primate behavior and its socioecological contexts.
- Identify and use basic techniques employed in field primatology.
- Understand the realities of primate conservation including habitat protection, human/non-primate interactions, and the maintenance of dynamic wild populations in an era of rapid global change.

**SELECTED TOPICS**

ANTH 280

1 - 3 Credits

33 hours of lecture

Varying topics for anthropology as listed in the quarterly class schedule. May be repeated for credit. [SE]

**Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of Anthropology.

## **SPECIAL PROJECTS**

ANTH 290

1 - 5 Credits

Opportunity to plan, organize, and complete special projects approved by the department.

Prerequisite: Consent of Instructional Unit. [SE]

### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## **Art**

### **DRAWING I**

ART 103

3 Credits

22 hours of lecture - 22 hours of lab

Using line and shape effectively. Contour line and gesture. Emphasis on expressive content and accurate seeing. [HB, SE] [PNP]

### **Course Outcomes:**

- Display drawing proficiency and accuracy in articulating basic design elements and principles such as shape, line, tone, volume, texture, scale, proportion, etc.
- Display skill in rendering and sensitivity in mark-making to create the illusion of form, volume, mass, texture, animation and space.
- Display technical skill and care in handling a variety of materials for their expressive potential.
- Analyze and articulate compositional elements in a formal review/ critique process.

### **OBSERVATIONAL DRAWING**

ART 104

4 Credits

22 hours of lecture - 44 hours of lab

Continuation of ART 103. Analysis and control of value, texture and color using a variety of techniques and drawing materials. Emphasis on accurate seeing. Prerequisite: ART 103. [HB, SE] [PNP]

### **Course Outcomes:**

- Produce the illusion of three dimensional space, light, and atmosphere on a two dimensional surface.
- Display drawing proficiency using color and tone.
- Interpret and utilize current and historical topics and trends in drawing, including the work of other artists, methods, materials and resources.
- Create drawings that are engaging in terms of composition and content.

### **CONTEMPORARY DRAWING PRACTICES**

ART 105

4 Credits

22 hours of lecture - 44 hours of lab

An interdisciplinary exploration of creative, critical, and analytical approaches to contemporary content and composition in a variety of media. Prerequisite: ART 103. [HB, SE] [PNP]

### **Course Outcomes:**

- Interpret and utilize current and historical topics and trends in drawing, including the work of other artists, methods, materials and resources.
- Display drawing proficiency in the creation of unique and visually engaging works.
- Develop approaches to solving open-ended problems.
- Display technical skill and care in handling a variety of materials for their expressive potential.
- Analyze and articulate compositional elements and conceptual concerns in a formal review/critique process.

### **CREATIVITY AND CONCEPT**

ART 110

3 Credits

22 hours of lecture - 22 hours of lab

Introduction to creativity, conceptual thinking, and visual problem solving for artists, designers and other creative professionals. Focus on strategies and methods for developing original ideas such as brainstorming, sketching, automatic writing, etc; then translating those ideas to visual form using a variety of media and techniques. Hands-on studio activities contextualized by theoretical readings and in-class discussions. [HB, SE]

#### **Course Outcomes:**

- Develop approaches to solving open-ended problems.
- Employ active listening, observation, brainstorming, diagramming and other problem-solving strategies.
- Express yourself clearly, listen critically to other perspectives, and seek and respond to feedback.
- Construct explanations for design solutions that express intent, strategy and compositional choices.

### **TWO-DIMENSIONAL DESIGN**

ART 115

4 Credits

22 hours of lecture - 44 hours of lab

Foundation art course working with line, shape, value, texture and the principles of spatial organization. May include designing with computers. [HB, SE] [PNP]

#### **Course Outcomes:**

- Identify, analyze and apply the basic elements and principles of two dimensional design.
- Explain and employ two dimensional design vocabulary and concepts.
- Demonstrate technical skill, care in handling materials and purposeful execution.
- Create original and coherent compositions by synthesizing design elements and integrating design principles.

### **COLOR THEORY AND DESIGN**

ART 116

4 Credits

22 hours of lecture - 44 hours of lab

Continuation of ART 115. Color theory and the application of color to specific design problems. Includes designing with computers. Prerequisite: ART 115. [HB, SE] [PNP]

### **Course Outcomes:**

- Identify, analyze and apply the basic elements and principles of color theory and design.
- Demonstrate technical skill, care in handling materials and purposeful execution.
- Explain and employ color theory and design vocabulary and concepts.
- Synthesize design skills, technique, craftsmanship and contextual awareness to create innovative, coherent and complete works.

### **THREE-DIMENSIONAL DESIGN**

ART 117

4 Credits

22 hours of lecture - 44 hours of lab

Introduction to sculptural design concepts including volume, space and scale. Explores a variety of media and construction techniques, with a focus on creative problem solving in the context of sculptural objects. [HB, SE] [PNP]

#### **Course Outcomes:**

- Identify, analyze and apply the basic elements and principles of three dimensional design.
- Explain and employ three dimensional design vocabulary and concepts.
- Apply critical thinking and problem solving skills in creating unique solutions to assignments.
- Demonstrate technical skill, care in handling materials and purposeful execution.

### **TIME-BASED ART AND DESIGN**

ART 118

4 Credits

22 hours of lecture - 44 hours of lab

Introduction of concepts and tools for the design of art to explore the transaction between people, objects and situations over time. Exploring the personal, cultural, formal, political, and historical aspects of the medium through readings, writings and critical reflection of relevant 20th and 21st century artworks, as well as the principles and aesthetics of moving imagery including timing, pacing, repetition, editing, composition, process and the link between sound and image. Activities include class discussions, software and equipment tutorials and studio time for experimental project development. [HA, SE]

#### **Course Outcomes:**

- Identify, analyze and apply the basic elements and principles of time-based art and design.
- Explain and employ vocabulary and concepts in time-based art and design.
- Identify, evaluate and integrate the history and context of art and design, as well as contemporary trends, into one's own work.
- Synthesize design skills, technique, craftsmanship and contextual awareness to create innovative, coherent and complete works.
- Demonstrate skill in manipulating and accessing technology, resources and materials as relates to the medium of time-based art.

### **PHOTOGRAPHIC STORYTELLING**

ART 131

3 Credits

22 hours of lecture - 22 hours of lab

Introduction to photographic storytelling. Topics include: examining historical use of the medium, analysis of narrative photographic genres, and the creation of a personal photographic essay.



Emphasis placed on seeing photographically and creating narrative. Includes field trip. Appropriate for non-majors and beginning photo students. Previous camera experience helpful, but not required. Student must provide digital camera. [HA, SE]

**Course Outcomes:**

- Create visually effective photographs.
- Analyze and discuss photos and photo series, using discipline appropriate vocabulary, in terms of composition, technique, content and message.
- Produce a visual narrative comprised of a series of photographs (and possibly text) that explores a particular theme and/or concept and succeeds in communicating an idea or message to its audience.
- Demonstrate a familiarity with the work of established photographic storytellers and an understanding of how their work communicates specific ideas and meanings.

**PHOTOGRAPHY I**

ART 140

4 Credits

22 hours of lecture - 44 hours of lab

Basic camera handling and darkroom procedures, metering, film processing, printing, and learning to see photographically. All work in black-and-white. Student must provide manual 35mm camera. A limited number of cameras are available for checkout in the Art Department. [HB, SE] [PNP]

**Course Outcomes:**

- Demonstrate skill with photographic tools, techniques, materials and facilities in creating unique and visually effective works.
- Apply design elements and principals specific to the art of photography.
- Practice methods of presenting photographs.
- Interpret and utilize current and historical topics and trends in photography, including contemporary artists, methods and resources.
- Construct verbal and written explanations for photographic solutions that address technique, intent, and compositional and design choices using appropriate discipline-based vocabulary.

**PHOTOGRAPHY II**

ART 141

4 Credits

22 hours of lecture - 44 hours of lab

Continuation of ART 140. Special darkroom and studio techniques. Introduction to the 4x5 and to computer manipulation of photographs. Particular emphasis on self-expression and print quality. Includes field trips to local galleries. Prerequisite: ART 140 or equivalent or consent of Instructional Unit. [HB, SE] [PNP]

**Course Outcomes:**

- Demonstrate skill with photographic tools, techniques, materials and facilities in creating unique and visually effective works.
- Apply design elements and principles specific to the art of photography.
- Practice methods of presenting photographs.
- Analyze and utilize historical and current topics in photography, including contemporary artists, methods and resources.
- Construct verbal and written explanations for photographic solutions that address technique, intent and compositional and design choices using appropriate, discipline based vocabulary.

### **PHOTOGRAPHY III**

ART 142

4 Credits

22 hours of lecture - 44 hours of lab

Continuation of ART 141. Opportunities to develop additional technical skill and continued exploration of self-expression. Prerequisite: ART 141 or equivalent. [HB, SE] [PNP]

#### **Course Outcomes:**

- Demonstrate skill with photographic tools, techniques, materials and facilities in creating unique and visually effective works.
- Apply design elements and principles specific to the art of photography.
- Practice methods of presenting photographs.
- Analyze and utilize historical and current topics in photography, including contemporary artists, methods and resources.
- Construct verbal and written explanations for photographic solutions that address technique, intent and compositional and design choices using appropriate discipline based vocabulary.

### **DIGITAL PHOTOGRAPHY I**

ART 145

3 Credits

22 hours of lecture - 22 hours of lab

Introduction to digital camera operation, image manipulation software use, seeing skills development, and expressive sensitivity. Special emphasis on the elements and principles of photographic composition, ethical issues, aesthetic vocabulary, and the study of how images communicate. Includes lecture, supervised lab, and group critiques. Familiarity with Adobe Photoshop will be helpful. Students must provide digital camera; a limited number of digital cameras are available for student checkout in the Art Department. [HB, SE]

#### **Course Outcomes:**

- Create, analyze and discuss photographs in terms of visually effective communication and composition.
- Demonstrate proficient camera operation and employ various digital technologies to edit, optimize, organize and archive photographs.
- Utilize different forms of output for digital photographs, including but not limited to, ink-jet printing and matting, on-line file sharing or digital platforms.
- Interpret and utilize current topics and trends in digital photography, including contemporary artists, methods and resources.

### **DIGITAL PHOTOGRAPHY II**

ART 146

4 Credits

22 hours of lecture - 44 hours of lab

Digital imagery as self-expression. Refining technical skills, exploring the unique opportunities of the digital medium, and examining current trends via field trips and critiques. Practicing effective small group discussion to demonstrate visual literacy. Prerequisite: ART 145 or both ART 140 and GRCP 120, or consent of instructional unit. [HB, SE]

#### **Course Outcomes:**

- Create, analyze and discuss photographs in terms of visually effective communication and composition.

- Demonstrate proficient camera operation and employ various digital technologies to edit, optimize, organize and archive photographs.
- Utilize different forms of output for digital photographs including ink-jet printing and matting, on-line file sharing, digital platforms or other forms of output.
- Analyze and utilize topics and trends in digital photography, including contemporary artists, methods and resources.

## **ART APPRECIATION**

ART 151

3 Credits

33 hours of lecture

The visual arts with which we come in contact every day. Ways contemporary and historic creative expression influence present day living and thinking. Personal contact with many art forms. Some hands-on experience. Especially for non-majors. [HA, SE]

### **Course Outcomes:**

- Explain artistic elements as reflections of a cultural context.
- Use discipline appropriate vocabulary.
- Describe specific visual characteristics in works of art.

## **GRAPHIC DESIGN EXPLORATION**

ART 172

3 Credits

22 hours of lecture - 22 hours of lab

Theoretical survey of Graphic Design and its cultural and historical context. Intended for both non-majors and pre-majors; focus on how Graphic Design functions as a mode of visual communication and its role in society, as well as exploring Graphic Design as a possible career. [HA, SE]

### **Course Outcomes:**

- Analyze various target audiences and the roles of a graphic designer in consumer society.
- Practice methods of developing effective, creative and technically competent graphic design solutions.
- Invent graphic design solutions within the context of art and design history, popular culture, and social and global human factors.
- Explain and employ appropriate graphic design vocabulary and concepts.

## **GRAPHIC DESIGN STUDIO I**

ART 173

4 Credits

22 hours of lecture - 44 hours of lab

Introduction to the elements and principles of graphic design and the design process through a series of hands-on projects stressing visual literacy, unity of form and utilizing common tools of the trade, including computers. Prerequisite: A grade of "C" or better in CGT 101 or 102, or equivalent computer experience. [HB, SE]

### **Course Outcomes:**

- Develop and/or work within a design process using iterative improvement and revision cycles.
- Proficiently utilize graphic design tools, including computers and software.

- Manipulate abstract, representational or symbolic form to communicate a specific message utilizing the elements and principles of design.
- Utilize analysis and critique methods to improve creative and technical strategies.
- Construct and respond to verbal explanations for graphic design solutions that address intent, strategy and compositional choices, using appropriate discipline based vocabulary.

## **TYPOGRAPHY**

ART 174

4 Credits

22 hours of lecture - 44 hours of lab

Typography and its application in graphic design projects. Topics include the history and classification of typeface; choosing and combining fonts; typesetting on the computer, including issues of legibility, readability and spacing, and the creation of original letterforms. Working knowledge of Mac OS and Adobe software is recommended. Offered as the second of three courses in graphic design: Art 173, 174, 273. Prerequisite: A grade of "C" or better in CGT 101 or 102, or equivalent computer experience. [HB, SE]

### **Course Outcomes:**

- Manipulate abstract, representational or symbolic form to communicate unique, relevant and specific messages within a project-based graphic design environment.
- Utilize analysis and critique methods to improve creative and technical strategies.
- Proficiently utilize graphic design tools, including computers and software.
- Construct and respond to verbal explanations for graphic design solutions that address intent, strategy and compositional choices, using appropriate discipline based vocabulary.

## **CERAMICS I: POTTERY**

ART 180

4 Credits

22 hours of lecture - 44 hours of lab

Working with clay. Hand-building techniques of pinch, coil, slab and press mold. Introduction to the potter's wheel. Basic glazing techniques. [HB, SE] [PNP]

### **Course Outcomes:**

- Demonstrate craftsmanship and technical skill in ceramic hand-building, wheel-throwing and glazing techniques.
- Apply design skills specific to the creation of ceramic pieces.
- Synthesize design skills, idea development, technique and craftsmanship to create innovative, coherent works.
- Explain and employ appropriate discipline based vocabulary.

## **CERAMICS II: POTTERY**

ART 181

4 Credits

22 hours of lecture - 44 hours of lab

Potter's wheel techniques of centering and throwing a variety of shapes, attaching handles and spouts, and fitting lids. Optional advanced hand-building assignments offered. Introduction to kiln stacking and firing. Prerequisite: ART 180. [HB, SE] [PNP]

### **Course Outcomes:**

- Demonstrate craftsmanship and technical skill in ceramic hand-building, wheel-throwing and

glazing techniques.

- Apply design skills particular to executing ceramic pieces.
- Synthesize design skills, idea development, technique and craftsmanship to create innovative, coherent works.
- Explain and employ appropriate discipline based vocabulary.
- Identify, evaluate, and integrate the history and context of ceramic art and design, as well as contemporary trends into one's own work.

### **CERAMICS III: POTTERY**

ART 182

4 Credits

22 hours of lecture - 44 hours of lab

Combining hand and wheel techniques to create original pieces as sculpture or for specific functions. Mold making, slip casting, underglazing, and kiln firing. Prerequisite: ART 181. [HB, SE] [PNP]

#### **Course Outcomes:**

- Demonstrate craftsmanship and technical skill in ceramic hand-building, wheel-throwing and glazing techniques.
- Apply design skills particular to executing ceramic pieces.
- Synthesize design skills, idea development, technique and craftsmanship to create innovative, coherent works.
- Explain and employ appropriate discipline based vocabulary.
- Identify, evaluate and integrate the history and context of ceramic art and design, as well as contemporary trends, into one's own work.

### **METAL ARTS I**

ART 189

4 Credits

22 hours of lecture - 44 hours of lab

Aesthetic expression within the context of applied design using metal. Design and technical skills will be equally emphasized. Fabrication and design of jewelry and other objects of metal. History of the fabrication of metal objects in other cultures. [HB, SE] [PNP]

#### **Course Outcomes:**

- Apply visual awareness, perception, acuity and a sense of design in viewing and creating artwork.
- Apply technical skill, care in handling of materials, awareness of process and purposeful execution appropriate to the discipline.
- Interpret and explain discipline appropriate vocabulary.
- Synthesize design skills, technique, craftsmanship and contextual awareness to create innovative, coherent and complete works.

### **METAL ARTS II**

ART 190

4 Credits

22 hours of lecture - 44 hours of lab

Continuation of ART 189. Design and technical skills in the raising and forming of metal vessels. Development of metal arts in Europe from the Middle Ages to the present. Prerequisite: ART 189. [HB, SE] [PNP]

**Course Outcomes:**

- Apply visual awareness, perception, acuity and a sense of design in viewing and creating artwork.
- Apply technical skill, care in handling of materials, awareness of process and purposeful execution appropriate to the discipline.
- Interpret and explain discipline appropriate vocabulary.
- Synthesize design skills, technique, craftsmanship and contextual awareness to create innovative, coherent and complete works.

**METAL ARTS III**

ART 191

4 Credits

22 hours of lecture - 44 hours of lab

Continuation of ART 190. Design and technical skills applied to casting and forging of metal objects. Overview of contemporary metal artists and their work. Prerequisite: ART 190. [HB, SE] [PNP]

**Course Outcomes:**

- Apply visual awareness, perception, acuity and a sense of design in viewing and creating artwork.
- Apply technical skill, care in handling materials, awareness of process and purposeful execution appropriate to the discipline.
- Interpret and explain discipline appropriate vocabulary.
- Synthesize design skills, technique, craftsmanship and contextual awareness to create innovative, coherent and complete works.

**COOPERATIVE WORK EXPERIENCE**

ART 199

1 - 5 Credits

165 hours of clinical

Supervised work experience in art or photography. Completion of specific learning objectives and employer evaluation. Completion of, or concurrent enrollment in, HDEV 195, 198, or 200 required. Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Fulfill the job requirements of their internship provider.

**THE HUMAN FIGURE I**

ART 203

4 Credits

22 hours of lecture - 44 hours of lab

Working from the male and female form in media already familiar to the student. Emphasis on accurate seeing. Prerequisite: ART 103 or consent of Instructional Unit. [HB, SE]

**Course Outcomes:**

- Produce the illusion of three dimensional space, light and atmosphere on a two dimensional surface.
- Display drawing proficiency using color and tone.
- Interpret and utilize current and historical topics and trends in drawing, including the work of

- other artists, methods, materials and resources.
- Create drawings that are engaging in terms of composition and content.

## **THE HUMAN FIGURE II**

ART 204

4 Credits

22 hours of lecture - 44 hours of lab

Working from the male and female form in media already familiar to the student. Emphasis on expressive power and individual development. Prerequisite: ART 203. [HB, SE]

### **Course Outcomes:**

- Produce the illusion of three dimensional space, light and atmosphere on a two dimensional surface.
- Display drawing proficiency using color and tone.
- Interpret and utilize current and historical topics and trends in drawing, including the work of other artists, methods, materials and resources.
- Create drawings that are engaging in terms of composition and content.

## **DIGITAL ILLUSTRATION**

ART 208

4 Credits

22 hours of lecture - 44 hours of lab

Developing digital illustration skills by using Adobe software with a focus on developing a personal voice, and exploring various styles and techniques. Activities include a series of hands-on creative projects. Prerequisite: A grade of "C" or better in CGT 102. [HB, SE]

### **Course Outcomes:**

- Manipulate abstract, representational or symbolic forms to construct effective, relevant and creative design solutions, utilizing appropriate design elements and principles.
- Skillfully utilize and manipulate traditional and digital media to create original visual solutions.
- Develop and/or work within a design process using iterative improvement and revision cycles.
- Practice and articulate ethical behavior in utilizing found images.
- Construct and respond to verbal and written explanations for design solutions that address intent, strategy and compositional choices, using appropriate discipline-based vocabulary.

## **PORTFOLIO DEVELOPMENT**

ART 215

3 Credits

22 hours of lecture - 22 hours of lab

Preparation and presentation of individual portfolio for submission to potential employers, galleries and educational institutions. Topics include traditional and digital portfolio formats, photographing, writing, critiquing, and speaking about artwork. Activities include selecting, refining, and incorporating projects from the entire program into portfolios. Instructors play advisory role, culminating with formal portfolio reviews by instructors, peers, and industry professionals. Prerequisite: Consent of Instructional Unit. [SE]

### **Course Outcomes:**

- Develop visual, verbal and written forms of presenting artwork and ideas, including editing

portfolio selections.

- Analyze and discuss artwork for composition, technique and communication.
- Practice methods of documenting artwork.
- Identify potential employers, galleries, or transfer institutions.
- Write an artist's statement and prepare a CV.

## **ART HISTORY: ANCIENT TO LATE ANTIQUE**

ART 220

5 Credits

55 hours of lecture

Survey of visual arts in the Mediterranean, the Near East, and in Northern Europe, covering the first arts of ancient humans through the Late Antique, 40,000 BCE-600 CE. Topics include why art and architecture exist and how they function in society; how religion, culture, artistic tradition, and patronage create, support, and influence art and architecture; how art and architecture achieve their effects, using materials, technique, style, and composition. [HA, SE]

### **Course Outcomes:**

- Explain artistic elements as reflections of a cultural context.
- Use discipline appropriate vocabulary.
- Describe specific visual characteristics in works of art.

## **ART HISTORY: MEDIEVAL-RENAISSANCE**

ART 221

5 Credits

55 hours of lecture

Survey of visual arts and architecture of Early Medieval through Late Renaissance Europe. 500-1600 CE. Topics include why art and architecture exist and how they function in society, how religion, culture, artistic tradition, and patronage create, support, and influence art and architecture, how art and architecture achieve their effects, using materials, technique, style, and composition. [HA, SE]

### **Course Outcomes:**

- Explain artistic elements as reflections of a cultural context.
- Use discipline appropriate vocabulary.
- Describe specific visual characteristics in works of art.

## **ART HISTORY: BAROQUE-MODERN**

ART 222

5 Credits

55 hours of lecture

Survey of the visual arts and architecture of Baroque through Modern Europe, ca. 1600-1914 CE. Topics include why art and architecture exist, and how they function in society; how religion, culture, artistic tradition, and patronage create, support, and influence art and architecture; how art and architecture achieve their effects, using materials, technique, style, and composition. [HA, SE]

### **Course Outcomes:**

- Explain artistic elements as reflections of a cultural context.
- Use discipline appropriate vocabulary.
- Describe specific visual characteristics in works of art.



## **ART IN THE TWENTIETH CENTURY**

ART 223

5 Credits

55 hours of lecture

Survey of the visual arts and architecture of the Modern and Post-modern Periods, 1900-Present. Topics include why art and architecture exist, and how they function in society; how religion, culture, artistic tradition, and patronage create, support, and influence art and architecture; how art and architecture achieve their effects, using materials, technique, style, and composition. [HA, SE]

### **Course Outcomes:**

- Explain artistic elements as reflections of a cultural context.
- Use discipline appropriate vocabulary.
- Describe specific visual characteristics in works of art.

## **ART HISTORY: ASIAN ART**

ART 225

5 Credits

55 hours of lecture

Survey of the visual arts and architecture of India, China, and Japan. Topics include why art and architecture exist, and how they function in society; how religion, culture, artistic tradition, and patronage create, support, and influence art and architecture; how art and architecture achieve their effects, using materials, technique, style, and composition. [HA, SE]

### **Course Outcomes:**

- Explain artistic elements as reflections of a cultural context.
- Use discipline appropriate vocabulary.
- Describe specific visual characteristics in works of art.

## **SURVEY OF NON-WESTERN ART**

ART 226

5 Credits

55 hours of lecture

Introduction to the visual arts and artifacts of the non-Western world, from prehistory to the present, to include the Middle East, the Pacific Islands, Africa, and the Americas. This survey course examines cultural and historical traditions, both in the secular and religious realms, as well as international contemporary art issues. Differences between Western and non-Western theories of art, aesthetics, values, and function will be explored. [HA, SE]

### **Course Outcomes:**

- Describe specific visual characteristics in works of art.
- Use discipline appropriate vocabulary.
- Explain artistic elements as reflections of a cultural context.

## **WOMEN ARTISTS THROUGH HISTORY**

ART 250

5 Credits

55 hours of lecture

Historical survey exploring themes in women's art and challenges women artists faced as professionals within their respective cultures; in-depth study of women artists working in Western traditions. [HA, SE]

**Course Outcomes:**

- Analyze patterns of power, privilege and inequality.
- Explain artistic elements as reflections of a cultural context.
- Use discipline appropriate vocabulary.
- Describe specific visual characteristics in works of art.

**PAINTING I**

ART 257

4 Credits

22 hours of lecture - 44 hours of lab

Introduction to materials and methods of oil and/or acrylic painting. Includes color theory, canvas stretching, and painting from still-life and portrait. Prerequisite: ART 103 or 115. [HB, SE]

**Course Outcomes:**

- Apply technical skill in stretching canvas, mixing paint, rendering objects, and the measuring and placement of forms in space.
- Display design skills in the compositional arrangement of shape, line, color, value, etc. within a painting.
- Critique works in terms of technique, design, composition and content, using discipline appropriate vocabulary.
- Synthesize design skills, technique, craftsmanship and contextual awareness to create innovative, coherent and complete works.

**PAINTING II**

ART 258

4 Credits

22 hours of lecture - 44 hours of lab

Continued work with acrylic and oil painting. Emphasis on line, color and pattern as expressive elements. Weekly group discussions. Prerequisite: ART 257. [HB, SE]

**Course Outcomes:**

- Apply technical skill in stretching canvas, mixing paint, rendering objects, and the measuring and placement of forms in space.
- Display design skills in the compositional arrangement of shape, line, color, value, etc. within a painting.
- Critique works in terms of technique, design, composition and content, using discipline appropriate vocabulary.
- Synthesize design skills, technique, craftsmanship and contextual awareness to create innovative, coherent and complete works.

**PAINTING III**

ART 259

4 Credits

22 hours of lecture - 44 hours of lab

Continuation of ART 258. Continued development of problem-solving techniques related to composition and a variety of subjects. Prerequisite: ART 258. [HB, SE]

**Course Outcomes:**

- Apply technical skill in stretching canvas, mixing paint, rendering objects, and the measuring and placement of forms in space.
- Display design skills in the compositional arrangement of shape, line, color, value, etc. within a painting.
- Critique works in terms of technique, design, composition and content, using discipline appropriate vocabulary.
- Synthesize design skills, technique, craftsmanship and contextual awareness to create innovative, coherent and complete works.

**WATERCOLOR I**

ART 260

4 Credits

22 hours of lecture - 44 hours of lab

Introduction to materials and methods of watercolor painting techniques. Topics include color theory, vocabulary, and composition; working in realistic and abstract styles. Activities include in-class critique and discussion. Prerequisite: ART 103. [HB, SE]

**Course Outcomes:**

- Apply technical skill in preparing paper, mixing paint, rendering objects, and the measuring and placement of forms in space.
- Display design skills in the compositional arrangement of shape, line, color, value, etc. within a painting.
- Critique works in terms of technique, design, composition and content, using discipline appropriate vocabulary.
- Synthesize design skills, technique, craftsmanship and contextual awareness to create innovative, coherent and complete works.

**WATERCOLOR II**

ART 261

4 Credits

22 hours of lecture - 44 hours of lab

Intermediate level exploration of watercolor painting. Continued development of skills in color mixing and composition with an emphasis on fostering content and a personal creative voice through the material. Activities include in-class critique and discussion. Prerequisite: ART 260. [HB, SE]

**Course Outcomes:**

- Apply technical skill in preparing paper, mixing paint colors, rendering objects and the measuring and placement of forms in space.
- Display design skills in the compositional arrangement of shape, line, color, value, etc. within a painting.
- Critique works in terms of technique, design, composition and content, using discipline appropriate vocabulary.
- Synthesize design skills, technique, craftsmanship and contextual awareness to create innovative, coherent and complete works.

**WATERCOLOR III**

ART 262

4 Credits

22 hours of lecture - 44 hours of lab

Advanced level exploration of watercolor painting, with emphasis on developing one's own visual language through the material, experimentation and innovation with wet media and its expressive potential; student-initiated research and the creation of a unique body of work suitable for portfolio presentation. Activities include in-class critique and discussion. Prerequisite: ART 261. [HB, SE]

**Course Outcomes:**

- Apply technical skill in preparing paper, mixing paint colors, rendering objects and the measuring and placement of forms in space.
- Display design skills in the compositional arrangement of shape, line, color, value, etc. within a painting.
- Synthesize design skills, technique, craftsmanship and contextual awareness to create innovative, coherent and complete works.
- Critique works in terms of technique, design, composition and content, using discipline appropriate vocabulary.

**PUBLICATION PRODUCTION**

ART 270

1 - 9 Credits

66 hours of lecture - 66 hours of lab

Design and production skills for publications, intended for Phoenix staff, graphic design students and others interested in the publications field. Topics include: Adobe InDesign for layout, preparing for printing, editing, proofing, creating promotional materials, working with printers, budgeting, managing the project and working with a team. Includes field trip. Prerequisite: Consent of Instructional Unit. [HB, SE] [PNP]

**Course Outcomes:**

- Manipulate abstract, representational or symbolic form to communicate a specific message.
- Effectively target a graphic design solution to a particular audience.
- Create graphic design projects that are relevant and have a unique voice.
- Develop approaches to solving open-ended problems.
- Utilize research findings to help shape creative or technical strategies.
- Consistently produce projects at a near-professional level of craftsmanship.
- Develop self-awareness and interpersonal communication skills.
- Work cooperatively as part of a team and contribute in both leadership and supportive roles.
- Build relationships of trust, mutual respect and productive interactions.
- Express yourself clearly, listen critically to other perspectives, and seek and respond to feedback.
- Be flexible, adapt to unanticipated situations and resolve conflicts.
- Produce well planned projects, anticipating potential problems.
- Work with printers, programmers and other third parties to determine pricing estimates and production workflow.
- Share resources, manage time effectively and adhere to deadlines and deliverables.
- Develop file management skills to effectively categorize, maintain, find and archive digital resources.
- Construct verbal explanations for graphic design solutions that address intent, strategy and compositional choices.
- Articulate the environmental impact of graphic design projects and identify sustainable practices.

## **PUBLICATION DESIGN**

ART 271

4 Credits

22 hours of lecture - 44 hours of lab

Graphic design principles as applied to the discipline of editorial publications. Topics include an exploration of publication formats, designing for target audience groups, page layout, adapting material for online delivery, and culminates with an individual book project with a heavy emphasis on interpreting original content into sequential visual form. Course may be taken concurrently with ART 270 Publication Production. Prerequisite: A grade of "C" or better in ART 174. [HB, SE]

### **Course Outcomes:**

- Manipulate abstract, representational or symbolic form to communicate a specific message.
- Effectively target a graphic design solution to a particular audience.
- Create graphic design projects that are relevant and have a unique voice.
- Develop approaches to solving open-ended problems.
- Utilize research findings to help shape creative or technical strategies.
- Consistently produce projects at a near-professional level of craftsmanship.
- Develop self-awareness and interpersonal communication skills.
- Work cooperatively as part of a team and contribute in both leadership and supportive roles.
- Build relationships of trust, mutual respect and productive interactions.
- Express yourself clearly, listen critically to other perspectives, and seek and respond to feedback.
- Be flexible, adapt to unanticipated situations and resolve conflicts.
- Produce well planned projects, anticipating potential problems.
- Work with printers, programmers and other third parties to determine pricing estimates and production workflow.
- Share resources, manage time effectively and adhere to deadlines and deliverables.
- Develop file management skills to effectively categorize, maintain, find and archive digital resources.
- Construct verbal explanations for graphic design solutions that address intent, strategy and compositional choices.
- Articulate the environmental impact of graphic design projects and identify sustainable practices.

## **GRAPHIC DESIGN STUDIO II**

ART 273

4 Credits

22 hours of lecture - 44 hours of lab

Continuation of ART 173 with focus on layout, composition, messaging, technical considerations and functional constraints for various types of communication design disciplines such as editorial design, advertising and persuasive design, branding and identity. Topics include ethical considerations related to graphic design such as sustainability, public service, consumerism, global diversity and copyright issues. Prerequisite: A grade of "C" or better in ART 173. [HB, SE]

### **Course Outcomes:**

- Use appropriate art vocabulary.
- Describe, recognize and implement color theory in graphic design projects.
- Manipulate abstract, representational or symbolic form to communicate a specific message.
- Analyze target audience and needs to develop effective graphic design solutions.
- Consider how art history, design history, contemporary trends and pop culture provide context for graphic design.
- Develop an understanding of how cultural context, social human factors, and the global environment inform and shape design decisions.
- Create purposeful graphic design projects that communicate relevance and have a unique

voice.

- Anticipate the impact your work will have economically, environmentally, ethically, morally and spiritually, and its consequences.
- Develop approaches to solving open-ended problems.
- Utilize research findings to help shape creative or technical strategies.
- Utilize analysis and critique methods to improve creative and technical strategies.
- Understand the production workflow and how it informs design decisions.
- Consistently produce projects at a near-professional level of craftsmanship.
- Develop self-awareness and interpersonal communication skills.
- Work cooperatively as part of a team and contribute in both leadership and supportive roles.
- Build relationships of trust, mutual respect and productive interactions.
- Express yourself clearly, listen critically to other perspectives, and seek and respond to feedback.
- Be flexible, adapt to unanticipated situations and resolve conflicts.
- Produce well planned projects, anticipating potential problems.
- Prepare a client brief or proposal, including business, marketing, timeline and technical requirements.
- Share resources, manage time effectively and adhere to deadlines and deliverables.
- Construct verbal explanations for graphic design solutions that address intent, strategy and compositional choices.
- Write, debate and speak intelligently about art, design and technology.
- Practice methods of presentation including mounting and creative comprehensive mock-ups.
- Articulate the environmental impact of graphic design projects and identify sustainable practices.
- Discuss the role and influence graphic design has in a consumer society.

## **GALLERY PREPARATION**

ART 278

1 - 6 Credits

33 hours of lecture - 66 hours of lab

Various aspects of presenting art exhibits, including the care, handling and installation of artwork, arranging fixtures, lighting, exhibition layout design, writing press material, and other professional practices. Repeatable for up to 6 credits. Written consent of Instructional Unit required. [HB, SE]

### **Course Outcomes:**

- Apply and engage in hands-on experience working in the Archer Gallery on campus.
- Survey and apply the essential aspects of working in an art gallery, including professionalism and business skills.
- Survey and appraise Portland and Vancouver art galleries and communities.

## **SELECTED TOPICS**

ART 280

1 - 5 Credits

55 hours of lecture

Course focuses on selected topics in art. Topics vary and course theme and content change to reflect new topics. Because the course varies in content, it is repeatable for credit for different topics. [SE]

### **Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of art.

## **SPECIAL PROJECTS**

ART 290

1 - 6 Credits

Opportunity to plan, organize and complete special projects approved by the department.  
Prerequisite: Consent of Instructional Unit. [HB]

### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## **WELDED SCULPTURE THEORY I**

ART 295

1 Credits

11 hours of lecture

Background for students to begin to develop their own language of form. Through the use of a slide/lecture format, students will learn about contemporary sculpture. Discussions include design problems relating to the fabrication of a welded sculpture. Concurrent enrollment in WELD 120 required. [HB]

### **Course Outcomes:**

- Apply visual awareness, perception, acuity and a sense of design in viewing and/or creating artwork.
- Apply technical skill, care and handling of materials, awareness of process, and purposeful execution appropriate to the discipline.
- Interpret and explain discipline appropriate vocabulary.
- Synthesize design skills, technique, craftsmanship and contextual awareness to create innovative, coherent and complete works.

## **WELDED SCULPTURE THEORY II**

ART 296

1 Credits

11 hours of lecture

The design and fabrication of non-representational sculpture. Students will view slides of contemporary work and visit local sculpture sites to improve their understanding of the language of form. The MIG welding process as a sculptural tool will be explored. Concurrent enrollment WELD 121 required. Prerequisite: ART 295. [HB]

### **Course Outcomes:**

- Apply visual awareness, perception, acuity and a sense of design in viewing and/or creating artwork.
- Apply technical skill, care and handling of materials, awareness of process, and purposeful execution appropriate to the discipline.
- Interpret and explain discipline appropriate vocabulary.
- Synthesize design skills, technique, craftsmanship and contextual awareness to create innovative, coherent and complete works.

## **WELDED SCULPTURE THEORY III**

ART 297

1 Credits

11 hours of lecture

The design and fabrication of non-representational sculpture. Students will view slides of contemporary work and visit local sculpture sites to improve their understanding of the language of form. The MIG welding process as a sculptural tool will be explored. Concurrent enrollment in WELD 122 required. Prerequisite: ART 296. [HB]

**Course Outcomes:**

- Apply visual awareness, perception, acuity and a sense of design in viewing and/or creating artwork.
- Apply technical skill, care and handling of materials, awareness of process, and purposeful execution appropriate to the discipline.
- Interpret and explain discipline appropriate vocabulary.
- Synthesize design skills, technique, craftsmanship and contextual awareness to create innovative, coherent and complete works.

## American Sign Language

### AM SIGN LANGUAGE I

ASL& 121

5 Credits

55 hours of lecture

Introduction to American Sign Language emphasizing instruction and practice in expressive and receptive ASL skills. Focus on basic vocabulary, grammar, and cultural aspects of the deaf community. [SE, HA]

**Course Outcomes:**

- Develop basic conversational fluency in ASL using appropriate vocabulary, grammar and conversational behaviors.
- Develop basic knowledge of ASL linguistic structures.
- Gain basic understanding of Deaf culture, the Deaf community, and the importance of ASL to Deaf culture and the Deaf community.
- Gain a basic understanding of various perspectives on the life experiences of Deaf people (cultural, linguistic, educational, medical, social and political) and how these various perspectives interact with each other and impact Deaf people and their langu

### AM SIGN LANGUAGE II

ASL& 122

5 Credits

55 hours of lecture

Continuation of ASL I, developing skills for the student with a basic knowledge of ASL. Focus on grammar, idioms, vocabulary building, culture and language. Prerequisite: ASL& 121 or consent of the instructor. [SE, HA]

**Course Outcomes:**

- Continue developing basic conversational fluency in ASL using appropriate vocabulary, grammar and conversational behaviors.
- Continue developing knowledge of ASL linguistic structure.
- Increase understanding of Deaf culture, Deaf community and the value of ASL in Deaf culture.
- Increase understanding of various perspectives on the life experiences of Deaf people (cultural, linguistic, educational, medical, social and political) and how these various



perspectives interact with each other and impact Deaf people and their language.

### **AM SIGN LANGUAGE III**

ASL& 123

5 Credits

55 hours of lecture

Continuation of ASL II, developing grammar and vocabulary skills, with emphasis on students expressive and receptive skills. Topics include abstract concepts of language and the deaf culture's values, attitudes, and community. Prerequisite: ASL& 122 or consent of the instructor. [SE, HA]

#### **Course Outcomes:**

- Continue developing basic conversational fluency in ASL using appropriate vocabulary, grammar and conversational behaviors.
- Continue developing knowledge of ASL linguistic structure.
- Increase understanding of Deaf culture, Deaf community and the value of ASL in Deaf culture.
- Increase understanding of various perspectives on the life experiences of Deaf people (cultural, linguistic, educational, medical, social and political) and how these various perspectives interact with each other and impact Deaf people and their language.

### **AMERICAN DEAF CULTURE**

ASL 125

5 Credits

55 hours of lecture

This course will focus on topics in the culture of deaf people including studies of their beliefs, practices and language. [HA]

#### **Course Outcomes:**

- Recognize how deaf people perceive themselves.
- Appreciate the differences between the traditional views of deafness held by hearing people and those held by deaf people.
- Identify the criteria for membership in Deaf culture.
- Identify the rules of behavior, values, beliefs and etiquette of Deaf culture.
- Relate to Deaf people with the attitude that they are equals.
- Reject paternalism as a basis for dealing with Deaf people.
- Recognize the need for Deaf people to become empowered.

### **AM SIGN LANGUAGE IV**

ASL& 221

5 Credits

55 hours of lecture

First of the second-year sequence in studying the language of Deaf Americans. Topics include developing receptive and expressive skill and fluency; correct formation of signs, movement, rhythm, phrasing and clarity; vocabulary building; developing proficiency in ASL grammar. Students will develop a respect for ASL as a language, including acceptance and appreciation of its diverse regional and personal applications within its culture. Prerequisite: A grade of "C" or better in ASL& 123, demonstrated equivalent proficiency, or with permission of the instructor. [SE, HA]

#### **Course Outcomes:**

- Develop expressive skills and ASL fluency.
- Correct the formation of signs, movement, rhythm, phrasing, linking, and clarity.
- Recognize finger spelled words.
- Develop advanced vocabulary building.
- Increase proficiency in ASL grammar.
- Demonstrate an understanding of the Deaf culture and American Sign Language, with an appreciation for the linguistic and cultural diversity.
- Apply language-learning skills outside the language classroom by conversing with friends and/or community members.

## **AM SIGN LANGUAGE V**

ASL& 222

5 Credits

55 hours of lecture

Second of second-year sequence in studying the language of Deaf Americans. Topics include developing receptive and expressive skills in dialogue; applying ASL informal discourse styles; vocabulary building; developing proficiency in ASL grammar for recreation, social services, government and the workplace. Students will develop a respect for ASL as a language, including acceptance and appreciation of its diverse regional and personal applications within its culture. Prerequisite: A grade of "C" or better in ASL& 221, demonstrated equivalent proficiency, or with permission of the instructor. [SE, HA]

### **Course Outcomes:**

- Continue development of receptive and expressive skills.
- Continue recognizing finger spelled words.
- Decrease dependency on English syntax structures.
- Participate in simple conversations using expressive ASL skills, vocabulary, grammar, facial markers, and non-manual signals to engage in common interactions with Deaf people.
- Appreciate the linguistic and cultural diversity of Deaf people and behave with respect and understanding while meeting the skills.
- Apply language-learning skills outside the language classroom by conversing with friends and/or community members.

## **AM SIGN LANGUAGE VI**

ASL& 223

5 Credits

55 hours of lecture

Third of second-year sequence in studying the language of Deaf Americans. Continuing development of receptive and expressive skills and fluency. Emphasis on increasing vocabulary, classifier, phrases and grammatical usage with a decrease dependency on English syntax structure. Students will be able to initiate and converse in topics such as technical fields of work, college level academic subjects, politics, and religion with consistent grammatical accuracy with native ASL users. Prerequisite: A grade of "C" or better in ASL& 222, demonstrated equivalent proficiency, or with permission of the instructor. [SE, HA]

### **Course Outcomes:**

- Increase advanced vocabulary development.
- Participate in most formal and informal conversations on general topics.
- Reduce the level of signing errors that interferes with understanding and rarely disturbs native signers.
- Understand the Deaf culture and American Sign Language, with an appreciation for the linguistic and cultural diversity.

- Manage common interactions using enhanced vocabulary and grammar with fellow classmate.
- Produce, create, interpret, or critique works from a discipline in the humanities.
- Continue language-learning skills outside the classroom by conversing with friends and/or Deaf community members.

## **SELECTED TOPICS**

ASL 280

1 - 3 Credits

33 hours of lecture

Course focuses on selected topics in American Sign Language. Topics vary and course theme and content change to reflect new topics. Because the course varies in content, it is repeatable for credit for different topics. [PNP]

### **Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of American Sign Language.

## **SPECIAL PROJECTS**

ASL 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the department.  
Prerequisite: Consent of Instructional Unit.

### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## **Astronomy**

### **INTRO TO ASTRONOMY**

ASTR&101

5 Credits

44 hours of lecture - 22 hours of lab

Survey of astronomy designed primarily for non-science majors. Includes study of the sun, solar system, stellar evolution, galaxies and cosmology. Evening observation sessions required.  
Formerly ASTR 101. [NS,SE]

### **Course Outcomes:**

- Relate the basic concepts of astronomy to the world around us.
- Describe the Universe, its origin and evolution, and our place in it.
- Describe the methods of astronomy: the observations, pattern recognition, analysis and testing behind the facts, concepts and theories – the effective application of scientific methodology.
- Become scientifically literate with the topic of astronomy – distinguish between science and pseudoscience in claims about the natural world.
- Obtain and use scientific data in the forms of graphs, tables and images.
- Perform observations to experience the astronomical landscape and its pattern.

## Automotive Technology

### SAFETY, BASICS AND ELECTRIC

AUTO 108

8 Credits

66 hours of lecture - 44 hours of lab

Study of shop safety: technical introduction to dealerships and vehicles (TPORT); study of basic electrical components and systems with emphasis on troubleshooting by application of concepts (Toyota 623). Prerequisite: Eligibility for DVED 023, READ 100 and ENGL 097 and consent of Instructional Unit. [GE]

#### Course Outcomes:

- Properly conduct a capacitance and load test on a battery with specs.
- Safely conduct a cooling system pressure test, determine needed action and describe to your instructor.
- Diagnose cooling system performance issue as it relates to proper thermostat operation.
- Demonstrate proper alternator testing procedures for both the VAT-40 and factory based testing; identify and verify specifications for operation.
- Demonstrate proper starter draw testing procedures for both the VAT-40 and factory based testing; identify and verify specification for proper operation.

### BRAKES

AUTO 109

7 Credits

44 hours of lecture - 66 hours of lab

Continuing study of shop safety; study of servicing drum, disk, ABS brakes, and traction control: operation, construction, parts, identification, diagnosis and repair procedures (Toyota 552). Prerequisite: Grade of "C" or better in AUTO 108 or consent of Instructional Unit. [GE]

#### Course Outcomes:

- Correctly diagnose a brake mechanical brake fault; safely machine a brake rotor.
- Identify and Analyze ABS related diagnostic trouble codes; create ethical estimate based on inspection.
- Identify correct method or methods to bleed air from hydraulic braking systems pointing out results of errors and impact to customer safety.

### CHASSIS SYSTEMS

AUTO 141

1 - 15 Credits

110 hours of lecture - 110 hours of lab

Continuing study of chassis systems: shop safety: (Toyota 553) ABS brakes and traction control: operation, construction, parts identification, diagnosis and repair procedures: (Toyota 652) automotive electrical components and systems: body electrical problems using a 6-step troubleshooting plan: (Toyota 453) steering, and suspension systems: operation, construction, parts identification, diagnosis, alignment and repair procedures. Prerequisite: AUTO 108 or 110. [GE]

#### Course Outcomes:

- Perform an alignment; includes setup, pre-measurements, finding correct specifications and adjust.
- Diagnose a Ride-Height problem; includes finding specifications, identifying type of

suspension, identifying type of failure and writing and ethical estimate.

- Diagnose a loose / failed suspension part and create an ethical estimate.
- Diagnose a vehicle pulling concern.

## **ENGINE PERFORMANCE**

AUTO 142

1 - 15 Credits

110 hours of lecture - 110 hours of lab

Study of engine performance: shop safety: with emphasis on engine performance operation, construction, parts identification, diagnosis, and repair procedures. (Toyota 852) EFI and TCCS engine control systems: fuel injection system, emission systems and computer system diagnosis. Prerequisite: AUTO 108 or 110. [GE]

### **Course Outcomes:**

- Diagnose a crank, no start vehicle condition, documenting your diagnostic strategy and describe appropriate repair.
- Diagnose a condition that limits engine closed loop operation.
- Correctly identify a misfire problem using acquired ignition scope patterns.
- Perform DTC diagnosis, document diagnostic strategy and describe appropriate repair.

## **INTRODUCTION TO TOYOTA**

AUTO 150

6 Credits

44 hours of lecture - 44 hours of lab

Introduction to safety, service procedures and responsibilities as a Toyota automotive service professional. Focus on soft skills used in daily customer interactions, technical skills needed to be successful in the current Toyota dealership environment. Emphasis on performing Toyota minor, intermediate, and major maintenance operations. Acceptance into the T-Ten Program.

Prerequisite: Must meet Clark Automotive entrance standards and have the recommendation of your sponsoring Toyota/Lexus service management. [GE]

### **Course Outcomes:**

- Define "The Toyota Way".
- Demonstrate Customer Service soft skills.
- Achieve SP/2 Mechanical Safety and Pollution Prevention certification.
- Perform TXM basic service functions and procedures.
- Determine service requirements for Toyota Minor, Intermediate and Major maintenance intervals.

## **TOYOTA ELECTRICAL I**

AUTO 151

8 Credits

44 hours of lecture - 88 hours of lab

First of two courses introducing basic electrical properties, circuits and testing. Major focus on the proper use of the DVOM in voltage drop diagnosis with an introduction to chassis electrical systems operation and testing. This course is a prerequisite for all future Toyota courses. Acceptance and good standing in the T-Ten Program. Prerequisite: A grade of "C" or better in AUTO 150. [GE]

### **Course Outcomes:**

- Accurately predict, measure and record basic DVOM readings in a series and parallel circuit.
- Use available wiring diagrams and resources, locate and repair an electrical fault on both electronically controlled and non-electronically controlled circuits and define diagnostic strategy.
- Diagnose a no charge and/ or battery light on complaint; define diagnostic strategy and describe appropriate repair.
- Diagnose a no crank/no start complaint; define diagnostic strategy and describe appropriate repair.

## **TOYOTA ELECTRICAL II**

AUTO 152

8 Credits

44 hours of lecture - 88 hours of lab

Second of two courses exploring electrical properties, circuits and testing. Major focus on the proper use of the DVOM in voltage drop diagnosis of multiplexed circuits used in Toyota vehicles with an introduction to computer controlled electrical systems operation and testing using a DSO. This course is a prerequisite for all future Toyota courses. Acceptance and good standing in the T-Ten Program. Prerequisite: A grade of "C" or better in AUTO 151. [GE]

### **Course Outcomes:**

- Diagnose computer controlled systems using data and electrical measuring tools.
- Diagnose multiplexed computer controlled systems using data and electrical measuring tools.
- Diagnose specialized systems using data and electrical measuring tools.
- Perform Hybrid Systems maintenance service procedures.

## **TOYOTA BRAKES**

AUTO 153

7 Credits

33 hours of lecture - 88 hours of lab

Theory and hands-on training in the operation, diagnostics, and service of Toyota vehicle braking systems. Initial focus on performing basic brake service procedures and diagnosis. Specific emphasis on the correct diagnostic strategies to locate and repair faults in ABS, VSC and VDIM systems. This course is a prerequisite for all future Toyota courses. Acceptance and good standing in the T-Ten Program. Prerequisite: A grade of "C" or better in AUTO 152. [GE]

### **Course Outcomes:**

- Perform basic service and diagnostic procedures of brake systems.
- Diagnose and service power braking systems.
- Describe, service and diagnose an ABS, VSC or VDIM braking system fault.
- Describe, service and diagnose a front disc and rear drum braking system fault.

## **TOYOTA INTERNSHIP I**

AUTO 154

4 Credits

11 hours of lecture - 99 hours of clinical

First managed internship experience in a Toyota/Lexus dealership, with focus on practicing skills learned throughout the first quarter of automotive instruction, including performing basic maintenance and diagnosing/repairing electrical and braking systems. Emphasis on developing strong customer-service and teamwork skills. Students required to document and share these experiences while working towards ASE and Toyota Certification. Acceptance and good standing in

the T-Ten Program. Prerequisite: A grade of "C" or better in AUTO 153. [GE]

**Course Outcomes:**

- Provide organized records and documents to support job log.
- Maintain weekly on-line journal of a customer related experience.
- Participate in on-line technical discussions led by instructor.
- Document completion of University of Toyota test.
- Take ASE exams A5-brakes and A6-electrical; minimum of one passed.

**TOYOTA STEERING AND SUSPENSION**

AUTO 155

7 Credits

33 hours of lecture - 88 hours of lab

Theory and hands-on training in the operation, diagnosis, and service of Toyota vehicle steering and suspension systems. Initial focus on performing basic tire, suspension and steering service procedures and diagnosis. Specific emphasis on the correct diagnostic strategies to locate and repair faults in TPMS and EPS systems. This course is a prerequisite for all future Toyota courses. Acceptance and good standing in the T-Ten Program. Prerequisite: A grade of "C" or better in AUTO 154. [GE]

**Course Outcomes:**

- Perform tire dismounting, mounting, balancing and repair; diagnose tire wear patterns and handling concerns.
- Diagnose TPMS fault and reinitialize system parameters.
- Inspect and replace worn suspension system parts.
- Perform wheel alignment measurements and adjustments.
- Inspect and replace worn steering system parts.

**TOYOTA ENGINE PERFORMANCE I**

AUTO 156

8 Credits

44 hours of lecture - 88 hours of lab

First of two courses on operation, inspection, diagnosis, service and repair of Toyota Engine Management systems. Focus on the operation and testing of the internal combustion engine and engine-and fuel-management systems. Emphasis on ignition, fuel delivery, and computer input sensor diagnosis. Necessary knowledge of diagnostic strategies and tools used daily in the dealership to repair drivability-related and/or engine performance-related issues. Acceptance and good standing in the T-Ten Program. Prerequisite: A grade of "C" or better in AUTO 155.

**Course Outcomes:**

- Perform all cylinder sealing related tests; determine necessary action.
- Diagnose a DTC related engine control failure using Techstream; demonstrate capture, analyze and graphing data, perform active tests.
- Diagnose a fuel and / or air induction fault; document diagnostic strategy and describe appropriate repair.
- Diagnose an Ignition related fault; document diagnostic strategy including capturing and analyzing ignition scope patterns; describe appropriate repair.

**TOYOTA ENGINE PERFORMANCE II**

## AUTO 157

8 Credits

44 hours of lecture - 88 hours of lab

Second of two courses on operation, diagnosis, service and repair of Toyota Engine Management Systems. Focus on advanced level diagnostics including fuel trim, DTC's drivability, Mode \$06 scan tool usage, and emissions control systems. Acceptance and good standing in the T-Ten Program. Prerequisite: A grade of "C" or better in AUTO 156.

### **Course Outcomes:**

- Define a strategy to diagnose and multiple cylinder or random mis-fire fault.
- Diagnose and "no-code" drivability fault; document diagnostic strategy and determine needed repair.
- Diagnose and repair an EVAP system Leak and / or Failure.

## **INTRODUCTION TO DEALERSHIP OPERATIONS**

### AUTO 160

6 Credits

44 hours of lecture - 44 hours of lab

Introduction to safety, service procedures and responsibilities as a dealership automotive service professional. Initial focus will be soft skills used in daily customer interactions and will continue with technical skills needed to be successful in the current dealership environment. Finally, emphasis will be placed on performing minor, intermediate and major maintenance operations. Remain in good standing in the HiTECC Program. Prerequisite: Must meet Clark Automotive entrance standards and have the recommendation of your sponsoring dealership service management.

### **Course Outcomes:**

- Demonstrate customer service skill used in the service drive.
- Achieve mechanical safety and pollution prevention industry certification.
- Perform basic quick service vehicle maintenance procedures.
- Determine vehicle service requirements for minor, intermediate, and major maintenance intervals.

## **ELECTRICAL I**

### AUTO 161

8 Credits

44 hours of lecture - 88 hours of lab

Introduction to basic electrical properties, circuits and testing. Major focus will be placed on the proper use of the DVOM in voltage drop diagnosis. Will also offer an introduction to Chassis Electrical Systems operation and testing. This course is a prerequisite for all future HiTECC courses. Remain in good standing in the HiTECC Program. Prerequisite: A grade of "C" or better in AUTO 160.

### **Course Outcomes:**

- Perform basic DVOM testing on Series and Parallel Circuits.
- Diagnose open, short-to-power, short-to-ground, and high resistance faults in automotive circuits.
- Diagnose a no-crank, no start fault.
- Diagnose a no-charge or under charge fault.
- Apply a strategy-based diagnostic process to identify a vehicle electrical fault.



## **ELECTRICAL II**

AUTO 162

8 Credits

44 hours of lecture - 88 hours of lab

Second in a series exploring electrical properties, circuits and testing. Major focus will be placed on the proper use of the DVOM in voltage drop diagnosis of multiplexed circuits used in Toyota vehicles. Will also include an introduction to computer controlled electrical systems operation and testing using a DSO. This course is a prerequisite for all future HiTECC courses. Remain in good standing in the HiTECC Program. Prerequisite: A grade of "C" or better in AUTO 161.

### **Course Outcomes:**

- Diagnose a computer controlled systems using data and electrical measuring tools.
- Diagnose a multiplexed computer controlled systems using data and electrical measuring tools.
- Diagnose specialized systems using data and electrical measuring tools.
- Perform hybrid system maintenance service procedures.

## **BRAKES**

AUTO 163

7 Credits

33 hours of lecture - 88 hours of lab

Provides theory and hands-on training in the operation, diagnostics, and service of vehicle braking systems. Specific emphasis will be placed on the correct diagnostic strategies to locate and repair faults in ABS, VSC and VDIM systems. Initial focus will be placed on performing basic brake service procedures and diagnosis. This course is a prerequisite for all future HiTECC courses. Remain in good standing in the HiTECC Program. Prerequisite: A grade of "C" or better in AUTO 162.

### **Course Outcomes:**

- Perform basic service and diagnostic procedures of brake systems.
- Describe construction, perform service, and diagnose disc brake systems.
- Describe construction, perform service, and diagnose drum brake systems.
- Describe construction, perform service, and diagnose ABS, VSC and VDIM systems.
- Demonstrate proficiency in diagnosing braking system faults.

## **INTERNSHIP I**

AUTO 164

4 Credits

11 hours of lecture - 99 hours of lab

Provides students with a managed internship experience in an automotive dealership. Students will focus on practicing skills learned throughout their first quarter of automotive instruction, including performing basic maintenance and diagnosing/repairing electrical and braking systems. Students will be required to document and share these experiences as they work toward ASE Certification. Emphasis will also be placed on developing strong customer service and teamworking skills. Remain in good standing in the HiTECC Program. Prerequisite: A grade of "C" or better in AUTO 163.

### **Course Outcomes:**

- Provide Organized records and documents supporting job log.
- Perform self evaluation and reflection of experience.
- Participate in technical discussion on work-related topics.
- Successful completion of one ASE Certification Exam.

## **STEERING AND SUSPENSION**

AUTO 165

7 Credits

33 hours of lecture - 88 hours of lab

Provides theory and hands-on training in the operation, diagnosis, and service of vehicle steering and suspension systems with specific emphasis on the correct diagnostic strategies to locate and repair faults in TPMS and EPS systems. Initial focus will be placed on performing basic tire, suspension and steering service procedures and diagnosis. This course is a prerequisite for all future HiTECC courses. Remain in good standing in the HiTECC Program. Prerequisite: A grade of "C" or better in AUTO 164.

### **Course Outcomes:**

- Demonstrate tire dismounting, mounting, balancing, and repair.
- Diagnose TPMS failure and initialize system.
- Inspect and replace worn steering and suspension system parts.
- Perform wheel alignment measurement and adjustment.
- Demonstrate proficiency in diagnosing tire wear and handling concerns.

## **ENGINE PERFORMANCE I**

AUTO 166

8 Credits

443 hours of lecture - 88 hours of lab

Instruction related to the operation, diagnosis, service and repair of engine management systems. Initial focus is on the operation and testing of the internal combustion engine then progress to engine and fuel management systems. Emphasis will be placed on ignition, fuel delivery, and computer input sensor diagnosis. Students will gain necessary knowledge of diagnostic strategies and tools used daily in the dealership to repair drivability and/or engine performance related issues. This course is a prerequisite for all future HiTECC courses. Remain in good standing in the HiTECC Program. Prerequisite: A grade of "C" or better in AUTO 165.

### **Course Outcomes:**

- Diagnose drivability concerns based on engine mechanical failures.
- Diagnose drivability concerns based on ignition failures.
- Diagnose drivability concerns based on fuel delivery failures.
- Use a scan tool to read and clear trouble codes.
- Perform active testing and analyze common input sensors currently in use on modern vehicles.

## **ENGINE PERFORMANCE II**

AUTO 167

8 Credits

44 hours of lecture - 88 hours of lab

Instruction regarding the operation, diagnosis, service and repair of engine management systems. Focus on advanced level diagnostics including fuel trim, no DTC's drivability, mode \$06 scan tool usage, and emissions control system diagnosis and repair. This course is a prerequisite for all future HiTECC courses. Remain in good standing in the HiTECC Program. Prerequisite: A grade of "C" or better in AUTO 166.

### **Course Outcomes:**

- Utilize fuel trims to diagnose a fuel management system failure.

- Describe operation and detail a diagnostic strategy for variable valve timing systems.
- Diagnose and repair computer network communication errors.
- Pass the Washington State Emissions Specialist test. (Does not certify)
- Employ a diagnostic strategy during the repair of emissions system failures

## **AUTOMOTIVE PROCESSES**

AUTO 170

3 Credits

33 hours of lecture

Introduction to and exploration of the automotive industry, with specific focus on vehicle service operations from a business standpoint. Students will complete a research assignment, write a paper, and deliver a presentation on their findings.

### **Course Outcomes:**

- Develop awareness of vehicle repair business processes.
- Explain the technician's role beyond vehicle service; including safety, customer satisfaction and business success.
- Identify Federal, State and Local laws pertaining to automotive services, with an emphasis on environment sustainability and safety concerns.
- Define and identify proper documentation requirements in an automotive service environment.

## **MECHANICAL PROCESSES**

AUTO 171

5 Credits

44 hours of lecture - 22 hours of lab

Expands on Automotive Process through demonstration and practice of vehicle servicing methods. Students will prepare vehicles for service and perform basic maintenance procedures in accordance with manufacturer's recommendations. Emphasis on safety, using proper equipment, and overall vehicle systems. Combination lecture/lab format will be utilized for instruction. Prerequisite: Completion of or concurrent enrollment in AUTO 170.

### **Course Outcomes:**

- Identify specific tools and their uses in automotive repair.
- Actively participate in shop, vehicle and personal safety practices.
- Actively participate in sustainability practices related to the automotive repair industry.
- Safely use vehicle lifts (lift certification), jacks and jack stands.
- Perform basic maintenance procedures and vehicle inspections.

## **MAINTENANCE PROCESSES**

AUTO 172

8 Credits

44 hours of lecture - 88 hours of lab

Emphasis on maintenance procedures and processes performed in express service environments. Particular attention paid to practice of comprehensive vehicle inspection and preventative maintenance operations. Introduction to tire service procedures also included in the course. While a combination lecture/lab will be utilized for instruction, course will be delivered primarily through lab activities. Prerequisite: Successful completion of both AUTO 170 (Automotive Processes) and AUTO 171 (Mechanical Processes).

### **Course Outcomes:**

- Perform detailed, high-quality, and timely vehicle inspections.
- Discriminate between manufacturer required and general preventative maintenance.
- Identify manufacturer suggested maintenance intervals and perform.
- Perform all level of fluid maintenance.
- Introduction to Tire Service including flat repair and balance.

### **UNDERCAR SERVICE AND REPAIR**

AUTO 173

15 Credits

110 hours of lecture - 110 hours of lab

Undercar maintenance processes with addition of light chassis repair procedures. Inspection and repair of brake systems, including minor diagnosis of common customer concerns, will be practiced. In addition, steering/suspension inspection and service will be presented. Continuation of tire servicing related to wheel alignment also included in course. While a combination lecture/lab will be utilized for instruction, course will be delivered primarily through lab activities. Prerequisite: A grade of "C" or better in AUTO 172 (Maintenance Processes).

#### **Course Outcomes:**

- Perform detailed, high-quality brake inspections and determine needed repairs.
- Perform basic service procedures of brake systems.
- Describe, service and diagnose a front disc and rear drum braking system fault.
- Perform detailed, high-quality steering and suspension inspection; determine needed service.
- Perform four wheel alignment and reinitialize steering angle sensors.

### **UNDERHOOD SERVICE AND REPAIR**

AUTO 174

15 Credits

110 hours of lecture - 110 hours of lab

Underhood maintenance processes with addition of light engine repair procedures. Minor diagnosis of common cylinder sealing faults and engine leak repair will be practiced. Introduction to engine controls and minor system diagnosis included. While a combination lecture/lab will be utilized for instruction, course will be delivered primarily through lab activities. Prerequisite: A grade of "C" or better in AUTO 172 (Maintenance Processes).

#### **Course Outcomes:**

- Perform all cylinder sealing related tests; determine necessary action.
- Diagnose a DTC related engine control input failure using a scan tool; demonstrate capture, analyze and graphing data, perform active tests.
- Identify sources of oil leaks and perform appropriate repairs.
- Perform all underhood maintenance and inspections (Engine, Transmission, etc.).
- Remove and replace a timing belt and / or change and verify correct camshaft timing.

### **COOPERATIVE WORK EXPERIENCE**

AUTO 199

1 - 5 Credits

165 hours of clinical

Supervised work experience in an approved job. Completion of specific learning objectives and employer evaluation. Completion of, or concurrent enrollment in, HDEV 195, 198, or 200 required. Prerequisite: Consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Fulfill the job requirements of their internship provider.

## **MANUAL TRANSMISSIONS, AXLES AND ENGINES**

AUTO 240

1 - 15 Credits

110 hours of lecture - 110 hours of lab

Study of mechanical drive train systems. (Toyota 302) Fundamentals of clutches, manual transmissions, manual transaxles, transfer cases and differentials with emphasis on diagnosis, repair, and rebuilding procedures. Study of engine repair operations, construction, parts identification, diagnosis, with emphasis on rebuilding procedures, and shop safety. Prerequisite: AUTO 108 or 110. [GE]

### **Course Outcomes:**

- Accurately measure internal engine components.
- Remove and replace a timing belt and / or change and verify correct camshaft timing.
- Inspect Cylinder Head for damage; pressure/vacuum test valve and determine necessary action.
- Diagnose Clutch and/or Clutch Hydraulic fault; determine necessary action.

## **AUTOMATIC TRANSMISSIONS AND ADVANCED ELECTRICAL**

AUTO 241

1 - 15 Credits

110 hours of lecture - 110 hours of lab

Study of automatic transmissions: shop safety: (Toyota 274) automatic transmissions: fundamentals of torque converters, automatic transmissions, automatic transaxles & final drive, operation components, diagnosis, repair, & rebuilding procedures. Study of advanced electrical concepts (Toyota 852) engine control systems: operation, construction, parts identification, diagnosis, & repair procedures with emphasis on DVOM & lab scope use. Prerequisite: AUTO 108 or 110. [GE]

### **Course Outcomes:**

- Perform automatic transmission hydraulic pressure tests; includes identifying correct access ports and specifications for each test.
- Measure shaft diameter and runout; includes identifying correct specifications and procedure for shaft involved.
- Check ATF level and type; determine appropriate action.
- Perform Torque Converter Stall Test; includes finding specifications and procedure, describe appropriate repair.

## **A/C AND ADVANCED CHASSIS SYSTEMS**

AUTO 242

1 - 15 Credits

110 hours of lecture - 110 hours of lab

Continuing study of advanced topics of electrical and engine performance: shop safety: (Toyota 256) with emphasis on evaporative control systems, SRS systems and accessories. Heating and air conditioning systems with emphasis on (Toyota 752) air conditioning and automatic temperature control: operation, components, recharging procedures, construction, and parts identification. Prerequisite: AUTO 108 or 110. [GE]

### **Course Outcomes:**

- Perform A/C Evacuate, Recover, and Recharge and verify proper operation.
- Diagnose an A/C Low Pressure problem, document diagnostic strategy and explain appropriate repair.
- Perform Orifice Tube replacement; includes evacuate, vacuum, leak test, and recharge; verify proper operation.
- Diagnose an A/C recovery machine malfunction and determine appropriate action.

## **TOYOTA CLIMATE CONTROL**

AUTO 250

7 Credits

33 hours of lecture - 88 hours of lab

Introduction to automotive heating and air conditioning systems used in Toyota vehicles. Topics include refrigerant handling, climate control system components, temperature system controls, refrigerant system diagnosis, recovery-recycling-recharging a/c systems, safety requirements for hybrid vehicles and dealership service. Acceptance and good standing in the T-Ten Program. Prerequisite: A grade of "C" or better in AUTO 157. [GE]

### **Course Outcomes:**

- Demonstrate operation of Air Mix Temperature Control.
- Perform cooling system bleeding procedure using Air Lift special tool; verify proper vehicle operation.
- Perform A/C system performance testing; diagnose system failure and determine necessary action.
- Perform A/C system evacuation, recycle and recharge.
- Diagnose A/C system fault using pressure gauge; determine necessary action.

## **TOYOTA INTERNSHIP II**

AUTO 251

4 Credits

11 hours of lecture - 99 hours of clinical

Second managed internship experience in a Toyota/Lexus dealership, with focus on practicing skills learned throughout the second quarter of automotive instruction. Skills include performing repairs to braking, steering/suspension, and engine management systems. Emphasis on developing strong customer-service and teamwork skills. Students required to document and share these experiences while working towards ASE and Toyota Certification. Acceptance and good standing in the T-Ten Program. Prerequisite: A grade of "C" or better in AUTO 250. [GE]

### **Course Outcomes:**

- Provide organized records and documents to support job log.
- Participate in weekly on-line discussion of customer related experiences.
- Participate in technical discussions hosted by instructor.
- Document completion of University of Toyota test.
- Take ASE exams A7-A/C and A4-Steering / Suspension; minimum of one passed.

## **TOYOTA ENGINE MECHANICAL**

AUTO 252

8 Credits

44 hours of lecture - 88 hours of lab

Operation, diagnosis, service and repair of a Toyota internal-combustion engine with focus on the tear-down and inspection of internal engine components. Emphasis on precision measurements

and component failure identification. Acceptance and good standing in the T-Ten Program. Prerequisite: A grade of "C" or better in AUTO 251. [GE]

**Course Outcomes:**

- Remove and Reinstall an engine assembly; finalize all checks for redelivery to customer.
- Accurately measure internal engine components.
- Remove and replace a timing belt and / or change and verify correct camshaft timing.

**TOYOTA MANUAL TRANSMISSION**

AUTO 253

7 Credits

33 hours of lecture - 88 hours of lab

Introduction to automotive manual transmissions and drivetrains. Topics include the principles of torque multiplication, engine braking, and gear ratios. Emphasis on the diagnosis and repair of clutch assembly, manual transmission, transfer cases, and drivetrains of Toyota vehicles.

Acceptance in and good standing in the T-Ten Program. Prerequisite: A grade of "C" or better in AUTO 252. [GE]

**Course Outcomes:**

- Diagnose clutch fault; document diagnostic strategy and determine needed repairs.
- Identify components and determine powerflow and torque multiplication of a manual transmission assembly.
- Identify components and determine powerflow and torque multiplication of a manual transaxle assembly.
- Identify components and determine powerflow and torque multiplication of a differential assembly.

**AUTOMATIC TRANSMISSIONS**

AUTO 254

9 Credits

55 hours of lecture - 88 hours of lab

Theory and hands-on training in the operation, diagnostics, and service of Toyota automatic transmissions and transaxles. Initial focus on performing basic automatic transmission service procedures and diagnosis with specific emphasis on the correct diagnostic strategies to locate and repair faults in automatic transmission control systems. This course is a prerequisite for all future Toyota courses. Acceptance and good standing in the T-Ten Program. Prerequisite: A grade of "C" or better in AUTO 253. [GE]

**Course Outcomes:**

- Describe automatic transmission and transmission control systems construction and operation; includes converters, holding devices, electronic devices, and geartrain sets (Toyota A, U, Ravigneaux/Lelletier and Compound).
- Perform basic checks and adjustments on Toyota transmissions; determine needed actions.
- Diagnose a Toyota transmission DTC fault.
- Remove, disassemble, reassemble and reinstall a Toyota RWD transmission; verify proper operation.

**TOYOTA INTERNSHIP III**

AUTO 255

4 Credits

11 hours of lecture - 99 hours of clinical

Third managed internship experience in a Toyota/Lexus dealership, with focus on practicing skills learned throughout the third quarter of automotive instruction. Skills include performing repairs to engines, transmissions, and drivetrains. Emphasis on developing strong customer service and teamworking skills. Students required to document and share these experiences as they work towards ASE and Toyota Certification. Acceptance and good standing in the T-Ten Program. Prerequisite: A grade of "C" or better in AUTO 254. [GE]

**Course Outcomes:**

- Provide organized records and documents to support job log.
- Participate in weekly on-line discussion of customer related experiences.
- Participate in technical discussions hosted by instructor.
- Document completion of University of Toyota test.
- Take ASE exams A1- Engine Repair and A8- Engine Performance; minimum of one passed.

**CLIMATE CONTROL**

AUTO 260

7 Credits

33 hours of lecture - 88 hours of lab

Instruction in automotive heating and air conditioning systems used in vehicles. Covers refrigerant handling, climate control system components, temperature system controls, refrigerant system diagnosis, recovery-recycling-recharging a/c systems, safety requirements for hybrid vehicles and dealership service. This course is a prerequisite for all future HiTECC courses. Remain in good standing in the HiTECC Program. Prerequisite: A grade of "C" or better in AUTO 167.

**Course Outcomes:**

- Define operation and function of vehicle temperature controls.
- Diagnose poor heater operation.
- Performance test A/C system.
- Acquire Refrigerant Handling Card.
- Perform A/C System Gauge diagnosis.

**INTERNSHIP II**

AUTO 261

4 Credits

11 hours of lecture - 99 hours of clinical

Provides students with a managed internship experience in a dealership. Students will focus on practicing skills learned throughout their second quarter of automotive instruction performing repairs to Steering/Suspension, Climate Control, and Engine Management Systems. Students will be required to document and share these experiences as they work towards ASE certification. Emphasis will also be placed on developing strong customer service and teamworking skills. This course is a prerequisite for all future HiTECC courses. Remain in good standing in the HiTECC Program. Prerequisite: A grade of "C" or better in AUTO 260.

**Course Outcomes:**

- Provide Organized records and documents supporting job log.
- Perform self evaluation and reflection of experience.
- Participate in technical discussion on work-related topics.
- Successful completion of one ASE Certification Exam.



## **ENGINE MECHANICAL**

AUTO 262

8 Credits

44 hours of lecture - 88 hours of lab

Instruction regarding the operation, diagnosis, service and repair of internal combustion engines. Focus on the tear down and inspection of internal engine components. Emphasis will be placed on precision measurements and components failure identification. This course is a prerequisite for all future HiTECC courses. Remain in good standing in the HiTECC Program. Prerequisite: A grade of "C" or better in AUTO 261.

### **Course Outcomes:**

- Remove and reinstall an engine assembly.
- Perform precise measurements of internal engine components identifying failures.
- Disassemble and reassembly cylinder head with valve timing verification.
- Diagnose and repair variable valve timing related mechanical components.
- Diagnose potential cause of engine noises.

## **MANUAL TRANSMISSION**

AUTO 263

7 Credits

33 hours of lecture - 88 hours of lab

Instruction in automotive manual transmissions and drivetrains. Students will explore the principles of torque multiplication, engine braking, and gear ratios. Emphasis will be placed on the diagnosis and repair of clutch assemblies, manual transmissions, transfer cases, and vehicle drivetrains. This course is a prerequisite for all future HiTECC courses. Remain in good standing in the HiTECC Program. Prerequisite: A grade of "C" or better in AUTO 262.

### **Course Outcomes:**

- Diagnose Clutch Noise or Vibration.
- Explain powerflow of all gears in a manual transmissions/transaxle.
- Explain powerflow of differential assembly.
- Diagnose noise concern using powerflow principles.
- Define torque/speed relationship in gear trains.

## **AUTOMATIC TRANSMISSIONS**

AUTO 264

9 Credits

55 hours of lecture - 88 hours of lab

Theory and hands-on training in the operation, diagnostics, and service of automatic transmissions and transaxles. Specific emphasis will be placed on the correct diagnostic strategies to locate and repair faults in automatic transmission control systems. Initial focus will be placed on performing basic automatic transmission service procedures and diagnosis. This course is a prerequisite for all future HiTECC courses. Remain in good standing in the HiTECC Program. Prerequisite: A grade of "C" or better in AUTO 263.

### **Course Outcomes:**

- Make basic checks and adjustments of Ravigneaux/Lepelletier, and Compound Geartrain transmissions.
- Diagnose Ravigneaux/Lepelletier and Compound Geartrain transmission DTC faults.
- Describe process and practice procedures used in the repair of computer controlled automatic

transmissions.

- Perform disassembly and reassembly of a compound geartrain transmission.

### **INTERNSHIP III**

AUTO 265

4 Credits

11 hours of lecture - 99 hours of clinical

Provides students with a managed internship experience in a dealership. Students will focus on practicing skills learned throughout their third quarter of automotive instruction including performing repairs to engines, transmissions, and drivetrains. Students will be required to document and share these experiences as they work towards ASE Certification. Emphasis will also be placed on developing strong customer service and teamworking skills. Remain in good standing in the HiTECC Program. Prerequisite: A grade of "C" or better in AUTO 264.

#### **Course Outcomes:**

- Provide Organized records and documents supporting job log.
- Complete exit interview with worksite supervisor/mentor.
- Participate in technical discussion on work-related topics.
- Successful completion of one ASE Certification Exam.

### **DRIVER COMFORT AND CONVENIENCE SYSTEMS**

AUTO 271

15 Credits

110 hours of lecture - 110 hours of lab

HVAC and safety system maintenance and service processes. Some light repair procedures will be practiced. Also includes body electrical diagnosis using diagrams, DMMs, and scan tools. While a combination lecture/lab will be utilized for instruction, course will be delivered primarily through lab activities. Prerequisite: Successful completion of all AUTO 170, 171, 172, 173 and 174 with a "C" or better.

#### **Course Outcomes:**

- Perform A/C Evacuate, Recover, and Recharge and verify proper operation.
- Perform A/C system performance test and touch feel test; determine necessary action.
- Obtain a Refrigerant Handler's Certification.
- Perform Body Electrical Diagnosis; Demonstrate use of DMM, Wiring Diagram and Scan Tool during interior body electrical concern diagnosis.

### **ADVANCED DIAGNOSTIC STRATEGIES**

AUTO 272

15 Credits

110 hours of lecture - 110 hours of lab

Vehicle electronic systems inspection, diagnosis and repair processes using advanced diagnostic tools. Focus on troubleshooting processes that lead to identification of root cause failures. Also, introduction to vehicle stability control and supplemental restraint systems included. While a combination of lecture/lab will be utilized for instruction course will be delivered primarily through lab activities. Prerequisite: Successful completion of all AUTO 170, 171, 172, 173 and 174 with a grade of "C" or better.

#### **Course Outcomes:**

- Advanced drivability inspections of fuel trims and misfire related codes determine necessary

action.

- Advanced electrical use of lab scope in the diagnostic process.
- Advanced Steering / Suspension – pull and drift diagnosis.

### **CAPSTONE NEW TECHNOLOGY**

AUTO 273

4 Credits

11 hours of lecture - 66 hours of lab

An alternative to a internship in which students will study a new automotive technology of their choice. Final project will vary with each instructor. Prerequisite: Successful completion of AUTO 271 and 272 with a grade of "C" or better.

#### **Course Outcomes:**

- Research new automotive propulsion technology.
- Display and Present final project.

### **INTERNSHIP**

AUTO 274

4 Credits

11 hours of lecture - 99 hours of lab

Managed field experience course designed to provide reflective activities aimed at assisting students in creating a professional development plan. Students will participate in online activities coupled with periodic on-site evaluations. This option provided for students with an automotive service position and ready to work. Course will be delivered primarily through online interface with several worksite visits by instructor. Prerequisite: Successful completion of AUTO 271 and 272 with a grade of "C" or better.

#### **Course Outcomes:**

- Develop and implement a personal and professional goals plan.
- Complete supervisory evaluation with instructor and workplace supervisor.
- Complete end of program evaluation.

### **SELECTED TOPICS**

AUTO 280

1 - 8 Credits

88 hours of lecture

Selected topics in Auto. Topics vary and course theme and content change to reflect new topics. Because the course varies in content, it is repeatable for credit. Specific topics are listed in the quarterly class schedule. [GE]

#### **Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principle of this course.

### **SPECIAL PROJECTS**

AUTO 290

1 - 3 Credits

For automotive majors only. Opportunity to plan, organize and complete special projects

approved by the department. Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## Baking - Culinary Arts

### BAKING LAB

BAK 110

10 Credits

220 hours of lab

Practical work experience in fundamentals of professional baking. Includes the production of a variety of doughnuts, sweet-rolls, breads, cookies, pastries, pies and cake making and finishing. Concurrent enrollment in BAK 111 required. [GE]

**Course Outcomes:**

- Train first-year baking students in various procedures for using equipment and formulas in BAK 110 stations 1 through 5.
- Evaluate first-year baking students on proper sanitation and safety procedures of station equipment.
- Organize all ingredients, tools, and equipment to accomplish the daily requirements of assigned station.

### BAKING THEORY

BAK 111

5 Credits

55 hours of lecture

Materials used in baking and how they relate to one another in the mixing, processing and baking of specific products. Concurrent enrollment in BAK 110 required. [GE]

**Course Outcomes:**

- Use basic principles of baking to understand ingredient functionality, weights and measures, and sanitation.
- Appreciate and understand the history of chocolate, farming, cultivation, manufacturing processes, and sensory evaluations.

### BAKING LAB

BAK 112

10 Credits

220 hours of lab

Practical work experience in fundamentals of professional baking. Includes the production of a variety of doughnuts, sweet-rolls, breads, cookies, pastries, pies and cake making and finishing. Concurrent enrollment in BAK 113 required. [GE]

**Course Outcomes:**

- Train first-year baking students in various procedures for using equipment and formulas in BAK 112 stations 1 through 5.
- Evaluate first-year baking students on proper sanitation and safety procedures of station equipment.
- Organize all ingredients, tools, and equipment to accomplish the daily requirements of

assigned station.

### **BAKING THEORY**

BAK 113

5 Credits

55 hours of lecture

Materials used in baking and how they relate to one another in the mixing, processing and baking of specific products. Concurrent enrollment in BAK 112 required. [GE]

#### **Course Outcomes:**

- Use basic principles of bread making to increase students' understanding of quick breads, artisan breads, yeast and fermentation, and applied math.
- Create a sourdough starter following scientific principles.

### **BAKING LAB**

BAK 114

10 Credits

220 hours of lab

Practical work experience in fundamentals of professional baking. Includes the production of a variety of doughnuts, sweet-rolls, breads, cookies, pastries, pies and cake making and finishing. Concurrent enrollment in BAK 115 required. [GE]

#### **Course Outcomes:**

- Train first-year baking students in various procedures for using equipment and formulas in BAK 114 stations 1 through 5.
- Evaluate first-year baking students on proper sanitation and safety procedures of station equipment.
- Organize all ingredients, tools, and equipment to accomplish the daily requirements of assigned station.

### **BAKING THEORY**

BAK 115

5 Credits

55 hours of lecture

Materials used in baking and how they relate to one another in the mixing, processing and baking of specific products. Concurrent enrollment in BAK 114 required. [GE]

#### **Course Outcomes:**

- Use basic principles of syrups, creams, sauces, pies, and pastries in preparation for practical application.

### **BAKING LAB**

BAK 116

10 Credits

220 hours of lab

Practical work experience in the fundamentals of professional baking. Includes the production of a variety of doughnuts, sweet rolls, breads cookies, pastries, pies, and cake making and finishing. Concurrent enrollment in BAK 117 required. [GE]

**Course Outcomes:**

- Train first-year baking students in various procedures for using equipment and formulas in BAK 116 stations 1 through 5.
- Evaluate first-year baking students on proper sanitation and safety procedures of station equipment.
- Organize all ingredients, tools, and equipment to accomplish the daily requirements of assigned station.

**BAKING THEORY**

BAK 117

5 Credits

55 hours of lecture

Lectures covering the materials used in baking, how they relate to each other in the mixing and processing of specific products. Lectures include lab demonstrations of each topic. Concurrent enrollment in BAK 116 required. [GE]

**Course Outcomes:**

- Use basic principles of cake making processes to include formulation, mixing, altitude adjustments, icings, and specialty cakes in preparation for practical application.

**BEGINNING CAKE DECORATING**

BAK 120

3 Credits

22 hours of lecture - 22 hours of lab

Practical exercises covering cake set-up, filling, trimming, and icing. Basic flower construction including design lay-out, script borders, cut-out designs, and color wheel. [GE]

**Course Outcomes:**

- Set up, trim, fill, and ice a cake by creating basic flower, border, and layout patterns for cakes for various occasions, to include mixing and coordination of colors and various types of icings and fillings.

**INTERMEDIATE CAKE DECORATING**

BAK 122

3 Credits

22 hours of lecture - 22 hours of lab

Practical exercises covering cake set-up, filling, trimming, and icing. The making and designing of a variety of flowers and borders. Script, stencils, piping, gel transfers, design perspective, image projection, and the use of air brushes. [GE]

**Course Outcomes:**

- Create cake decorations: flowers, leaves, borders, and rolled fondant.

**ADVANCED CAKE DECORATING**

BAK 124

3 Credits

22 hours of lecture - 22 hours of lab

Wedding cake set-up and construction. Borders for wedding cakes. Make orchids and other flowers to compliment special design cakes. Piping of comic-type figures. [GE]

**Course Outcomes:**

- Decorate cakes including wedding cakes using advanced decorating techniques to include lace and filigree, orchids, dogwoods, poinsettias, daffodils, hyacinths, and figure piping.

**PASTRY ART**

BAK 126

3 Credits

22 hours of lecture - 22 hours of lab

Basic course for the beginning pastry chef. Topics include custards, ice creams, specialty sauces, meringues, pate choux, Bavarians, candies, holiday desserts, and individual plated desserts. [GE] [PNP]

**Course Outcomes:**

- Create decorated desserts, confections, and centerpieces.

**COOPERATIVE WORK EXPERIENCE**

BAK 199

1 - 5 Credits

165 hours of clinical

Supervised work experience in an approved program-related job. Completing specific learning objectives and gaining valuable industry knowledge enhances choice of future employment opportunities. Completion of, or concurrent enrollment in, HDEV 195, 198, or 200 required. Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Fulfill the job requirements of their internship provider.

**BAKERY MANAGEMENT LAB**

BAK 210

10 Credits

220 hours of lab

Practical instruction in bakery management, working at various baking stations. Concurrent enrollment in BAK 211 required. Prerequisite: Three quarters of BAK 110, 112, 114, or 116. [GE]

**Course Outcomes:**

- Supervise and assist first-year baking students with basic preparation skills in first-year stations (BAK 110) 1-5.
- Improve and enhance hands-on baking skill levels, building on first year stations 1-5.

**BAKERY MANAGEMENT THEORY**

BAK 211

5 Credits

55 hours of lecture

Introduction and group discussions regarding management and merchandising of a bakery.

Concurrent enrollment in BAK 210 required. Prerequisite: Three quarters of BAK 111, 113, 115, or 117. [GE]

**Course Outcomes:**

- Create, design, and cost a Buche de Noel.
- Build and maintain a customer base.
- Interview, hire, and schedule bakery employees.
- Prepare an application for a small business loan for a bakery.

**BAKERY MANAGEMENT LAB**

BAK 212

10 Credits

220 hours of lab

Practical instruction in bakery management, working at various baking stations. Concurrent enrollment in BAK 213 required. Prerequisite: Three quarters of BAK 110, 112, 114, or 116. [GE]

**Course Outcomes:**

- Supervise and assist first-year baking students with basic preparation skills in first-year stations (BAK 112) 1-5.
- Improve and enhance hands-on baking skill levels, building on first year stations 1-5.

**BAKERY MANAGEMENT THEORY**

BAK 213

5 Credits

55 hours of lecture

Introduction and group discussions regarding management and merchandising of a bakery. Concurrent enrollment in BAK 212 required. Prerequisite: Three quarters of BAK 111, 113, 115, or 117. [GE]

**Course Outcomes:**

- Design, plan, and equip a bakery following given dimensions and relative information.
- Communicate effectively with customers.
- Sell, merchandise, and market bakery products.

**BAKERY MANAGEMENT LAB**

BAK 214

10 Credits

220 hours of lab

Practical instruction in bakery management, working at various baking stations. Concurrent enrollment in BAK 215. Prerequisite: Three quarters of BAK 110, 112, 114, or 116. [GE]

**Course Outcomes:**

- Supervise and assist first-year baking students with basic preparation skills in first-year stations (BAK 114) 1-5.
- Improve and enhance hands-on baking skill levels, building on first year stations 1-5.

**BAKERY MANAGEMENT THEORY**



BAK 215

5 Credits

55 hours of lecture

Introduction and group discussions regarding management and merchandising of a bakery. Concurrent enrollment in BAK 214. Prerequisite: Three quarters of BAK 111, 113, 115 or 117. [GE]

**Course Outcomes:**

- Plan a menu and plated desserts.
- Create a safe, productive, and ergonomically correct work environment.

**BAKERY MANAGEMENT LAB**

BAK 216

10 Credits

220 hours of lab

Practical instruction in bakery management, working at various baking stations. Concurrent enrollment in BAK 217 required. Prerequisite: Three quarters of BAK 110, 112, 114, or 116. [GE]

**Course Outcomes:**

- Supervise and assist first-year baking students with basic preparation skills in first-year stations (BAK 116) 1-5.
- Improve and enhance hands-on baking skill levels, building on first year stations 1-5.

**BAKERY MANAGEMENT THEORY**

BAK 217

5 Credits

55 hours of lecture

Introduction and group discussions regarding management and merchandising of a bakery. Concurrent enrollment in BAK 216 required. Prerequisite: Three quarters of BAK 111, 113, 115 or 117. [GE]

**Course Outcomes:**

- Compare and contrast class baked products with commercial bakery products.
- Research and develop savory grab and go items.

**SPECIAL PROJECTS**

BAK 290

1 - 12 Credits

Opportunity to plan, organize and complete individualized special projects approved by the department. [GE]

**Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

**Biology**

**BIOLOGY PRACTICUM**

BIOL 011

1 - 10 Credits

220 hours of lab

Laboratory work for selected biology courses. Concurrent enrollment in BIOL& 251, 252, or 253 required.

**Course Outcomes:**

- Use self-study skills to help demonstrate mastery of human anatomy in BIOL& 251, 252 and 253.

**SURVEY OF BIOLOGY**

BIOL&100

5 Credits

44 hours of lecture - 33 hours of lab

Overview of basic concepts and issues in biology including the cellular basis of life, metabolism, principles of inheritance, evolution and diversity. Strong emphasis on the process of scientific inquiry using critical thinking and communication abilities. This course is intended for non-biology majors and fulfills the laboratory science requirements or as a recommended course for other biology courses. English writing skills are highly recommended. Required for psychology majors. Formerly BIOL 104. Credit not allowed for BIOL 104, BIOL& 100, BIOL 105, BIOL& 160 and AG/BIOL 175. [NS, SE]

**Course Outcomes:**

- Explain and apply basic biology principles relating to biochemistry, cells, metabolism, photosynthesis, cell division, molecular genetics and heredity.
- Explain and discuss (oral and/or written) relationships between these basic biology principles.
- Apply the process of the scientific method and use appropriate technology to seek answers to questions.
- Obtain, interpret and evaluate both scientific and general literature and evaluate the information from procedural and scientific accuracy points of view.
- Develop questions about biology and pursue answers to them using a variety of resources.

**ENVIRONMENTAL BIOLOGY**

BIOL 101

5 Credits

33 hours of lecture - 44 hours of lab

Overview of basic concepts and issues related to the interaction between humans and their environment. Topics include population growth, loss of biodiversity, global climate change, ozone depletion, energy consumption and various types of pollution. This course is intended for non-majors and fulfills the laboratory science distribution requirement. It is also required for WSU-Vancouver Environmental Science/Regional Planning majors. [NS, SE]

**Course Outcomes:**

- Explain how human population growth, affluence and resource use affects the environment.
- Identify characteristics that make a species vulnerable to endangerment and extinction.
- Describe humans' role in managing resources such as soil, water and air.
- Identify the role of natural selection in evolution.
- Explain how biological diversity is key to ensuring a population's ability to evolve.
- Critically evaluate a variety of different types of sources for scientific credibility.
- Present information on the environmental impacts of a lifestyle change using credible and appropriate sources.

## **SMALL WORLD BIOLOGY-SEARCH FOR NEW ANTIBIOTICS**

BIOL 105

5 Credits

33 hours of lecture - 44 hours of lab

Investigative course involving authentic research to discover potentially new antibiotics. Overview of basic concepts and issues in biology including the cellular basis of life, metabolism, principles of inheritance, evolution and ecology as they relate to soil microbiology and human disease processes and treatment. Strong emphasis on scientific inquiry including critical thinking, laboratory research methodology, and communication abilities. This course is intended for non-biology majors and fulfills the laboratory science requirements or as a recommended course for other biology courses. English writing skills are highly recommended. [GE, SE, NS]

### **Course Outcomes:**

- Demonstrate an understanding of the biology of cells, nutrition, metabolism, organismal biology, and soil ecology.
- Demonstrate an ability to design, implement, and evaluate the results of experimentation using standard scientific methodologies such as hypothesis formulation and testing.
- Demonstrate an ability to interpret information presented in scientific literature.
- Clearly communicate research results via oral, written and visual formats.
- Demonstrate an appreciation of research science and its role in solving a human health issue—the antibiotic crisis.

## **INTRODUCTION TO WILDLIFE**

BIOL 139

3 Credits

33 hours of lecture

Wildlife conservation and management in the U.S. and throughout the world. Examines the social and political aspects of wildlife conservation and management, challenges to management of biodiversity, wildlife population management, and ecosystem management. [NS, SE]

### **Course Outcomes:**

- Understand the basic principles underlying the conservation and management of wildlife.
- Recognize the legal, social, cultural, and political institutions that affect wildlife conservation and management.
- Understand how scientific knowledge and research are used in the conservation and management of our natural resources.
- Analyze, organize and present information on a local wildlife species issue in the news.

## **MAMMALS OF THE NORTHWEST**

BIOL 140

3 Credits

33 hours of lecture

Important mammals of the Pacific Northwest. Their identification, classification, life histories, ecology, current status, and management. [NS, SE]

### **Course Outcomes:**

- Identify NW mammals with common name, and scientific name using binomial nomenclature.
- Characterize the behaviors, traits, habitat, and the unique physiology (where applicable) of mammals of the Pacific NW.
- Obtain information about NW mammals and share that information with the class. Evaluate the application of the scientific method in a peer reviewed journal article.

## **BIRDS OF THE PACIFIC NORTHWEST**

BIOL 141

3 Credits

33 hours of lecture

Important Birds of the Pacific Northwest. Their identification, classification, life histories, ecology, current status, and management. [NS, SE]

### **Course Outcomes:**

- Explain current scientific theory on bird evolution and evolution of flight.
- Identify at least 50 Pacific Northwest birds species using specimens and pictures.
- Write accurate field notes with key characteristics and behaviors.
- Present information on a current conservation issue affecting birds using a scientific source.
- Identify and describe basic characteristics of birds.
- Describe some basic anatomy and physiology of birds.

## **FRESHWATER FISHES OF THE PACIFIC NORTHWEST**

BIOL 142

3 Credits

33 hours of lecture

Important fishes of the Pacific Northwest. Identification, classification, and basic biology of freshwater fishes of the Pacific Northwest. Introduction to fishery management concepts. Overview of factors affecting salmon in the Columbia River Basin. [NS, SE]

### **Course Outcomes:**

- Identify various species of fish to the genus level.
- Explain the basics of fish biology and evolution.
- Acquire an appreciation for freshwater fish diversity in the Pacific Northwest and develop an understanding of its importance to overall, ecosystem health.
- Present an overview of factors affecting salmon populations in the Columbia River basin.

## **INTRODUCTION TO FORESTRY**

BIOL 143

3 Credits

33 hours of lecture

A forest management course including the structure and function of trees, soils, forest ecology, forest insects and diseases, timber management, fire management, and forest economy. Class will occasionally meet off campus and a Saturday field trip is required. [NS, SE]

### **Course Outcomes:**

- Observe and explain forest ecology principles (typical topics include succession, biodiversity, plant association, forest health and plant identification).
- Explain and discuss (oral and/or written) relationships between basic ecology principles.
- Apply the process of the scientific method and use appropriate technology to seek answers to questions (especially in topics related to forest harvesting and biodiversity).

## **REPTILES & AMPHIBIANS OF THE PACIFIC NW**

BIOL 145

3 Credits

33 hours of lecture

Introduction to the biology, ecology, evolution, and geographic distribution of Pacific Northwest reptiles and amphibians. [NS, SE]

**Course Outcomes:**

- Demonstrate knowledge and comprehension of the basic principles of herpetology.
- Demonstrate, in writing, concepts related to herpetology.

**MARINE BIOLOGY**

BIOL 150

5 Credits

33 hours of lecture - 44 hours of lab

The marine environment (physical and chemical properties), its plants, bacteria, animal life (vertebrates, invertebrates), ecosystems, fisheries and pollution. [NS, SE]

**Course Outcomes:**

- Explain/define verbally and in writing the basic principles of marine biology including concepts of ecology and oceanography and the relationships between these principles.
- Use the scientific method to answer questions relating to marine biology.
- Research and present information relevant to ocean diversity, marine organisms, and marine ecology.
- Interpret and evaluate and present both scientific and general literature and evaluate the information from procedural and scientific accuracy points of view.

**GENERAL BIOLOGY W/LAB**

BIOL&160

5 Credits

33 hours of lecture - 44 hours of lab

Introduction to the study of the cell, the basic component of all living organisms. Emphasis on cell chemistry, structure, metabolism, energetics, cell division and genetic principles. Intended for students seeking a two-year degree in the health occupations. Lab work is required. Successful completion fulfills pre-requisite for BIOL& 241, BIOL& 251, and BIOL& 260. [GE, SE, NS] [PNP]

**Course Outcomes:**

- Apply basic biology principles including biochemistry, cells structure and function, metabolism, and genetics.
- Perform laboratory observation and experimentation.
- Draw conclusions about scientific principles based on practice of scientific methodologies.
- Evaluate the reliability of scientific information using appropriate literature research strategies.
- Apply scientific methods of evidence-based hypothesis-testing to evaluate biological claims.

**HUMAN BIOLOGY**

BIOL 164

4 Credits

44 hours of lecture

The structure and function of the human body as it relates to homeostasis, health, disease and the environment. Concepts to be covered include human organization, processing, transporting, integration/coordination, reproduction, genetic, and evolution/ecology. Can be used as a science

distribution requirement. Concurrent enrollment in BIOL 165 recommended. Formerly BIOL 160. [NS, SE]

**Course Outcomes:**

- Recall and apply facts and concepts relating to basic human anatomy and physiology.
- Demonstrate, in writing, concepts related to human biology.

**HUMAN BIOLOGY LAB**

BIOL 165

1 Credits

33 hours of lab

Laboratory study of the structure and function of the human body as it relates to homeostasis, health, disease, and the environment. Concurrent enrollment in, or completion of BIOL 164 required. Formerly BIOL 161. [NS, SE]

**Course Outcomes:**

- Identify basic human anatomical features and briefly describe the functions of many of those features.

**HUMAN GENETICS**

BIOL 167

3 Credits

33 hours of lecture

Introduction to a variety of genetics topics, including nature versus, nurture, forensic sciences, patterns of inheritance, pedigree analysis, diseases, genetically modified organisms, gene therapy, cloning, and eugenics. Course will also focus on realized and/or potential impacts on society. Formerly BIOL 162. [NS, SE] [PNP]

**Course Outcomes:**

- Demonstrate knowledge of basic human genetics principles.
- Apply this knowledge to answer human genetics-related questions and solve related problems.
- Demonstrate how information learned in class relates to human genetics articles from newspapers, magazines, and/or the web.
- Demonstrate knowledge of the scientific method and the ability to interpret graphs.
- Apply the scientific method to evaluating a claim made by a specific product.

**HUMAN GENETICS LABORATORY**

BIOL 168

2 Credits

44 hours of lab

An introductory course that explores a variety of genetics topics through hands-on activities, simulations, presentation, and discussions. Activities may include DNA extraction, restriction enzyme digestions, electrophoresis, recombinant DNA, bacterial transformation, polymerase chain reaction (PCR) mutagenesis, genetically modified foods, antibiotics resistance, genetic crosses, genetic mapping, population genetics, and DNA databases. Prerequisite: A grade of "B-" or better in BIOL& 100 or BIOL 164 or BIOL 167 or consent of Instructional Unit. [NS, SE]

**Course Outcomes:**

- Demonstrate knowledge of basic genetics concepts.

- Apply this knowledge to solve genetics-related questions and problems.
- Demonstrate knowledge of and an ability to perform specified genetics lab techniques.
- Demonstrate knowledge of the scientific method and apply it to answer specific genetics-related questions.

### **COOPERATIVE WORK EXPERIENCE**

BIOL 199

1 - 5 Credits

165 hours of clinical

Supervised work experience in an approved job. Completion of specific learning objectives and employer evaluation. Completion of, or concurrent enrollment in, HDEV 195, 198, or 200 required. Prerequisite: Consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Fulfill the job requirements of their internship provider.

### **FIELD STUDIES IN BIOLOGY**

BIOL 208

1 - 10 Credits

22 hours of lecture - 286 hours of lab

For students interested in biology. An ecological approach with a diversity of habitats being visited (marine in winter, Great Basin Desert and marsh lands in spring). Credits for BIOL 208 are accumulated for each trip with a total of 15 credits possible for all trips. Prerequisite: Completion of a 100- or 200- level biology course, or consent of instructional unit. [NS, SE]

#### **Course Outcomes:**

- Develop skills in field identification using field guides including identifying most of the species of birds, mammals, reptiles and plants observed in the field.
- Recognize the adaptations for life in the high desert and gain an understanding of the ecology of the area.
- Construct a field journal using accurate field notes.

### **MAJORS ECOLOGY/EVOLUTION**

BIOL&221

5 Credits

33 hours of lecture - 44 hours of lab

Second course of three introductory courses for life science majors. Covers Mendelian genetics, evolution, adaption, speciation, biodiversity, and ecology. BIOL& 222 is the first course in the three-course series for majors, to be taken prior to BIOL& 221 or BIOL& 223. Prerequisite: A grade of "C" or better in BIOL& 222 or a grade of "B" or better in BIOL& 100. [NS, SE]

#### **Course Outcomes:**

- Apply fundamental principles and relationships from the Natural Sciences to solve problems.
- Evaluate claims about the natural world using scientific methodology.

### **MAJORS CELL/MOLECULAR**

BIOL&222

5 Credits

33 hours of lecture - 44 hours of lab

First course of three introductory courses for life science majors. Includes organic chemistry, cell structure, DNA structure and replication, gene expression, cell division, organismal development, molecular genetics and biotechnology. BIOL& 222 is the first course in the three-course series for majors; to be taken prior to BIOL& 221 or BIOL& 223. Prerequisite: Completion of or concurrent enrollment in CHEM& 139 (100) or CHEM& 121 (111) or CHEM& 141 (131). [NS, SE]

**Course Outcomes:**

- Demonstrate knowledge and understanding of basic biology principles relating to biochemistry, cells, metabolism, photosynthesis, cell division, molecular genetics, heredity, and reproduction.
- Explain and discuss (oral and/or written) aspects relating to these basic biology principles.
- Use the process of the scientific method to seek answers to questions.
- Retrieve, interpret, and evaluate (oral and/or written) both scientific and general literature, and evaluate the information from procedural and scientific accuracy points of view.
- Exhibit curiosity about nature and discipline themselves to develop questions and pursue answers to them using a variety of resources.

**MAJORS ORGANISMAL PHYS**

BIOL&223

5 Credits

33 hours of lecture - 44 hours of lab

Third course of three introductory courses for life science majors. Covers the physiology of major animal and plant organ systems. BIOL& 222 is the first course in the three-course series for majors, to be taken prior to BIOL& 221 or BIOL& 223. Prerequisite: A grade of "C" or better in BIOL& 222 or a grade of "B" or better in BIOL& 100. [NS, SE]

**Course Outcomes:**

- Know and demonstrate the steps and processes of the scientific method.
- Learn biological lab techniques and procedures.
- Demonstrate comprehension of photosynthesis.
- Describe plant structure, growth and development including how plants access and transport nutrients.
- Describe different means of angiosperm reproduction.
- Demonstrate comprehension of general forms and functions of animal physiology with emphasis on circulation, nervous systems, motor systems and sensory systems.

**FLOWERING PLANTS OF THE PACIFIC NORTHWEST**

BIOL 224

5 Credits

33 hours of lecture - 44 hours of lab

Identification and ecology of local wildflowers through the use of taxonomic keys, preparation of specimens and field trips to study native species in their habitats. For forestry, wildlife, recreation, botany and non-biology majors interested in learning to recognize local wildflowers. A Saturday field trip is required. [NS, SE]

**Course Outcomes:**

- Appreciate wild plant diversity in the Pacific Northwest.
- Recognize 80-90% of the families of wildflowers encountered in the region.
- Identify most plants to species using "Flora of Pacific Northwest" taxonomic key.
- Properly collect and prepare quality herbarium specimens.



- Acquire an appreciation for, and an understanding of, the flowering plant diversity in the Pacific Northwest and gain an understanding of the influence that invasive exotic species have on local ecosystems.

## **HUMAN ANATOMY AND PHYSIOLOGY I**

BIOL&241

5 Credits

33 hours of lecture - 44 hours of lab

The first in a two-quarter sequence exploring the relationships between structure and function in the human body. The sequence is intended as a prerequisite for students planning to major in Nursing, Dental Hygiene or other allied health programs, or as life science credit for non-biology majors. Topics include homeostasis, terminology, histology, the integumentary, skeletal, articular, muscular, nervous, and endocrine systems. Concurrent enrollment in BIOL& 241L. Prerequisite: A grade of "C" or better in BIOL& 160 or department approval. [NS, SE]

### **Course Outcomes:**

- Apply principles and standard terminology pertaining to homeostasis, and the anatomy (structure) and physiology (function) of: tissues, the integument, osseous tissue and the skeletal system, muscle tissue and the muscular system, and the nervous system.
- Explain biological concepts (above) using effective written communication skills.

## **HUMAN ANATOMY AND PHYSIOLOGY II**

BIOL&242

5 Credits

33 hours of lecture - 44 hours of lab

The second in a two-quarter sequence exploring the relationships between structure and function in the human body. The sequence is intended as a prerequisite for students planning to major in Nursing, Dental Hygiene or other allied health programs, or as life science credit for non-biology majors. Topics include endocrine, cardiovascular, respiratory, digestive, urinary, and reproductive systems and fluid and electrolyte balance. Concurrent enrollment in BIOL& 242L. Prerequisite: A grade of "C" or better in BIOL& 241 or department approval. [NS, SE]

### **Course Outcomes:**

- Apply basic principles of human biology in relation to anatomy and physiology of: the endocrine system, blood, the heart and circulatory system, lymphatic system and immunity, the digestive, respiratory and urinary systems, fluid and electrolyte balance,
- Explain biological concepts (above) using effective written communication skills

## **HUMAN A & P I**

BIOL&251

5 Credits

33 hours of lecture - 44 hours of lab

The first in a three-quarter sequence exploring the relationships between structure and function in the human body. The sequence is intended as a prerequisite for students planning to major in Nursing, Dental Hygiene or other allied health programs, or as life science credit for non-biology majors. Topics include homeostasis, terminology, cells, protein synthesis, DNA replication, histology, the integumentary, skeletal, articular, and muscular systems, and bone, muscle and membrane physiology. Formerly BIOL 231. Credit is not allowed for both BIOL& 251 and BIOL 231. Concurrent enrollment in BIOL& 251L. Prerequisite: A grade of "C" or better in BIOL& 100 or BIOL& 160 or BIOL 164/165, or BIOL& 221 or CHEM& 121 or 141 or consent of Instructional Unit.

Formerly BIOL 231. [NS, SE]

**Course Outcomes:**

- Demonstrate understanding of and apply principles and standard terminology pertaining to homeostasis, the scientific method, basic chemistry, and the anatomy (structure) and physiology (function) of: cells, tissues, the integument, osseous tissue and the
- Explain biological concepts (above) using effective written communication skills.

**HUMAN A & P II**

BIOL&252

5 Credits

33 hours of lecture - 44 hours of lab

The second in a three-quarter sequence exploring the relationships between structure and function in the human body. The sequence is intended as a prerequisite for students planning to major in Nursing, Dental Hygiene or other allied health programs, or as life science credit for non-biology majors. Topics include homeostasis, neural tissue, the spinal cord and spinal nerves, the brain and cranial nerves, integration of neural function, the special senses, the endocrine and reproductive systems, development and inheritance. Formerly BIOL 232. Credit is not allowed for both BIOL& 252 and BIOL 232. Concurrent enrollment in BIOL& 252L required. Prerequisite: A grade of "C" or better in BIOL& 251 or written consent of Instructional Unit. [NS, SE]

**Course Outcomes:**

- Apply basic principles of human biology in relation to anatomy and physiology of: neural tissue, the spinal cord and spinal nerves, the brain and cranial nerves, the integration of neural function, the special senses, the endocrine and reproductive system
- Explain biological concepts (above) using effective written communication skills.

**HUMAN A & P III**

BIOL&253

5 Credits

33 hours of lecture - 44 hours of lab

The third in a three-quarter sequence exploring the relationships between structure and function in the human body. The sequence is intended as a prerequisite for students planning to major in Nursing, Dental Hygiene or other allied health programs, or as life science credit for non-biology majors. Topics include homeostasis, the cardiovascular, lymphatic, digestive, respiratory and urinary systems, cellular metabolism, and fluid and electrolyte balance. Formerly BIOL 233. Credit is not allowed for both BIOL& 253 and BIOL 233. Concurrent enrollment in BIOL 011 for one credit and BIOL& 253L required. Prerequisite: A grade of "C" or better in BIOL& 252 or consent of Instructional Unit. [NS, SE]

**Course Outcomes:**

- Apply basic principles of human biology in relation to anatomy and physiology of: neural tissue, the spinal cord and spinal nerves, the brain and cranial nerves, the integration of neural function, the special senses, the endocrine and reproductive system
- Explain biological concepts (above) using effective written communication skills.

**MICROBIOLOGY**

BIOL&260

5 Credits

33 hours of lecture - 44 hours of lab

History of microbiology and a survey of organisms included in the study of microbiology with emphasis on bacteria. Physiology, morphology, genetics, growth and reproduction of bacteria. Experiments stress lab techniques and organisms that are a factor in clinic and hospital environments. Prerequisite: BIOL& 160 or consent of instructor. Formerly BIOL 240. [NS, SE]

**Course Outcomes:**

- Explain and apply microbiological safety techniques.
- Demonstrate an understanding of basic microbiological principles relating to history, microscopy, taxonomy, epidemiology, immunology, metabolism, genetics, aseptic technique, growth, and culture methodology.
- Apply basic scientific principles in solving real and hypothetical microbiological problems using the scientific method.
- Show an ability to communicate complex scientific information.
- Analyse and evaluate information presented in scientific journals and other media (e.g., newspapers, magazines, radio, and/or television) for scientific accuracy.
- Develop effective personal time management, organization, study skills.

**HUMAN CADAVER DISSECTION**

BIOL 275

1 - 6 Credits

198 hours of lab

Dissection of the muscular, circulatory, nervous, digestive and reproductive systems. [SE]

**Course Outcomes:**

- Prosect the cadaver to demonstrate the organs/systems for use in Human Anatomy & Physiology lab instruction.

**SELECTED TOPICS**

BIOL 280

1 - 5 Credits

55 hours of lecture

Selected topics in Biology. Topics vary, and course contents change to reflect new topics. Because the course varies in content it is repeatable for credit for different topics. [SE]

**Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of biology.

**SPECIAL PROJECTS**

BIOL 290

1 - 5 Credits

Opportunity to plan, organize, and complete special projects approved by department.

Prerequisite: Written consent of Instructional Unit. [SE]

**Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## Business Technology Medical Office

### **MATH FOR HEALTH CARE PROFESSIONALS**

BMED 103

3 Credits

33 hours of lecture

Mathematical concepts related to both administrative and dosage calculations for the physician's office, clinic, or emergi-center. Prerequisite: Eligibility for MATH 030 or higher via placement score or prerequisite coursework. [CP]

#### **Course Outcomes:**

- Perform calculations in basic math including fractions, decimals, percents, ratios and proportions, formulas, and metric conversions
- Solve medical office bookkeeping problems.
- Identify pertinent information on drug labels such as trade name, generic name, total volume, dosage strength, and manufacturer. .
- Distinguish among different sized syringes (TB, insulin, 3 mL, 5 mL, 10 mL, 20 mL) and what the calibrations represent. Solve adult and pediatric dosage calculation problems, (for both oral and parenteral meds), using the Formula method and/or ratio and pr

### **STATISTICS FOR HEALTH CARE PROFESSIONALS**

BMED 105

2 Credits

22 hours of lecture

Introduction to statistical computations and analysis used in healthcare. Topics include patient census, occupancy, length of stay, mortality and morbidity statistics. Prerequisite: A grade of "C" or better in BMED 103 or BUS 102. [CP]

#### **Course Outcomes:**

- 1.1 Define and understand the need to study health care statistics.
- 1.2 Recognize where health care statistics originate.
- 1.3 Identify users of health care statistics.
- 2.1 Define, differentiate and apply patient census, occupancy, length of stay, mortality, and morbidity terms.
- 2.2 Compute common health care statistics.
- 3.1 Define descriptive statistics and common descriptive statistics terms.
- 3.2 Compute mean, median, mode, and percentile.
- 3.3 Calculate range, variance and standard deviation.

### **MEDICAL TERMINOLOGY I**

BMED 110

3 Credits

33 hours of lecture

Introduction to medical word building with common medical roots, prefixes and suffixes. Study of terms related to the body as a whole, as well as terms related to human anatomy, pathology, diagnostic tests, clinical procedures, and abbreviations associated with each body system. Medical Terminology I covers the following body systems: digestive, urinary, reproductive, nervous, and cardiovascular. Course work will include spelling and pronunciation of terms. [GE] [PNP]

#### **Course Outcomes:**

- Recognize a wide selection of word parts that allow them to understand of a wide variety of medical terms, particularly within the body systems covered in this course.

- Define terms that apply to the body as a whole, particularly directional terms, body cavities, anatomical divisions and planes of the body.
- Recognize medical eponyms, procedures, tests, and abbreviations.
- Use medical terms in written and verbal communication.
- Translate medical English into standard English, including the ability to look up unknown terms.

## **MEDICAL TERMINOLOGY II**

BMED 111

3 Credits

33 hours of lecture

Continuation of Medical Terminology I, BTEC 110. Study of common medical roots, prefixes and suffixes and terms related to human anatomy, physiology, pathology, diagnostic tests, clinical procedures, and abbreviations associated with each body system. Medical Terminology II covers the following body systems: respiratory, blood, lymphatic, immune, musculoskeletal, integumentary, sense organs (eyes and ears), endocrine, as well as psychiatry. Course work will include spelling and pronunciation of terms. Prerequisite: BTEC 110 or BMED 110. [GE] [PNP]

### **Course Outcomes:**

- Recognize a wide selection of word parts that allow them to understand of a wide variety of medical terms, particularly within the body systems covered in this course.
- Define terms that apply to the body as a whole, particularly directional terms, body cavities, anatomical divisions and planes of the body.
- Recognize medical eponyms, procedures, tests, and abbreviations.
- Use medical terms in written and verbal communication.
- Translate medical English into standard English, including the ability to look up unknown terms.

## **INTRODUCTION TO PATHOPHYSIOLOGY**

BMED 112

5 Credits

55 hours of lecture

Introduction to the general mechanisms of systemic disease including etiology, physical signs and symptoms. Etiology focus will include infectious mechanisms, hereditary contributions, external physical agents and autoimmune conditions. Discussions of differences between disease and illness to include basic principles of pharmacology laboratory and diagnostic tests, overview of common therapies, prognosis and public health issues. Prerequisite: A grade of "C" or better in BMED 111 and BIOL 164/165 or HEOC 100. [GE] [PNP]

### **Course Outcomes:**

- Recall, understand, apply and evaluate over 520 diseases and conditions discussed in the text focusing on etiology, differentiation, common therapies, pharmacology, and tests currently utilized in the health care setting.
- Utilize over 600 vocabulary terms in written and verbal communication with the ability to apply said terms to future conditions.
- Communicate effectively in both written and verbal venues. Recognize and respond to verbal and non-verbal communication. Teach etiology, therapies, pharmacology regarding specific conditions assigned.
- Instruct individuals according to their needs. Instruct "patients" utilizing both verbal and written directions. Utilize understanding of disease processes, including chronic conditions, prevention, and special needs of the patient.
- Understand and explain health maintenance and disease prevention.

## **MEDICAL OFFICE ADMINISTRATIVE PROCEDURES I**

BMED 116

3 Credits

22 hours of lecture - 22 hours of lab

Introduction to administrative positions in the medical field. Students gain introductory administrative competencies compliant with CAAHEP and other related professional organizations. The lab portion of the class prepares the student in medical office competencies and relevant software. Strong teamwork and time management skills are necessary to be successful in this rigorous course. Cannot receive credit for both BMED 115 and 116/117. Prerequisite: Completion of, or concurrent enrollment in, BMED 110 and completion of BTEC 149 or 150, or instructor permission. [GE]

### **Course Outcomes:**

- Define and describe his/her position and duties within the administrative medical office framework.
- Be familiar with the attributes, education and experience necessary for success in his/her chosen field and understand "scope of practice" as it relates to education, training and personal capabilities.
- Gain familiarity with the structure of the administrative office health care setting and of the people who populate the setting.
- Gain first-hand experience of the advantages and necessity of teamwork in any health-care setting.
- Be familiarized with the basics of computer literacy and the critical thinking skills necessary for success in a medical office environment.
- Demonstrate understanding of the important types, means, and methods of vital written, oral and nonverbal communication within the medical office environment.
- Understand the application of various administrative techniques which contribute to the delivery of cost-effective and quality health care.
- Have knowledge and capabilities with regard to appointment scheduling, medical records maintenance and protocol, computer programs and literacy, priority of work tasks, proper telephone etiquette, professional communication techniques with respect to heal

## **MEDICAL OFFICE ADMINISTRATIVE PROCEDURES II**

BMED 117

3 Credits

22 hours of lecture - 22 hours of lab

Students will complete the competencies and coursework needed to successfully perform administrative and management duties in an outpatient medical clinic. This course continues where BMED 116 leaves off, offering the continuing student more coding, financial tasks, accounting practices, office management and human resource duties. Strong teamwork and time management skills are necessary to be successful in this rigorous course. Cannot receive credit for both BMED 115 and 116/117. Prerequisite: Completion of BMED 116 or instructor permission. [GE]

### **Course Outcomes:**

- Exhibit proficiency in clerical and administrative functions required of a medical office manager.
- Employ professional, ethical, and legal standards in health care practice.
- Integrate knowledge from behavioral and biological sciences as a basis for allied health practices.
- Embody professional behaviors as defined by the disciplines of allied health.

## **MEDICAL REIMBURSEMENT**

BMED 129

5 Credits

55 hours of lecture

Overview of inpatient, outpatient health, insurance plans, revenue cycles, health insurance claims, health insurance terminology, reimbursement methodologies for professional services, completion of CMS/1500 and UB-04 billing forms. Topics include compliance issues, fraud and abuse/HIPAA issues, processing various perspective payment systems. Concurrent enrollment in BMED 111. Prerequisite: A grade of "C" or better in BMED 110. [GE] [PNP]

### **Course Outcomes:**

- Recognize different types of facilities that would employ allied health personnel.
- Describe practices for creating relationships between the Patient, Provider and Carrier.
- Complete Managed Care Insurance Plans.
- Understand managed care: medical contracts and ethics.
- Explain Benefits and Payment Adjudication.
- Perform medical billing.
- Process medical claims.

## **MEDICAL CODING - CPT/HCPCS**

BMED 130

4 Credits

44 hours of lecture

Introduction to procedural coding in ambulatory settings using the CPT Code Set and HCPCS (Health Care Financing Common Procedure Coding System). Student is introduced to the symbols, terminology and methods of procedural coding used by physicians and third parties and is guided step-by-step through various procedural coding scenarios by means of workbook exercises and actual case studies. The format and guidelines of the CPT and HCPCS code sets are reviewed to include E/M codes and modifiers. Reviews medical/surgical terminology, surgical/anatomical procedures, anesthesia, pharmaceuticals, and durable medical goods. Looks at CPT's position as it relates to ICD-9 and ICD-10 in today's coding world. Prerequisite: A grade of "C" or better in BMED 111. [GE]

### **Course Outcomes:**

- Describe the history, intricate structure, creators, purpose, and uses of the Current Procedural Terminology (CPT) coding system and the Healthcare Common Procedure Coding system (HCPC Level II).
- Define and identify CPT symbols, appendices, modifiers, guidelines, procedural codes and become comfortable with the use of the 2013 CPT code book.
- Demonstrate the ability to understand the notion of and to code E/M or emergency management services.
- Delineate the contents of a surgical package, distinguish between general surgery and specific organ system surgical procedures. Demonstrate knowledge of anesthesia procedures and coding.
- Demonstrate knowledge of various common and some uncommon surgical and anatomical vocabulary, radiological, procedural medical terminology as well as terms relating to pharmaceutical items and durable goods.
- Define and demonstrate usage of various radiological and laboratory/pathological procedural terms.
- Relate the format, structure, and general content of the Medicine Section of the CPT codebook.
- Identify various medical documentation instruments and completely understand their detail.

Be familiar with all billing forms and their uses and demonstrate ability to code from these documents.

- Apply CPT coding conventions and national CPT guidelines to correctly assign procedures and services codes to operative reports, clinic notes, and other medical record documentation, achieving at least 90% accuracy rate.
- Distinguish between CPT and HCPCS codes, assigning appropriate codes to report complex services and procedures as well as pharmaceuticals and durable medical goods.
- Discuss the impact of coding on reimbursement and managed health care as well as issues caused by its improper uses. Recognize the importance of medical necessity.

## **MEDICAL CODING ICD-9-CM/ICD-10**

BMED 132

5 Credits

55 hours of lecture

Introduction to use of the ICD-9-CM and ICD-10 (International Classification of Disease, 9th & 10th Edition, Clinical Modification) coding system as it is used in inpatient, ambulatory and long term care. Content and purposes of indexes and registers are reviewed. Implications of diagnostic related groups (DRGs) and other prospective payment systems and their relationships to coding assignments and financing of health care, theory and practice are provided in coding problem solving and data quality content and measures. Prerequisite: A grade of "C" or better in BMED 111. [GE]

### **Course Outcomes:**

- Locate correct diagnostic code in ICD-9-CM code books, volumes 1, 2, and 3.
- Extract diagnosis and hospital procedures from sample medical charts, utilizing coding guidelines effectively.
- Code and extract diagnoses and PCS in ICD-10.
- Apply reimbursement, regulatory and insurance compliance along with coding guidelines specific to every chapter of the ICD-9-CM.
- Communicate effectively in both written and verbal venues. Recognize and respond to verbal and non-verbal communication. Work in teams, query appropriately, and explain and support coding decisions to others.

## **INTERMEDIATE MEDICAL CODING**

BMED 133

5 Credits

55 hours of lecture

Coding systems used in hospitals, physicians' offices and long-term care sites. Emphasis on ICD-9-CM (International Classification of Diseases, 9th Edition, Clinical Modification) and CPT (Current Procedure Terminology). Topics include content and purposes of disease and procedure indexes, as well as the purposes of abstracting from patient medical records; implications of diagnostic related groups (MS-DRGs) and ambulatory payment classifications (APCs) and their relationship to coding assignment and financing of hospital care; relationships of coding assignment and financing of physician office care; coding problem solving and measures for data quality and compliance. Class activities include coding practice using actual patient records and ICD-9-CM/CPT encoder. Prerequisite: A grade of "C" or better in BMED 129, BMED 130 and BMED 132, or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Acquire, understand, process and draw conclusions from information using observation, analysis, interpretation, speculation and evaluation.
- Demonstrate understanding of the Prospective Payment System: terms, regulatory changes,



MS-DRG, in relation to medical billing and coding.

- Apply understanding of inpatient hospital coding utilizing coding guidelines, and extrapolation of source document to correctly choose codes from ICD-9-CM-Volume 3, ICD-10-CM/PCS, CPT-HCPCS and Encoder.

## **MEDICAL OFFICE SEMINAR**

BMED 134

1 Credits

11 hours of lecture

Overview of student success strategies, library resources, the health care delivery system in the United States and the various employment opportunities in medical office occupations including discussion of job requirements and responsibilities. [GE] [PNP]

### **Course Outcomes:**

- Explain why attitude is important when approaching the study of a subject.
- Utilize good study habits and routines for college success.
- Explain the benefits of a study group.
- Define the role the Center for Medicare and Medicaid Services play in health care delivery.
- Provide the meaning for the following abbreviations: CDC, FDA, NIH, OSHA, JCAHO, AMA, HMO, CMS, HIPPA.
- Describe the concept of Managed Care including the gatekeeper model and capitation payment versus fee-for-service.
- Describe the Health Insurance Portability and Accountability Act (HIPAA) and its effect on health care delivery.
- Describe ambulatory care.
- Describe the difference between the clinical outpatient and the referred outpatient.
- Describe the general and specialty hospital.
- Apply the concept of a teaching hospital, and categories of hospital ownership as it relates to future employment.
- Distinguish between hospice, home care, home health and long term care facilities.
- Describe the important role played by allied health professional association.
- Describe some resources at Clark's Cannell Library that can be used to research medical topics.
- Briefly describe responsibilities of a medical receptionist.
- Briefly describe the responsibilities of a medical assistant.
- Briefly describe the responsibilities of a medical record technician or accredited record technician.
- Briefly describe the responsibilities of a medical transcriptionist.
- Define the following allied health professional abbreviations: AAMA, CMA, AHIMA, RHIT, RHIA, AAMT, CMT, CCS.

## **THERAPEUTIC COMM SKILLS FOR HEALTH PROF**

BMED 137

3 Credits

33 hours of lecture

Techniques for encouraging a therapeutic and helping relationship with the client/patient. Includes an overview of the psychosocial development of a person, from birth to death. [GE]

### **Course Outcomes:**

- Integrate evidence-based knowledge, theories and concepts from liberal education, including literature, behavioral, natural and physical sciences into the professional health care practices.

- Incorporate critical thinking skills in autonomous decision-making and effective therapeutic communication with individuals, families, groups, and communities.
- Practice profession competently in the roles of advocate, assistant, coordinator/collaborator, educator, leader, and consumer of research in a variety of health care settings.
- Facilitate therapeutic, caring, and collaborative relationships with clients and members of interdisciplinary health teams through effective interpersonal, oral, written, and emerging technology communication strategies.
- Integrate knowledge of leadership/management/administrative and information technology skills and health care policies in providing direct and indirect care to clients.
- Provide comprehensive, culturally competent client-centered care to promote, restore, and maintain the maximum health potential of individuals, families, groups, and communities across the lifespan.
- Incorporate professional values, professional standards, and ethical, moral, and legal aspects of health care practice to promote advocacy, collaboration, and social justice.

## **LEGAL ASPECTS OF THE MEDICAL OFFICE**

BMED 138

2 Credits

22 hours of lecture

Introduction to medical law, ethics and bioethics. Topics will include: ethics and bioethics in the practice of medicine, professional codes of ethics, an introduction to law, legal guidelines and the practice of medicine including professional liability, public duties, consents, advance directives, anatomy of a malpractice case, legal aspects of medical records, confidentiality, security of patient information and the release of patient information, patient access to their own medical records, and responding to subpoena duces tecum of medical records. [GE]

### **Course Outcomes:**

- Outline the principles of the American legal system, specifically sources of law, jurisdiction of courts and the structure of state and federal court systems, and civil case procedure.
- Analyze and comprehend legal documents, court documents and client letters, and effectively assist in drafting, editing and proofreading.
- Interpret ethical rules and standards of practice pertaining to the medical office, including conflicts of interest, client confidentiality, and unauthorized practice of law.
- Conduct effective factual and legal research and apply legal terms to working scenarios.

## **MA ASSISTANT EXAMINATION REVIEW**

BMED 139

2 Credits

22 hours of lecture

Review of Medical Assistant administrative and clinical competencies including anatomy and physiology, medical terminology and legal aspects. Discussion of studying and test taking techniques to prepare for the NCCT Medical Assisting certification and the CMA certifications. Students will have a registration date to complete both exams by class completion. Concurrent enrollment in BMED 166 required. Prerequisite: A grade of "C" or better in BMED 163, 164 and 165 or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Describe Medical Assistant administrative and clinical competencies including anatomy and physiology, medical terminology and legal aspects.
- Employ studying and test taking techniques to prepare for Medical Assistant Certification examination.

## **LEGAL ASPECTS OF HEALTH INFORMATION**

BMED 140

2 Credits

22 hours of lecture

Introduction to legal concepts with particular focus on healthcare providers and records generated in the practice of medicine, including administration of law, legal and court structure and function, and managing the release of patient information. Topics include liability of hospital and providers of care as well as current pertinent legislation, legal status of medical staff, laws relating to bioethical issues. [GE]

### **Course Outcomes:**

- Describe the structure of the legal system, and the sources of law.
- Legal issues associated with physicians, nursing, and insurance as it relates to the healthcare industry.
- Discuss criminal aspects of the healthcare system.
- Explain contract law, with attention paid to the formation and enforcement of contracts.

## **MEDICAL OFFICE CLINICAL PROCEDURES I**

BMED 163

6 Credits

44 hours of lecture

Principles of medical office clinical procedures including preparing a patient for assisting a physician with examinations, procedures, and components of patient history. Covers charting, vital signs, sterile setups, universal blood precautions and methods of asepsis and sterilization. Topics also include techniques in patient interviewing and education. Lab provides the opportunity for practice and to demonstrate proficiency in procedures. Concurrent enrollment in BMED 130 and FACPR 032 required or consent of Instructional Unit. Prerequisite: A grade of "C" or better in BMED 105, 112, 117, 129, 132, 138, HEOC 120 and CMST& 230 and consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Perform proper hand washing technique, sterile field, and different glove fit.
- Patient interview, vitals, vaccine verification. Ensuring patients are comfortable with patient education.
- Perform ambulatory equipment fit care, eye care, ear care.
- Perform emergency recognition, know what is in a facility crash cart.

## **MEDICAL OFFICE CLINICAL PROCEDURES II**

BMED 164

6 Credits

44 hours of lecture

Continuation of Medical Office Clinical Procedures I covering medical office clinical procedures including methods of collecting blood, processing specimens, equipment preparation and operation, electrocardiology, medication administration, medical and surgical asepsis. The lab provides an opportunity to practice procedures and demonstrate proficiency. Concurrent enrollment in BMED 137 and 165 required or consent of Instructional Unit. Prerequisite: A grade of "C" or better in BMED 163 or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Dispose of biohazard waste.

- Perform venipuncture using a Vacutainer system and butterfly system.
- Help the physician comply with the Controlled Substance Act of 1970.
- Administer oral drugs, draw up a drug from an ampule, and reconstitute and draw up drugs for administration.
- Give an intramuscular , subcutaneous, and intradermal injections.

## **MEDICAL OFFICE LABORATORY PROCEDURES**

BMED 165

4 Credits

22 hours of lecture - 44 hours of lab

Introduction to specimen collection and processing. Performing basic CLIA waived hematology, chemistry and immunology testing; microscopic urine tests including gram smears; basic culture techniques and blood typing. Equipment use and maintenance, re-agent storage and handling. Quality control measures. Lab safety emphasized. Cannot receive credit for both HEOC 160 and BMED 165. Concurrent enrollment in BMED 137 and 164 required or consent of Instructional Unit. Prerequisite: A grade of "C" or better in BMED 163 or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Implement appropriate safety procedures in a medical laboratory setting.
- Obtain proper specimens for blood, urine, and microbiologic testing.
- Demonstrate knowledge of CLIA laws as they pertain to the medical office.

## **MEDICAL ASSISTANT PRACTICUM**

BMED 166

6 Credits

11 hours of lecture - 165 hours of clinical

Supervised medical assistant experience in a health care facility. Provides students with the opportunity to apply knowledge and skill in performing administrative and clinical procedures and in developing professional attitudes for interacting with other professionals and consumers. Concurrent enrollment in BMED 139 required. Prerequisite: A grade of "C" or better in BMED 164, 165 and consent of Instructional Unit. [GE, HR]

### **Course Outcomes:**

- 1. Student hand book with tracking of all course outcomes. Need to be completed, signed and returned after 200 hours are completed.
- 2. Preceptor hand book with tracking of all course outcomes. Need to be completed, signed and returned after 200 hours are completed.
- 3. Sit and pass the CMA (AAMA) exam, as well as Washington State National (NCCT) exam.
- 4. Become employed as a medical assistant.

## **HEALTH INFORMATION PROCEDURES**

BMED 222

5 Credits

44 hours of lecture

Introduction to health information procedures, principles and practice standards associated with medical record department and health unit coordinator responsibilities. Topics include: licensing, regulation, and accreditation of health care facilities, hospital organization, patient registration, health care statistics, medical record content, medical record assembly, analysis and coding. CPT coding (ICD-9-CM and ICD-10-CM) will be introduced as well as a review of other medical classifications of nomenclatures classification and nomenclatures. Completion of, or concurrent

enrollment in BIOL 164/165 or HEOC 100, or consent of Instructional Unit. Prerequisite: A grade of "C" or better in BMED 103 and 105. [GE] [PNP]

**Course Outcomes:**

- Demonstrate proficiency in health information procedures.
- Demonstrate proficiency in clinical documentation and the healthcare delivery system.
- Be able to utilize the healthcare record.
- Demonstrate organization and management of the health record.

**MEDICAL OFFICE PRACTICUM**

BMED 225

2 Credits

11 hours of lecture - 33 hours of clinical

Supervised learning in a clinic, medical center, or other health care facility, practicing medical office administrative responsibilities. Prerequisite: Consent of Instructional Unit. [GE, HR]

**Course Outcomes:**

- Demonstrate professionalism, integrity, dependability and initiative in the workplace as well as the classroom.
- Demonstrate excellent communication skills by application of communications coursework as well as administrative skills to all forms of communication.
- Application of knowledge and skills learned in the medical office program.

**MEDICAL OFFICE PRACTICUM**

BMED 226

3 Credits

11 hours of lecture - 66 hours of clinical

Supervised learning in a clinic, medical center, or other health care facility, practicing medical office administrative responsibilities. Prerequisite: Consent of Instructional Unit. [GE, HR]

**Course Outcomes:**

- Demonstrate professionalism, integrity, dependability and initiative in the workplace. Get to work on time and complete scheduled work hours. Maintain confidentiality, professionalism and a strong work ethic while on site as well as in the classroom. Per
- Demonstrate excellent communication skills. Application of communication coursework to the job site.
- Apply knowledge and skills learned in the medical office program to an actual medical setting.

**HEALTH DATA CONTENT AND STRUCTURE**

BMED 227

3 Credits

22 hours of lecture - 22 hours of lab

Analysis and utilization of health record content with emphasis on physician's orders, clinical lab tests, diagnostic and treatment modalities and pharmacology and an overview of applicable consent and confidentiality principles. Students will participate in hands-on lab application of healthcare procedures via the AHIMA web-based Virtual lab. Prerequisite: Completion of with a grade of "C" or concurrent enrollment in BMED 222. [CP]

**Course Outcomes:**

- Differentiate between the UHDDS and UACDS healthcare datasets/types of data collected.
- Locate clinical data in health record documentation.
- Differentiate various types of healthcare disciplines and providers in the continuum of care.
- Distinguish between the content of health records in the acute care inpatient, hospital outpatient/ASC and physician office settings.
- Describe the health information management department functions and purpose.

## **MEDICAL DOCUMENT MANAGEMENT AND TECHNOLOGY**

BMED 228

3 Credits

33 hours of lecture

Fundamental principles in identifying and applying inpatient and outpatient records and reports. Strong skills in English, spelling and grammar, medical terminology, attention to detail, proofreading, and quality assurance are recommended. Completion of with a grade of "C" or concurrent enrollment in BMED 222. Prerequisite: A grade of "C" or better in BMED 222, or consent of Instructional Unit.

### **Course Outcomes:**

- Respond to the information needs of internal and external customers throughout the continuum of healthcare services with appropriate health record documentation.
- Enhance health data collection, storage, analysis and reporting of information including end-user hardware and software applications
- Recognize the best HIT practices and enact strategic and operational plans for utilization of these practices involved in an outpatient and inpatient setting.

## **HIIM DIRECTED PRACTICE**

BMED 229

1 Credits

33 hours of clinical

Supervised learning in a clinic, medical center, campus, or other health care facility, practicing medical office administrative and HIIM responsibilities. The student will be extrapolating, correcting, analyzing for completeness, abstracting reports for release of information (ROI), coding, billing and communication competencies using actual electronic medical records and medical charts. Provision for technical experiences is an integral component of curricula. This provides students the application of classroom and laboratory objectives in a supervised affiliation site. Performed under leadership of a registered health information administrator or registered health information. Prerequisite: Successful completion of the following: BMED 116, 222 and 228 or Consent of the Instructional Unit.

### **Course Outcomes:**

- Utilizing CAHIM accreditation competencies and coursework students should successfully demonstrate dependability, initiative and teamwork in a healthcare setting.
- Demonstrate extrapolation and application of health records for accuracy, ROI, coding, and ability to query providers correctly.
- Utilize resources for correct application of medical administrative competencies.
- Apply legal, ethical and HIM principles to decisions regarding medical records.

## **PATIENT ADVOCATE1: INTRO TO HEALTH ADVOCACY**

BMED 233

3 Credits

33 hours of lecture

Application of anatomy and physiology to examine multi-system and holistic disease management and patient education. Introduction to Health Advocacy careers with a focus on chronic disease care. Discussion of ethical and practical approaches to patient, with emphasis on advocacy, leadership and communication. Class activities, including role-play, will focus on professional, effective and empathetic communication skills with patients, healthcare personnel and administrators. Prerequisite: Successful completion with a "C" or better in BMED 110 or consent of Instructional Unit.

**Course Outcomes:**

- Discuss importance, as well as scope, of the health advocate in the role of patient care within the modern medical landscapes of gatekeeper management, patient-centered medical homes, and other manifestations of the Affordable Care Act.
- Explain homeostasis of the organism in the context of interactions between multiple body systems.
- Describe etiologies, mechanisms, complicating factors and clinical manifestations of polysystemic diseases.
- Explain concepts of holistic medicine, evidence-based vs. empirical, and functional medicine.
- Demonstrate empathetic listening skills, and rapport-building skills as appropriate for the profession of health advocacy.

**PATIENT ADVOCACY II: COORDINATION AND COACHING**

BMED 234

4 Credits

44 hours of lecture

Patient Advocates are required to build relationships, solve problems and locate resources, all within the scope of coordination. Drawing on cultural sensitivity and the whole-person concept, this course develops communication skills needed to build relationships, navigate and improve patient satisfaction, outcomes and compliance. Establishing and maintaining professional boundaries in context of the advocate role on the medical team. Application of principles of health coaching, as different from navigation, to enable patients to make positive behavior changes, navigate the health and community service system, and engage in their own care. Prerequisite: Successful completion with a "C" or better in BMED 110 and BMED 233 or consent of the Instructional Unit.

**Course Outcomes:**

- Define care coordination, plan of care (POC) care transitions, continuum of care including end of life and palliative care and the relationship of each to navigation and advocacy.
- Effectively utilize practices for communicating with patients, community partners, and the healthcare teams.
- Explain how culture and bias affect interpretation and of illness and the interaction with the healthcare system.
- Describe how the patient advocate role is integrated into the healthcare team and the importance of role clarity.
- Locate and establish eligibility to access resources.

**PATIENT ADVOCACY III: WHOLE PERSON CARE**

BMED 235

4 Credits

44 hours of lecture

Advanced concepts in healthcare systems advocacy and navigation. Exploration and application of the critical process of linking healthcare systems with patients, the advocate role on the medical team and scope of practice, available resources and the culture of the patient and the community.

Further emphasis on managing the patient as a whole person and partner in their care, including implications of family involvement. Examines the emotional, social, psychological and physical impact of chronic disease. Behavioral health issues, end-of-life issues, palliative care and hospice needs will be explored in the context of advocate role, scope of practice and safety, ethics, decision support and family. Evidence-based strategies that support healthy behaviors will be introduced and practiced. Practice in motivational interviewing techniques, teach back and activation conversations will focus on strategies to engage both patients and families.

Prerequisite: Successful completion with a "C" or better in BMED 110 and BMED 234 or consent of the Instructional Unit

**Course Outcomes:**

- Coordinate community resources based on patient needs.
- Describe a process of receiving and making referrals to appropriate community resources
- Successfully apply strategies for managing the whole person, chronic disease, behavioral health and end of life issues in multiple simple and complex case studies.
- Utilize practices for communicating with patients including: motivational interviewing, teach back, active and empathetic listening, and conflict management.
- Utilize coaching strategies to engage clients and families in care and wellness
- Demonstrate culturally sensitive conversations and strategies that reduce social and cultural barriers to care and reduce health disparities.

**PATIENT ADVOCACY IV: ADVANCED ADVOCACY SKILLS**

BMED 236

4 Credits

44 hours of lecture

Advanced concepts in healthcare systems advocacy and navigation. Exploration and application of the critical process of linking healthcare systems with patients, the advocate role on the medical team and scope of practice, available resources and the culture of the patient and the community. Further emphasis on managing the patient as a whole person and partner in their care, including implications of family involvement. Examines the emotional, social, psychological and physical impact of chronic disease. Behavioral health issues, end of life issues, palliative care and hospice needs will be explored in the context of advocate role, scope of practice and safety, ethics, decision support and family. Evidence-based strategies that support healthy behaviors will be introduced and practiced. Practice in motivational interviewing techniques, teach back and activation conversations will focus on strategies to engage both patients and families.

Prerequisite: Successful completion with a "C" or better in BMED 110 and BMED 234 or consent of the Instructional Unit

**Course Outcomes:**

- Determine the impact of demographic, physical and emotional and social aspects of chronic disease when linking patients to supportive resources.
- Select appropriate change and communication strategies to improve level of patient activation and engagement in their care
- Successfully present a case that demonstrates the effective application of the patient advocate role
- Choose or modify communication strategies to address/overcome opportunities and barriers for care to insure effective care delivery.
- Demonstrate personal confidence in practice patient health advocacy in the community, and build a continuing personal development plan.

**INTERMEDIATE ANATOMY AND PHYSIOLOGY**

BMED 242

3 Credits



22 hours of lecture - 22 hours of lab

Expanded exploration of human anatomy and physiology with an emphasis on medical record extrapolation, analysis of medical procedures, continuation of pathophysiology as applied to medical coding and health information management. The student will apply prerequisite coursework to common procedures, treatments and standard of care with consideration and exploration of current laws, such as the Affordable Care Act and Meaningful Use and their impact on patient care, billing and health information management. Prerequisite: Successful completion with a "C" or better of BMED 112 and BMED 132.

**Course Outcomes:**

- Ability to extrapolate patient medical records and reports for information relevant to code and manage health information compliance.
- Locate clinical data in health record documentation.
- Application of medical understanding toward HIIM mandates including quality improvement and reimbursement issues.
- Ability to apply intermediate application of anatomical and physiological conditions to health information management functions and purpose.

**MEDICAL OFFICE CAPSTONE PRACTICUM**

BMED 250

3 Credits

22 hours of lecture - 33 hours of clinical

Supervised learning in a simulated health care environment where students will be extrapolating, correcting, analyzing for completeness; abstracting reports for release of information (ROI); coding and billing using actual electronic medical records and charts. In addition, students will develop in-depth knowledge of career opportunities and medical administrative team environments. Prerequisite: A grade of "C" or better in BMED 222 or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Develop and implement a training and/or continuing education program.
- Participate in the management processes and report results.
- Demonstrate focused individualized projects.
- Describe emerging trends in healthcare.
- Demonstrate life-long learning capabilities.

**SELECTED TOPICS**

BMED 280

1 - 3 Credits

33 hours of lecture

The course focuses on selected topics in Business Technology. Topics vary, and course theme and content change to reflect new topics. Because the course varies in content, it is repeatable for credit for different topics. Individual topics are listed in the quarterly class schedules. [GE]

**Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this course.

**SPECIAL PROJECTS**

BMED 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the faculty of the department. Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## Business Technology

### KEYBOARDING

BTEC 100

1 - 3 Credits

11 hours of lecture - 44 hours of lab

Introduction to the keyboard, development of speed and accuracy, and basic keyboarding applications, including business letters, memos, tables, and reports. Keyboarding courses (BTEC 101 and 190) are taught as individualized instruction through self-paced study. Students register for BTEC 100. At the end of the quarter, registration will automatically be changed to the appropriate course(s). A student earns from 1 to 3 credits in a course depending on the number of lessons and tests successfully completed. [GE] [PNP]

**Course Outcomes:**

- Place into BTEC 101 (beginning keyboarding) or BTEC 103 (refresher keyboarding).

### BEGINNING KEYBOARDING

BTEC 101

1 - 3 Credits

11 hours of lecture - 44 hours of lab

Introduction to keyboard, development of speed and accuracy and basic keyboarding applications - simple letters, memos, tables, and reports. For students who have had no previous keyboarding instruction. Register for BTEC 100. At the end of the quarter, registration will automatically be changed to the appropriate course(s). This course is taught on microcomputers. [GE] [PNP]

**Course Outcomes:**

- Keyboard by touch.
- Identify the meaning and use of proofreader's marks to correctly key copy.
- Key memos, business and personal letters, tables, and reports.
- Key straight copy for three minutes at a minimum rate of 30 WPM with a maximum of three errors.

### REFRESHER KEYBOARDING

BTEC 103

1 - 3 Credits

11 hours of lecture - 44 hours of lab

Review of keyboard and basic typing applications, development of speed and accuracy. For students who have not typed for several years and need a review. Continuous enrollment, flexible time, individualized program. Satisfactory completion meets prerequisite for BTEC 122, Document Formatting. Register in BTEC 100. Registration will automatically be changed at the end of the quarter. Cannot receive credit for both BTEC 103 and BTEC 190. [GE] [PNP]

**Course Outcomes:**

- Keyboard by touch.
- Identify the meaning and use of proofreader's marks to correctly key copy.
- Key memos, business and personal letters, tables, and reports.
- Key straight copy for five minutes at a minimum rate of 35 WPM with a maximum of five errors.

## **BEGINNING COMPUTER FUNDAMENTALS**

BTEC 105

3 Credits

33 hours of lecture

Introduction to basic computer skills. Topics include computer components, terminology, and skills to manage files/folders, send and receive email, create documents using word processing, make simple spreadsheets, and locate information on the Internet. For students with little or no prior computer experience. [GE] [PNP]

### **Course Outcomes:**

- Demonstrate basic computer skills by selecting, editing, and entering data to create documents using word processing and spreadsheet applications.
- Manage and organize files and folders.
- Use the Internet to research, analyze, and report on specified topics.
- Send appropriately formatted e-mails utilizing attachments, CC, and forwarding.

## **APPLIED OFFICE ENGLISH**

BTEC 106

3 Credits

33 hours of lecture

Fundamental skills in the use of reference materials, spelling, business vocabulary, editing, word usage, grammar, sentence structure, and punctuation and practice in basic writing skills for business letters, memorandums, and emails. Students who have already completed BTEC 087 or BTEC 107 should not take this course. Prerequisite: Eligibility for ENGL 098. [GE] [PNP]

### **Course Outcomes:**

- Proofread and edit with a high degree of accuracy and use the proofreader's marks accurately.
- Identify and use appropriate reference sources (e.g. dictionaries, reference manuals, atlases, etc...) .
- Recognize and correct errors in grammar, punctuation, usage, spelling, word choice, sentence structure, and common keyboarding errors such as transpositions, omitted copy, or added copy.
- Recognize and practice basic writing skills using business documents including letters, memorandums, and emails.

## **BUSINESS ENGLISH**

BTEC 107

5 Credits

55 hours of lecture

Develop proficiency in the language skills necessary for business writing. Strong emphasis placed on grammar, punctuation, sentence structure, capitalization, subject/verb agreement, and editing. Prerequisite: Eligibility for ENGL 098. [C, SE]

### **Course Outcomes:**

- Apply correctly the mechanics of grammar and English language.
- Use the dictionary and other reference books for gaining conciseness of expression and increasing vocabulary.
- Correctly spell words commonly used in business.

## **INTRODUCTION TO OUTLOOK**

BTEC 114

1 Credits

11 hours of lecture

This course is designed to give students an overview of Outlook. Students will be introduced to email etiquette, calendaring functions, and create and organize contacts, and compose and deal with email messages. [GE]

### **Course Outcomes:**

- Gain an overview of the benefits of email: create and send email messages, receive emails and competently work with file and item attachments within email messages, and work with flag and message reminders.
- Work with the calendar feature in Outlook: create and invite others to meetings, schedule events, and work with appointments.
- Manage tasks and contacts: create, edit, and organize tasks and contacts within Outlook.

## **APPLICATION ESSENTIALS: WORD**

BTEC 116

1 Credits

11 hours of lecture

Fundamentals of common business applications using MS Windows and MS Word, and using Windows to manage files/folders and giving students hands-on experience in word processing. Basic Word features, basic word processing skills and MLA document formatting will be covered. [GE] [PNP]

### **Course Outcomes:**

- Apply knowledge of the common software features of word-processing using Microsoft Word.

## **APPLICATION ESSENTIALS: EXCEL**

BTEC 117

1 Credits

11 hours of lecture

Fundamentals of common business applications using MS Windows and MS Excel, and using Windows to manage files/folders and giving students hands-on experience in spreadsheets. Basic Excel features, basic spreadsheet skills and common formulas and functions will be covered. [GE] [PNP]

### **Course Outcomes:**

- Apply knowledge of the common software features of spreadsheets using Microsoft Excel.

## **APPLICATION ESSENTIALS: POWERPOINT**

BTEC 118

1 Credits

11 hours of lecture

Fundamentals of common business applications using MS Windows and MS PowerPoint to manage files/folders and giving students hands-on experience in presentation software. Basic PowerPoint features including basic designs and animation will be covered. Successful completion of BTEC 116, 117, & 118 can replace BTEC 149. [GE] [PNP]

**Course Outcomes:**

- Apply knowledge of the common software features of presentation software using Microsoft Powerpoint.

**INTRODUCTION TO WORD**

BTEC 120

3 Credits

33 hours of lecture

Create, format, edit, save and print documents using fonts, numbered and bulleted text tables, tabs, columns, thesaurus, grammar-check. Create reports and longer documents using columns, page numbers, footnotes, endnotes, headers and footers. Assemble form letters using mailing lists, envelopes, mailing labels, and standard paragraphs. Use styles to create flyers and newsletters with graphics. BTEC 100 or keyboarding speed of 30 wpm recommended. Application software for this course will be Microsoft Word. Cannot receive credit for both BTEC 120 and 125. [GE] [PNP]

**Course Outcomes:**

- Perform basic computer operations within a network environment.
- Define and use word processing concepts and terminology.
- Create documents for business and personal use utilizing the special features available in a word processing software.
- Create proper document format for memos, letters, reports, and tables.
- Prepare documents in mailable form (Proper formatting, spelling and grammar) .
- Reinforce spelling, punctuation and word usage skills.
- Create the necessary documents using the appropriate word processing features and commands to perform the job efficiently.

**WORD FOR BUSINESS**

BTEC 122

5 Credits

55 hours of lecture

Producing letters, memos, and tables using fonts, tabs, tables, numbered and bulleted text, thesaurus, and grammar-check. Reports and longer documents will be created using columns, page numbers, footnotes, endnotes, headers, and footers. Form letters using mailing lists, envelopes, mailing labels, and standard paragraphs will be assembled. Styles, flyers and newsletters with graphics are included. [GE] [PNP]

**Course Outcomes:**

- Define and use word processing concepts and terminology.
- Create documents for business and personal use utilizing the special features available in a word processing software.
- Create proper document format for memos, letters, reports, and tables.
- Prepare documents in mailable form (Proper formatting, spelling and grammar) .
- Reinforce spelling, punctuation and word usage skills.
- Create the necessary documents using the appropriate word processing features and commands to perform the job efficiently.

## **FILING AND RECORDS MANAGEMENT**

BTEC 131

3 Credits

33 hours of lecture

Principles and procedures of records storage and control including record cycle, microrecords, and electronic files. Selection of equipment and supplies. Practice in using indexing rules, coding, and filing for alphabetic, numeric, geographic, and subject filing systems. [GE] [PNP]

### **Course Outcomes:**

- Index, code, and arrange personal, business, and government names in indexing order of units using the rules recommended by ARMA.
- Prepare cross-reference cards of personal and business names as recommended by ARMA.
- Inspect, index, code, cross-reference (if necessary) , sort and file alphabetical correspondence.
- Analyze, compare, and adjust filing segments for input into a computer database.

## **10-KEY CALCULATOR**

BTEC 135

1 Credits

5 hours of lecture - 10 hours of lab

Ten-key by touch using a business-size electronic calculator. Training on operational features of modern business calculators incorporating business applications. [GE] [PNP]

### **Course Outcomes:**

- Ten-Key by touch.
- Perform addition, subtraction, division, and multiplication of whole numbers and decimals, discounts, and net price.
- Use constants to multiply and divide.
- Perform accumulative and negative calculation.
- Increase speed and accuracy using electronic calculator.

## **BUSINESS TECHNOLOGY SEMINAR**

BTEC 140

2 Credits

22 hours of lecture

Problems, methods, procedures, and human relations related to on-the-job work experience in business. Concurrent enrollment in BTEC 199. Prerequisite: Written consent of Instructional Unit required. [GE] [PNP]

### **Course Outcomes:**

- Project a professional image.
- Use appropriate interpersonal skills with sensitivity to ethnic and cultural differences in dealing with customers, working as a team, managing conflicts, or handling telephone communications.
- Identify and practice problem solving skills.
- Demonstrate an understanding of the importance of being a team player as well as the ability to get along with supervisors, co-workers, and fellow students.

## **BUSINESS TECHNOLOGY SEMINAR**

BTEC 141

2 Credits

22 hours of lecture

Problems, methods, procedures, and human relations related to on-the-job work experience in business. Concurrent enrollment in BTEC 199. Prerequisite: Written consent of Instructional Unit required. [GE] [PNP]

### **Course Outcomes:**

- Project a professional image.
- Use appropriate interpersonal skills with sensitivity to ethnic and cultural differences in dealing with customers, working as a team, managing conflicts, or handling telephone communications.
- Identify and practice problem solving skills.
- Demonstrate an understanding of the importance of being a team player as well as the ability to get along with supervisors, co-workers, and fellow students.

## **BUSINESS TECHNOLOGY SEMINAR**

BTEC 143

2 Credits

22 hours of lecture

Problems, methods, procedures, and human relations related to on-the-job work experience in business. Concurrent enrollment in BTEC 199 required. Prerequisite: Consent of Instructional Unit. [GE] [PNP]

### **Course Outcomes:**

- Project a professional image.
- Use appropriate interpersonal skills with sensitivity to ethnic and cultural differences in dealing with customers, working as a team, managing conflicts, or handling telephone communications.
- Identify and practice problem solving skills.
- Demonstrate an understanding of the importance of being a team player as well as the ability to get along with supervisors, co-workers, and fellow students.

## **BUSINESS TECHNOLOGY SEMINAR**

BTEC 145

2 Credits

22 hours of lecture

Problems, methods, procedures, and human relations related to on-the-job work experience in business. Concurrent enrollment in BTEC 199 required. Prerequisite: Consent of Instructional Unit. [GE] [PNP]

### **Course Outcomes:**

- Project a professional image.
- Use appropriate interpersonal skills with sensitivity to ethnic and cultural differences in dealing with customers, working as a team, managing conflicts, or handling telephone communications.
- Identify and practice problem solving skills.
- Demonstrate an understanding of the importance of being a team player as well as the ability to get along with supervisors, co-workers, and fellow students.

## **PROFESSIONAL SELF-DEVELOPMENT**

BTEC 147

2 Credits

22 hours of lecture

Professional concepts applied to individuals in the business world in relation to themselves, the companies they represent, and the public they serve. Focus on improving resume, cover letter, interview, career portfolio and business communication and business etiquette skills. [GE]

### **Course Outcomes:**

- Employ job search techniques.
- Create necessary job search documents.
- Demonstrate ability to work in teams.
- Prepare and present an oral presentation.

## **BUSINESS PROFESSIONAL SELF DEVELOPMENT**

BTEC 148

3 Credits

33 hours of lecture

This course is designed to give students an overview of the job search process and will also explore the importance of developing and using soft skills in a business setting. Students will learn professional business concepts and communication skills improving themselves, the companies they represent and the public they serve. For employees or prospective employees who wish to improve their professional relations and growth potential. [HR]

### **Course Outcomes:**

- Apply job search techniques and write for a variety of purposes and audiences.
- Create necessary job search documents and demonstrate appropriate interview skills (Resume, Cover Letter, Thank you letter).
- Demonstrate ability to work in teams (goal setting, stress and time management, getting along with co-workers and supervisors).
- Identify and demonstrate techniques of clear communication and effective professional business relation skills, including enthusiasm and attitude, teamwork, networking, problem solving and critical thinking, and professionalism.
- Identify and demonstrate effective resolution techniques for work place conflicts.

## **COMPUTER APPLICATIONS ESSENTIALS**

BTEC 149

3 Credits

33 hours of lecture

Fundamentals of common business applications using MS Windows and MS Office. An overview using Windows to manage files/folders and giving students hands-on experience in word processing, spreadsheet, presentation, and database software. [GE]

### **Course Outcomes:**

- Perform common computer file management tasks within a networked environment.
- Apply knowledge of the common software features of word-processing, spreadsheets, and presentation graphics by creating, editing, and printing routine office documents using Microsoft Office.



## **COMPUTER BUSINESS APPLICATIONS**

BTEC 150

5 Credits

55 hours of lecture

Introduction to creating business projects with MS Windows and MS Office that emphasize critical thinking and problem-solving skills. Assignments include managing files/folders, creating and formatting Word documents, Excel workbooks, PowerPoint presentations, and Access databases, as well as integrated Office applications; researching and writing an MLA report and, in teams, creating and giving a presentation based on research. [GE] [PNP]

### **Course Outcomes:**

- Perform common computer file management tasks within a networked environment.
- Apply knowledge of the common software features of word-processing, spreadsheets, databases, and presentation graphics by creating, editing, and printing routine office documents.
- Use library resources, the Internet, and interview skills to locate information for a term report.
- Prepare and present an oral team presentation using computer generated graphic slides.

## **INTRODUCTION TO OFFICE PUBLISHING TOOLS**

BTEC 155

3 Credits

33 hours of lecture

Introduction to Microsoft Publisher. Focus on creating, saving, printing, and/or publishing flyers, newsletters, Web sites, and various business publications and forms; also applying graphics and publishing standards. [GE] [PNP]

### **Course Outcomes:**

- Design visually appealing documents for printed and electronic distribution.
- Utilize key techniques to complete Publisher projects.
- Use Microsoft Publisher to create projects that are designed to sell, train, or inform.
- Utilize the Internet, library, and other sources to research effective visual presentation techniques.

## **POWERPOINT PRESENTATION**

BTEC 165

3 Credits

33 hours of lecture

Create and deliver electronic business presentations using Microsoft PowerPoint incorporating ethics in infographics. Develop presentation skills using text, graphics, charts, clip art, scanned objects, and embedding or linking media for print, sales presentations, and interoffice electronic communications. Previous experience with Windows environment using Word or Excel is recommended. [GE] [PNP]

### **Course Outcomes:**

- Demonstrate a working knowledge of PowerPoint tools.
- Create unique presentations using modified clip art, graphics, themes, drawings, scanned objects, and animation.
- Use appropriate techniques to embed or link materials from other files or programs.
- Communicate clearly using visual presentation to enhance speaking.
- Use and evaluate effective presentation design and technique.

## **INTRODUCTION TO EXCEL**

BTEC 169

3 Credits

33 hours of lecture

Skills to create, edit, format, and print spreadsheets, tables, graphs and charts using Microsoft Excel; skills to create and edit formulas and simple functions; skills to create, sort, and filter a worksheet databases; skills to PivotTables, templates, and manage multiple worksheets and workbooks. Prior experience with keyboard and/or ten-key by touch and logical thinking are extremely helpful. [GE]

### **Course Outcomes:**

- Create and edit data in worksheets and various types of charts.
- Manage workbooks.
- Work with formulas and functions.
- Enhance worksheet appearance with shapes, WordArt, images, and diagrams.

## **EXCEL FOR BUSINESS**

BTEC 170

3 Credits

33 hours of lecture

Advanced Microsoft Excel skills including creating, editing, and printing professional workbooks, using advanced formulas and charts, auditing and validating worksheet data, and solving complex problems with Excel. Integrating Excel with other office applications and understanding how technology is critical to solving business problems. An introduction to VBA, macros, and making an application in Excel. Prerequisite: BTEC 169 and BUS 102 (formerly MATHB 065) or equivalent score on COMPASS placement or consent of Instructional Unit. [GE] [PNP]

### **Course Outcomes:**

- Create and edit data in worksheets and various types of charts.
- Create macros to streamline work functions in Excel.
- Use advanced formulas and functions to create and modify financial statements.
- Import data from other sources into Excel.

## **ACCESS FOR BUSINESS**

BTEC 180

3 Credits

33 hours of lecture

Introductory and intermediate skills for Microsoft Access for people who use and maintain Access databases. Topics include creation of tables, queries, forms and subforms, reports and subreports, and macros using both design view and wizards. Introduction to special fields such as memos, OLE and drop-down menus within the tables and forms, and using validation rules and referential integrity to insure the data is "clean". The course does assume knowledge of Microsoft Windows. Also offered as CTEC 180. Cannot receive credit for both BTEC 180 and CTEC 180. [GE]

### **Course Outcomes:**

- Demonstrate the ability to create and modify Access Tables, Queries, Form - including subforms, and Reports - including subreports.
- Demonstrate the ability to use OLE objects in an Access Table and Form.
- Demonstrate the ability to import tables from another database, text document or spreadsheet.

- Demonstrate the ability to use, label, and discuss database objects and terminology.

### **E-COMMERCE: INTRO TO BUSINESS ON THE WEB**

BTEC 195

3 Credits

33 hours of lecture

Introduction to e-commerce including the evolution of electronic commerce, business-to-business and business-to-customer e-commerce, creating a Web presence, commerce infrastructure and software choices, security and encryption issues, and electronic payment systems. Requires a group project to write a business plan for an online entity. Prior computer class (BTEC 149 or 150), BUS 101, and familiarity with a Web browser recommended. Cannot receive credit for BTEC 195 and 212. [GE]

#### **Course Outcomes:**

- Understand the components of a successful e-commerce site.
- Demonstrate the knowledge of web promotion techniques.
- Demonstrate the knowledge of marketing for the web.
- Demonstrate the knowledge of how credit cards are processed.
- Examine international e-commerce sites and the cultural issues.
- Demonstrate the knowledge of laws that govern electronic commerce activities.
- Examine the issues of trademark infringement, regulation, and solicitation activities.

### **COOPERATIVE WORK EXPERIENCE**

BTEC 199

1 - 3 Credits

99 hours of clinical

Supervised on-the-job work experience in an approved job in the local community with specific learning objectives and employer evaluation. See Cooperative Education Work Experience description in College Life and Services section of the catalog for more information. Consent of Instructional Unit and concurrent enrollment in accompanying seminar course required. 9 credits maximum. [GE]

#### **Course Outcomes:**

- Understand the knowledge and attitudes necessary for successful job performance.
- Project a professional image.
- Use appropriate interpersonal skills with sensitivity to ethnic and cultural differences in dealing with customers, working as a team, managing conflicts, or handling telephone communications.

### **DOCUMENT FORMATTING**

BTEC 201

1 - 3 Credits

11 hours of lecture - 44 hours of lab

Business letters, tables, electronic forms, use of templates, and report keyboarding on a production basis. Further development of speed and accuracy. Continuous enrollment, flexible times, individual program. Cannot receive credit for both BTEC 201 and 102. Prerequisite: BTEC 101, or 103, and BTEC 122 or consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Key business letters, memos, tables, business forms, and reports in an acceptable (mailable)

style on a production basis under pressure of time.

- Improve proofreading skills while keying from rough-draft copy.
- Key straight copy for five minutes at a minimum rate of 45 WPM with a maximum of five errors.

## **SPEED AND ACCURACY BUILDING**

BTEC 203

1 - 3 Credits

11 hours of lecture - 44 hours of lab

Emphasis will be placed on correct techniques and appropriate drills to improve speed and accuracy. Cannot receive credit for both BTEC 203 and 010. Prerequisite: BTEC 201 or 102 or consent of Instructional Unit. [GE] [PNP]

### **Course Outcomes:**

- Key straight copy for five minutes at a minimum rate based on improvement of their starting speed.
- Key straight copy for one minute at a minimum rate based on improvement of their starting speed.
- Set individual goals and develop plan to achieve them.

## **INTRODUCTION TO SHAREPOINT**

BTEC 207

3 Credits

33 hours of lecture

This course is designed to give students an overview of the content management system SharePoint and its application for use in a business environment. Prerequisite: Completion of BTEC 149 or 150 or BTEC 120 or 122, BTEC 169, and CTEC 102 or consent of Instructional Unit. [CP]

### **Course Outcomes:**

- Manage lists and document library in SharePoint: work with different views, tag files, search for documents, and check in and out files.
- Edit pages within SharePoint: customize page layouts, add/remove web parts, and customize web parts (the look and feel)
- Work with permissions in SharePoint.
- Collaborate within SharePoint: communicate using discussion boards, edit blogs, and work with Wiki content.

## **ADMINISTRATIVE PROCEDURES**

BTEC 211

5 Credits

55 hours of lecture

Overview of current office procedures to equip students with the tools to solve a variety of problems in the changing business world using Microsoft applications. Complete simulated exercises requiring critical thinking, understanding of multicultural relations, and advanced office practices in preparation to work successfully in various office situations. [GE] [PNP]

### **Course Outcomes:**

- Understand your role in the structure of business organizations.
- Use interpersonal skills to develop effective working relationships and function as a member

of the office team.

- Manage your work and time effectively.
- Create a professional job campaign to prepare for the job market.
- Make travel arrangements.
- Use the telephone effectively.

## **SELECTED TOPICS**

BTEC 280

1 - 3 Credits

33 hours of lecture

The course focuses on selected topics in Business Technology. Topics vary, and course theme and content change to reflect new topics. Because the course varies in content, it is repeatable for credit for different topics. Individual topics are listed in the quarterly class schedules. [GE]

### **Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this course.

## **SPECIAL PROJECTS**

BTEC 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the faculty of the department. Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## **Business Administration**

### **BASIC ACCOUNTING PROCEDURES**

BUS 028

3 Credits

33 hours of lecture

Introduction to the fundamental bookkeeping functions of the double-entry accounting process to prepare financial information for a business or organization. Topics including the basic accounting equation, preparation of business and financial transactions, journalizing, posting, making adjustments, preparing the worksheet, and preparing financial statements from the worksheet. [PNP]

### **Course Outcomes:**

- Understand banking terminology and reconcile bank statements as well as create and maintain petty cash and change funds.
- Be familiar with the bookkeeping and accounting concepts and terminology.
- Analyze and record all financial transactions for a service organization.
- Complete the whole accounting cycle for a service organization, from journalizing the transactions to preparing the financial reports (Income statement, Statement of Owner's Equity, and Balance Sheet).

## **BASIC ACCOUNTING PROCEDURES**

BUS 029

3 Credits

33 hours of lecture

A continuation of BUS 028, with focus on accounting in a merchandising business. Topics include the valuation of inventories, depreciation, tax reports, payroll accounting, and the preparation of financial statements and special journals. Prerequisite: BUS 028. [PNP]

### **Course Outcomes:**

- Complete the whole accounting cycle for a merchandising organization, from journalizing the transactions to preparing the financial reports (Income statement, Statement of Owner's Equity, and Balance Sheet).
- Analyze and record all financial transactions for a merchandising organization.
- Be familiar with the bookkeeping and accounting concepts and terminology for merchandising organizations such as Depreciation, Freight, and Merchandise Inventory.
- Understand payroll terminology and will prepare payroll register (calculate wages and salaries and all the deductions). In addition, journalize and post all the bookkeeping entries that are associated with payroll.
- Prepare the special papers (Sales, Purchase, Cash Receipts, and Cash Payment).

## **ACCOUNTING APPLICATIONS**

BUS 036

3 Credits

33 hours of lecture

Accounting procedures applied to business simulations. Includes payroll, depreciation of fixed assets, budgeting, maintaining sales and purchase records and preparing financial statements. Prerequisite: BUS 029 or consent of Instructional Unit. [PNP]

### **Course Outcomes:**

- Complete a comparative Balance Sheet, multiple-step Income Statement, and Statement of Stockholder's Equity.
- Understand banking terminology and reconcile bank statements to cash as well as analyze sales transaction under the perpetual inventory system.
- Identify cash flows arising from operating, investing, and financing activities and complete a Statement of Cash Flows, the fourth financial statement.
- Describe the characteristics of preferred and common stock and explain and analyze all stock transactions, dividends, and stock splits.
- Describe the purpose, structure, and content of the three basic financial statements: Income Statement, Statement of Owner's Equity and Balance Sheet.
- Describe, calculate and interpret the use of horizontal, vertical and ratio analysis.

## **INTRODUCTION TO BUSINESS**

BUS& 101

5 Credits

55 hours of lecture

Learn about the business functions of management, human resources, marketing, law, computers, accounting, finance, production, small business and international business. Credit not allowed for both BUS& 101, BUS 101 and MGMT 100. Formerly BUS 101. [SE] [PNP]

### **Course Outcomes:**

- Write and speak clearly about business concepts, issues, principles, methods, and practices.
- Analyze business problems and opportunities, and prepare solutions and/or arrive at decision

in increasingly effective ways.

- Define and use business terminology.
- Examine the dynamic nature of trends within the economic, legal, technological, competitive and global business environments.
- Describe the functions of business planning, organizing, leading, and controlling as they relate to internal/external stakeholders.
- Apply team/group working skills to working situations inside and outside of the classroom.
- Recognize the many types of business careers and opportunities.

## **BUSINESS MATH APPLICATIONS**

BUS 102

5 Credits

55 hours of lecture

Application of mathematics in common business situations. Emphasis is on practical applications and problem-solving skills for the business professional as well as the consumer and investor. Topics include: trade and cash discounts, simple and compound interest, mark up and mark down, and consumer credit. Cannot receive credit for both BUS 102 and MATHB 065. Prerequisite: Qualifying score on the college numerical skills placement for MATH 030 or higher or consent of Instructional Unit. [CP, GE]

### **Course Outcomes:**

- Review the basic mathematical operations involving fractions, decimals, equations, and percentages.
- Use mathematical operations in preparing invoices, marking up or down prices, figuring out trade and cash discounts.
- Calculate payroll by figuring out the gross pay as well as all the deductions from employees' paychecks. Calculate the employer's payroll expenses. Employ payroll terminology.
- Practice calculating the simple interest on loans, the compounded interest on deposits, mature value on a promissory note, and the monthly payment on a consumer loan or mortgage.

## **INTRODUCTION TO INTERNATIONAL BUSINESS**

BUS 105

3 Credits

33 hours of lecture

A survey course, as well as a preparatory course for advanced study, of globalization and international business issues discussed include the history and development of international business, international institutions, regional alliances, sociocultural and political forces, national resources and environmental sustainability, labor forces, and the development of international competitive strategy.

### **Course Outcomes:**

- Understand what international business is, why it is important, and why and how international business differs from domestic business. Appreciate the long and important history of international business and its role in the world's development, and the dra
- Appreciate the magnitude of international trade and how it has grown, and identify the direction of trade, or who trades with whom, and trends in such trade. Explain the theories that attempt to explain why certain goods are traded internationally, and th
- Explain the importance of international institutions to business decision-makers and their firms. Explain the role of the United Nations as an institution and its relevance to international business. Also the purposes of the two global monetary institutio
- Define culture, discuss the sociocultural aspects of it as a phenomenon, and explain the

significance of the cultural differences for international business.

- Describe how geographical features of a country or region create contextual differences that contribute to economic, cultural, political, and social conditions important to international business. Also, outline the nonrenewable and renewable energy source

## **CUSTOMER SERVICE**

BUS 110

3 Credits

33 hours of lecture

Introduction to customer-centered business organization. Topics include the principles and practices of customer relations, the history of consumerism and customer relations departments, and methods to develop internal/external customer service skills, including identifying and responding to their needs, improving skills in providing information, dealing with conflict situations, and developing a positive customer relations climate. [GE] [PNP]

### **Course Outcomes:**

- Differentiate between verbal and non-verbal communication skills.
- Describe all avenues of customer service.
- Understand all avenues of customer service.

## **SMALL BUSINESS MANAGEMENT**

BUS 115

3 Credits

33 hours of lecture

Strategic and managerial considerations in starting, building, and maintaining a small business. Purchase, location, and layout of a new business along with controlling finances, purchasing, personnel, inventory management, pricing, and the legal environment. [GE] [PNP]

### **Course Outcomes:**

- Identify a set of guidelines for developing and operating a small business.
- Recognize marketing, merchandising, human resource, legal, operating, and financial situations within the framework of a small business.
- Identify, interpret, and analyze the various problems in creating and operating a small business.
- Access the various professional sources of information available for the successful operation of a small business (Small Business Administration, for example) .

## **MERCHANDISING MANAGEMENT**

BUS 116

3 Credits

33 hours of lecture

Introduction to merchandising management. Topics include retail buying and merchandising functions, negotiation techniques, management of incoming/outgoing merchandise and inventory, mathematics of merchandising, analysis of vendor performance, sales forecasting, and creating a merchandising plan. [GE] [PNP]

### **Course Outcomes:**

- Calculate the merchandising mathematics basic to buying and selling.
- Write and speak clearly about purchasing and merchandising management techniques.
- Analyze purchasing and merchandising problems and prepare solutions in increasingly



effective ways.

- Recognize the factors that affect the scope of the retail buyer's responsibilities.
- Apply group-working skills to learning situations.

## **ADVERTISING**

BUS 117

3 Credits

33 hours of lecture

Introduction to advertising. Topics include the problems faced by advertisers and their agencies, along with the policies and procedures for solutions in the development of advertising objectives and strategies, selection of media, determination of budgeting methods, and preparation of copy and layout for effective results. Credit not allowed for both BUS 117 and BUS 217. [GE] [PNP]

### **Course Outcomes:**

- Identify, interpret and analyze the various opportunities for a successful advertising plan and gain an understanding of how to place the message in conventional and new media.
- Demonstrate knowledge on the evolution and current process of promoting and advertising brand names and projects and learn integrated marketing and brand promotion techniques.
- Identify techniques for media buying and compare different methods of measuring advertising and media effectiveness.

## **COMPUTERIZED ACCOUNTING**

BUS 130

3 Credits

33 hours of lecture

Computerized accounting techniques in the basic areas of financial accounting, including the processes of analyzing, recording, reporting and interpreting accounting data in a business environment. A systems approach with real world applications of the general ledger, accounts receivable, accounts payable, purchasing, cash receipts, accounting for sales, payroll, and month and year-end closing for both a service and a merchandising business. Quickbooks software is utilized in this course. Prerequisite: BUS 028 and 029 or ACCT& 201 (or BUS 231). [GE] [PNP]

### **Course Outcomes:**

- Perform banking tasks in QuickBooks.
- Customize and edit a chart of accounts in QuickBooks.
- Perform customer and sales tasks in QuickBooks.
- Perform employee and payroll tasks in QuickBooks.
- Print reports and graphs in QuickBooks.
- Perform tasks required for proficiency in using QuickBooks.
- Set up a new company in QuickBooks.
- Perform vendor, purchasing, and inventory tasks in QuickBooks.

## **BUSINESS PLAN**

BUS 135

3 Credits

33 hours of lecture

An introduction to building a business plan that incorporates a promotional plan. Plan purpose, audience, design, format, and presentation will be considered. Previous business planning experience useful but not required. Plans will incorporate a "hands-on" interactive approach. [GE]

### **Course Outcomes:**

- Discuss an Executive Summary
- Describe the format and design of the Business Plan
- Explain the need for sound financials
- Understand the legal form of a business and place
- Describe the Management Plan
- Explain the risk, feasibility and stakeholder analysis
- Explain the purpose of a business plan
- Describe the format and design of the Business Plan

## **INTRODUCTION TO ENTREPRENEURSHIP**

BUS 139

5 Credits

55 hours of lecture

Learn what makes a successful entrepreneur, the tools an entrepreneur needs to start a business, and the opportunities and pitfalls faced by an entrepreneur. [GE] [PNP]

### **Course Outcomes:**

- Explore ideas and opportunities for viability
- Understand internal strengths and weaknesses
- Identify external opportunities and threats
- Discuss information gathering and sharing
- Apply team building skills to projects
- Analyze potential changes for innovations and revitalization
- Synthesize diverse challenges and opportunities
- Recommend innovative strategies

## **PERSONAL FINANCE**

BUS 160

5 Credits

55 hours of lecture

Buying insurance (life, health, property, and auto), buying and financing a home, minimizing Federal income tax, borrowing, saving, and investing. [GE] [PNP]

### **Course Outcomes:**

- Identify, discuss and use the best practices in dealing with consumer credit, taxes, housing costs, insurance, investments, retirement planning, estate planning, money management and the opportunity costs associated with various financial decisions.
- Realize that the financial decisions that you make will have far-reaching effects on your life and the lives of your family and loved ones.
- Draft a financial plan to meet your financial goals that takes into account your own needs and the needs of others affected by your plan.
- Accept that staying focused on your personal financial plan is necessary for successfully meeting your goals.
- Be aware that differences over purchasing decisions and managing finances cause more stress on personal relationships than any other single factor.
- Realize that making sure that those close to you are financially secure is one of the most loving things you can do for them.
- Acknowledge that investing is vital for meeting your future plans and your plans for your family or those close to you.
- Comprehend that proper estate planning will leave a legacy for your survivors.
- Acknowledge that whether single or married, young or old, by choice or by circumstance, you will find that your personal financial decisions affect your day-to-day life.

- Understand that you can empower yourself to take control of your financial future.

## **COOPERATIVE WORK EXPERIENCE**

BUS 199

1 - 5 Credits

165 hours of clinical

Up to 5 credits for supervised work training in an approved job. Completion of, or concurrent enrollment in BTEC 147 or HDEV 195, 198, or 200 required. Prerequisite: Completion of one class with a "C" or better in Business, Economics or Management. Consent of Instructional Unit required. [GE] [PNP]

### **Course Outcomes:**

- Demonstrate a satisfactory job performance to include: using appropriate interpersonal skills with sensitivity to ethnic and cultural differences in dealing with external and internal customers, working as a team, managing conflicts, and handling telephon
- Demonstrate the development of workplace skills and attitudes appropriate to the setting.
- Demonstrate workplace skills and techniques in the areas of time management, work ethics, problem solving, interpersonal relations, and conflict management.

## **BUSINESS LAW**

BUS& 201

5 Credits

55 hours of lecture

Practical applications of the law of contracts, agency, employment, real and personal property, and bailments in the business world and in one's personal affairs. Legal reasoning and illustrative case problems. Prerequisite: Sophomore standing or consent of Instructional Unit. Formerly BUS 224. [SE]

### **Course Outcomes:**

- Display a comprehensive understanding of the origins and structure of the American legal system.
- Compare the advantages and disadvantages of various types of business organizations.
- Identify the requirements/components of a valid contract.
- Identify basic constitutional and governmental principles.
- Demonstrate an ability to frame a case in court; particularly a contract case, a tort case, the functions of the Plaintiff and Defendant, and the burden of proof.
- Explain the difference between criminal law and civil tort law.
- Explain how a party may discharge a contract.
- Identify the available defenses to the enforcement of a contract.
- Demonstrate an awareness of standards of ethical behavior as specifically applied to the business environment.
- Identify the key aspects/phases of the judicial process.
- Recognize the issues relative to performance of contracts and discuss the remedies for breach of contract.
- Describe elements of property law and bailment.
- List third party rights in contracts.
- Tell what the Uniform Commercial Code is and describe its applicability.
- Discuss the applicability of the Uniform Commercial Code to negotiable instruments and secured transactions.
- Discuss the impact of the Uniform Commercial Code upon the sale and transfer of goods.
- Discuss the UCC concept of title and risk of loss.

## **DESCRIPTIVE STATISTICS**

BUS 203

3 Credits

33 hours of lecture

Application of statistics to practical business problems. Includes summarizing and presenting data in tables and graphs, calculating and using common descriptive statistics, determining probabilities and using the binomial, Poisson, and normal probability distributions. Knowledge of Excel highly recommended. Prerequisite: MATH 095 or equivalent or consent of Instructional Unit. [SE]

### **Course Outcomes:**

- Calculate the numerical measures for grouped and ungrouped data (Arithmetic mean, weighted mean, median, mode, etc.) and measures of dispersion (range, variance, standard deviation, etc.).
- Be familiar with probability and its uses in business. Be familiar with probability rules, types and the principles of counting. Use tables to look up values of binomial and poisson probability distributions, as well as calculate continuous probability di
- Define statistics and its uses as well as differentiate between the levels of measurements and the types of variables. Create frequency distribution tables as well as various types of graphs for the purpose of describing and presenting data.

## **INFERENCEAL STATISTICS**

BUS 204

3 Credits

33 hours of lecture

Application of statistics to practical business and economic problems. Includes sampling, point and interval estimates, hypothesis testing using the normal, t, f and chi-square distributions, analysis of variance, correlation, and simple and multiple regression. Knowledge of Excel recommended. Prerequisite: Completion of BUS 203 or MATH 203 with a "C" or better or consent of Instructional Unit. [SE]

### **Course Outcomes:**

- Define a hypothesis and follow the five-step test of hypothesis procedure. Differentiate between the different kinds of population parameters being tested (one-population mean, two-population means, variance, ANOVA, using proportions, etc.). Be familiar
- Be familiar with linear regression and correlation. Calculate coefficient of correlation, determination, and set up an equation for one or multiple regressions. Chi-square will also be covered.
- Be familiar with sampling in terms of reasons for it, types of it, size of a sample as well as sampling errors. Use sample calculations in estimations and construction of confidence intervals.

## **BUSINESS COMMUNICATIONS**

BUS 211

3 Credits

33 hours of lecture

Developing proficiency in written and oral communications appropriate for business by composing, organizing, and editing documents such as letters, reports, memos, emails, and presentations from a variety of business cases and managerial interviews. Emphasis on team work, collaboration, diversity, intercultural communication, and the delivery of oral presentations, using

specialized software. Same as ENGL 212. Prerequisite: ENGL& 101 (or ENGL 101) or consent of Instructional Unit. [C, SE]

**Course Outcomes:**

- Identify and utilize at least five aspects of audience analysis for communication and demonstrate culture- and gender-awareness by using audience-tailored messages and inclusive language and delivery methods.
- Apply techniques for successful verbal communication on the job including conducting using interpersonal communication in business situations and working in teams. Students will also research, design and deliver oral presentations.
- Demonstrate techniques for successful written communication on the job. This includes writing well-organized and effective direct, goodwill, persuasive, and bad news letters, memos and e-mails and utilizing techniques of business communications (grabbing

**PROFESSIONAL SELLING**

BUS 251

3 Credits

33 hours of lecture

Introduction to personal selling concepts for the relationship era of business. Focus on selling stages, including prospecting, qualifying, developing rapport, overcoming objections, closing techniques, and following up with customer service. Focus on personal, retail, and organizational selling. [GE] [PNP]

**Course Outcomes:**

- Recognize and state the differences among a variety of selling systems.
- Examine the sales process and the measurable outcomes it accomplishes.
- Identify the specific elements of the sales process, including the importance of personal communication factors on prospecting, qualification, business planning, prospect behavior, problem(s) identification and product solution strategies, delivery/servic
- Recognize the major elements of the sales and sales management process.
- Dwmonstrate selling skills, concepts, and process elements and how they apply to an actual selling situation.
- Recognize how sales principles relate to international marketing and sales. Recognize cultural and language barriers to good communication and problem solving.

**PRINCIPLES OF MARKETING**

BUS 260

5 Credits

55 hours of lecture

Introduction to concepts of marketing, with practical emphasis on the research, evaluation, and segmentation of markets. Focus on behavior of consumer and organizational buyers. Activities include developing a marketing plan to include product planning, pricing, promoting, and placement. [GE] [PNP]

**Course Outcomes:**

- Identify the major elements of the marketing process, including the influence of external factors on marketing, marketing planning and research, buyer behavior and market segmentation, product strategy, placement (distribution) strategy, promotional strat
- Recognize how marketing principles relate to international marketing and not-for-profit marketing.
- Recognize and state the differences between a variety of marketing careers.
- Demonstrate how marketing theory, concepts, and process elements apply to an actual

marketing situation.

- Examine the marketing process and the functions it accomplishes.
- Identify essential primary and secondary data and information for practical marketing judgments, standards, and problem solving.
- Recognize the major elements of the marketing process.

## **SELECTED TOPICS**

BUS 280

1 - 5 Credits

55 hours of lecture

The course focuses on selected topics in Business. Topics vary, and course theme and content change to reflect new topics. Because the course varies in content, it is repeatable for credit for different topics. Individual topics are listed in the quarterly class schedules. [GE]

### **Course Outcomes:**

- Demonstrate an outcome(s), experience(s), or tangible product(s) as determined by the supervisory instructor.

## **SPECIAL PROJECTS**

BUS 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the department.

Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Demonstrate an experience or tangible product as determined by the supervisory instructor.

## **Computer Aided Design and Drafting Technology**

### **CADD ORIENTATION**

CADD 101

1 Credits

22 hours of lab

Combination of off-campus field trips to a variety of businesses and on-campus test-drives of several core CADD software applications seen on the field trips. Focus on exposure and orientation to core CADD software applications, and development of an educational plan. [GE]

### **Course Outcomes:**

- Discuss CADD; its many variations and applications throughout a variety of industries.
- Identify different types of CADD and related graphics products, and their basic industrial applications.
- Demonstrate written communication skills which are sufficient for employment in a CADD position, or if not demonstrated, identify areas of English mechanics which need improvement and develop a plan for that improvement.
- Identify potential educational pathways where CADD is used as a tool.
- Demonstrate elements of professionalism: attendance, timeliness, completeness, personal behavior.
- Develop an educational plan.

## **CADD CAREERS**

CADD 102

1 Credits

22 hours of lab

Combination of off-campus field trips to a variety of businesses and on-campus test-drives of several core CADD software applications seen on the field trips. Focus on exposure and orientation to core CADD software applications beyond CADD 101 and development of a career plan. Prerequisite: A grade of "C" or better in CADD 101. [GE]

### **Course Outcomes:**

- Discuss the application of CADD tools as seen in use across a variety of industries.
- Identify CADD employers in the Portland metro area and beyond.
- Contrast and compare different types of CADD and related graphics products, and their basic industrial applications.
- Demonstrate written communication skills which are sufficient for employment in a CADD position, or if not demonstrated, identify areas of English mechanics which need improvement and develop a plan for that improvement.
- Demonstrate elements of professionalism: attendance, timeliness, completeness, personal behavior.
- Update an educational plan.

## **BASIC SKETCHUP**

CADD 110

4 Credits

16 hours of lecture - 55 hours of lab

Basic operations of the current version of SketchUp. Topics include screen features, drawing and editing 3D objects, using and applying material to surfaces, opening and saving files, and using AutoCAD drawing file data. Recommended for anyone comfortable using a PC. [GE]

### **Course Outcomes:**

- Discuss the use of SketchUp in the world today.
- Identify features and their function on the SketchUp screen.
- Create, open, and save SketchUp files.
- Set up and use default options.
- Identify edges and faces.
- Draw basic objects accurately.
- Move, rotate, combine, stack, and copy objects.
- Perform basic editing of objects.
- Identify and use the different color indicators.
- Control object properties.
- Import and use an AutoCAD floor plan.
- Create and use a simple drawing template.
- Create and use a simple border/title block or 'Layout'.
- Dimension simple objects.
- Create and use simple grouped objects.
- Discuss three dimensional viewpoints.
- Create multiple views of simple 3D objects.
- Lay out and print drawings.

## **BASIC RHINOCEROS**

CADD 120

4 Credits

16 hours of lecture - 55 hours of lab

Basic operation of Rhinoceros, a 3D surface modeling software of interest to students in engineering, industrial design, and graphic design. Creating and editing of curves, surfaces, solids, and textures and lighting effects. Includes the use of plug-ins for rendering. Recommended for anyone comfortable using a PC. [GE]

**Course Outcomes:**

- Discuss how Rhino works and how it can be used to create 3D objects.
- Save and open files of different file types.
- Create and transform curves.
- Create and transform surfaces.
- Create and transform solids.
- Analyze and diagnose for geometry problems.
- Create and manipulate lighting and material effects.
- Render 3D shapes in using Rhino, Flamingo, Brazil, and/or Penguin rendering engines.
- Create simple animations using Bongo.
- Print rendered images in high quality color.

**BASIC MICROSTATION**

CADD 130

4 Credits

16 hours of lecture - 55 hours of lab

Basic operations of the current version of MicroStation. Covers screen features, command terminology, drawing and editing objects, working with 2D and 3D, using reference files, opening and saving drawing files, and printing. Recommended for anyone comfortable using a PC. [GE]

**Course Outcomes:**

- Discuss the use of MicroStation in the world today.
- Identify features and their function on the MicroStation screen.
- Create, open, and save drawing files.
- Discuss and use seed files and workspaces.
- Draw basic objects.
- Perform basic editing of objects.
- Use snaps and locks.
- Control objects with groups and levels.
- Dimension and annotate simple objects.
- Create and utilize a class drafting standard.
- Discuss and use two and three dimensional coordinate systems.
- Discuss and use three dimensional viewpoints.
- Print drawings.

**BASIC AUTOCAD**

CADD 140

4 Credits

16 hours of lecture - 55 hours of lab

Basic operations of the current version of AutoCAD. Screen features, drawing and editing objects, working with 2D, using both model space and layouts, dimensioning and dimension styles, using blocks, attributes, and xrefs, opening and saving files, and using templates. Recommended for anyone comfortable using a PC. [GE]

**Course Outcomes:**



- Discuss the use of AutoCAD in the world today.
- Identify features and their function on the AutoCAD screen.
- Create, open, and save drawing files.
- Draw basic objects.
- Perform basic editing of objects.
- Use running object snap modes.
- Control object properties using layers.
- Create and use a simple drawing template.
- Create and use a simple border/title block in paper space.
- Dimension simple objects.
- Create and utilize a class drafting standard.
- Discuss the application of blocks and attributes.
- Create and use simple blocks, with and without attributes.
- Create and use Xref's.
- Discuss two dimensional coordinate systems.
- Print drawings.

## **ARCHITECTURAL DRAFTING 1**

CADD 141

4 Credits

16 hours of lecture - 55 hours of lab

Beginning foundations of architectural drafting using AutoCAD Architecture. Topics include terminology, architectural symbols and standards, line weights and layer management. A standard multi-sheet drawing set for a residence will be developed and will include a site plan, foundation plan, floor plan, and elevations, and related basic residential construction processes. Prerequisite: A grade of "C" or better in ENGR 113, and either ENGR 140 or CADD 140. [GE]

### **Course Outcomes:**

- Name and discuss architectural companies of the local area.
- Discuss, read, and use annotations typical of architectural drawings.
- Name and discuss basic elements found in typical residential construction.
- Use drafting standards.
- Use industry standard layers.
- Create a site plan.
- Create elevations.
- Create a floor plan.
- Create a roof plan.
- Create a foundation plan.
- Create sections.
- Create construction detail drawings.
- Create a multi-sheet drawing set representative of residential design and construction.

## **INTERMEDIATE AUTOCAD**

CADD 142

2 Credits

11 hours of lecture - 22 hours of lab

A continuation of AutoCAD. Topics covered include: review and continued work with blocks, attributes, and xref's; creating and using dynamic blocks; using annotated text and dimension text; and an introduction to 3D. Prerequisite: A grade of "C" or better in ENGR 140 or CADD 140.

### **Course Outcomes:**

- Discuss the use of AutoCAD within architecture, and other CAD related software used by

mechanical companies.

- Understand and use drawing aids, selection settings, options, and profiles.
- Understand and draw using all 2D draw commands.
- Understand and use all 2D editing functions.
- Create and habitually use a multitude of template drawings, set up for different purposes.
- Create and habitually use layout styles.
- Dimension in both model space and paper space on a layout tab.
- Understand and habitually use plot styles and plot style tables.
- Set up and use dimension styles.
- Understand, create, and habitually use drafting standards.
- Create and use blocks.
- Create and use attributes with blocks.
- Use and manipulate xrefs.

### **CIVIL DRAFTING 1 WITH CIVIL 3D**

CADD 143

4 Credits

16 hours of lecture - 55 hours of lab

Beginning foundations of civil drafting concepts and practices. Introduction to terminology, symbols, multiple use blocks and details, origins and uses of survey data, contours, alignments, and profiles to describe/define project objects. Topics will include basic site considerations, basic types and construction of roads, site drainage, sewer systems, potable water, walks, driveways, and fire access. Class projects will use various applications to achieve data tables and calculations; drafting is not platform dependent but is biased towards use of AutoCAD.

Prerequisite: A grade of "C" or better in ENGR 113, and either ENGR 140 or CADD 140. [GE]

#### **Course Outcomes:**

- Discuss the use of AutoCAD within the civil engineering industry, and other CADD related software used by civil companies.
- Name and discuss civil companies of the local area.
- Discuss, read, and use annotations typical of civil drawings.
- Name and discuss basic elements found in civil engineering and land planning.
- Discuss and use drafting standards.
- Discuss and use industry standard layers.
- Discuss and create a site plan.
- Discuss and create elevations.
- Discuss and create profiles.
- Discuss and create sections.
- Discuss and create construction detail drawings.
- Create a multi-sheet drawing set representative of residential sub-division design and construction.

### **BASIC SOLIDWORKS**

CADD 150

4 Credits

16 hours of lecture - 55 hours of lab

Parametric solids modeling with SolidWorks, covering the breadth of the software at a basic level. Create part, assembly, and drawing files, including design tables and multiple configurations.

Recommended for anyone comfortable using a PC. [GE]

#### **Course Outcomes:**

- Discuss the different parametric modeling software and the variety of ways in which and by

whom it is used, and how it differs fundamentally from the older "drafting" software.

- Identify features and their function on the SolidWorks screen.
- Create, open, and save part, assembly, drawing, and template files.
- Sketch and perform basic editing of moderately complex sketch objects.
- Use constraints and relations in moderately complex sketches.
- Create and edit moderately complex features.
- Create assemblies and add mates at an introductory level.
- Create and use design tables and multiple configurations at an introductory level.
- Create, annotate, and print 2D engineering drawings at an introductory level.
- Use mold design tools at an introductory level.
- Use engineering analysis software at an introductory level.
- Create surface models at an introductory level.
- Create sheetmetal parts at an introductory level.

## **MECHANICAL DRAFTING 1 WITH SOLIDWORKS**

CADD 154

4 Credits

16 hours of lecture - 55 hours of lab

Mechanical drafting using SolidWorks. Focus on detailed control in annotating and producing drawings of parts and assemblies. Includes components in mechanical print reading. Prerequisite: A grade of "C" or better in ENGR 113, and either ENGR 150 or CADD 150. [GE]

### **Course Outcomes:**

- Use and interpret information typically placed in ASME defined title blocks.
- Understand and utilize ANSI and ISO engineering drawing standards documentation.
- Interpret and use fastener data and symbology.
- Interpret GDT symbology at an introductory level.
- Create appropriately laid out and annotated detail drawings.
- Create assembly drawings in several styles.
- Create BOMs at an introductory level.
- Identify features and their function on SolidWorks drafting related toolbars.
- Understand relationships between and use default drawing template, sheet format, and sheet sizes.
- Create new and edit existing drawing templates and sheet formats.
- Create eDrawings.
- Use GDT, weld symbols, and surface finish annotations at an introductory level in drawings.

## **INTERMEDIATE SOLIDWORKS - TOP DOWN DESIGN**

CADD 155

4 Credits

16 hours of lecture - 55 hours of lab

System design using SolidWorks in the context of an assembly. Focus on complex modeling of parts and assemblies. Prerequisite: CADD 150 or ENGR 150. [GE]

### **Course Outcomes:**

- Discuss and compare bottom-up and top-down design approaches to design.
- Identify and use all available mates.
- Identify and use configurations.
- Discuss and use parent/child relationships in assemblies.
- Use top-down approaches in the context of an assembly.
- Use and edit external references.
- Use and edit in-context features.

- Use and edit in-place mates.
- Create user defined properties.

## **INTRODUCTION TO CAM**

CADD 160

2 Credits

11 hours of lecture - 22 hours of lab

Introduction to CAM software for CNC machine operation. Recommended for anyone comfortable using a PC. [GE]

### **Course Outcomes:**

- Use Mastercam software to produce part drawings, toolpaths, and M & G code.
- Use terminology related to CAM programming.
- Create milling, drilling, pocketing, islands, bolt circles, bolt patterns, and profiling toolpaths for 2-D, 3-D, and multi-parts.
- Generate and save NC code.
- Verify accuracy of resultant NC code using Verify feature of Mastercam.
- Plot programs using Backplot feature of Mastercam software.
- Discuss the general nature of CAM programming, and Mastercam in particular.
- Create 2D and 3D geometry in Mastercam.

## **BASIC REVIT: RESIDENTIAL**

CADD 170

4 Credits

16 hours of lecture - 55 hours of lab

Basic operations of the current version of Revit, as used in residential architectural design and drafting. Topics include screen features, drawing and editing 3D objects, using sheets and views, file management, and using pre-existing AutoCAD drawing file data. Recommended for anyone comfortable using a PC. [GE]

### **Course Outcomes:**

- Discuss the use of Revit within architecture, and other companies.
- Discuss and describe BIM.
- Create and use elements.
- Create and use views.
- Create and use levels and grids.
- Create and use walls, floors, and roofs.
- Create and use doors, windows, stairs, and railings.
- Create and use schedules.
- Create and use sheets.
- Create and modify annotations and dimensions.

## **REVIT: COMMERCIAL**

CADD 171

4 Credits

16 hours of lecture - 55 hours of lab

Revit Commercial will continue to build on the basic tools covered in the Basic Revit Residential course. This is a project-based course and will focus on building a commercial office building using the basic tools, but also focusing on more advanced tools required to complete a commercial project. Topics include: grids, reflected ceiling plans, interior and exterior elevations sections,

interior design, schedules, site rendering, view templates, construction documents setup and work-sharing. Prerequisite: A grade of "C" or better in CADD 170. [GE]

**Course Outcomes:**

- Use Revit at a foundational level in the architectural design of commercial type structures.
- Create floor plans, sections, interior and exterior elevations, reflected ceiling plans, and schedules.
- Create a typical commercial roof and floor system.
- Create and use custom Revit content.
- Create and annotate a construction document set typical of a commercial project.

**COOPERATIVE WORK EXPERIENCE**

CADD 199

1 - 6 Credits

Supervised work experience in an approved job. Completion of specific learning objectives and employer evaluation. Prerequisite: Consent of instructional unit and completion of or concurrent enrollment in HDEV 195, 198 or 200 required. [GE]

**Course Outcomes:**

- Supervised work experience in an approved job. Completion of specific learning objectives and employer evaluation.

**PRESENTATION GRAPHICS**

CADD 207

4 Credits

16 hours of lecture - 55 hours of lab

Concepts of design and graphic principles for developing a variety of visual presentations by applying different graphic forms used for advertising, and showcasing graphic skills by producing portfolio quality work. Prerequisite: A grade of "C" or better in CADD 141, CADD 143, or CADD 154. [GE]

**Course Outcomes:**

- Discuss design concepts and principles of a graphic presentation.
- Design and produce a simple informational presentation board.
- Design and produce a simple promotional presentation board.
- Discuss behavioral characteristics of a credible and amiable presenter.
- Demonstrate basic principles of giving a presentation with graphics.
- Demonstrate persuasive, informational, and spontaneous presentations.
- Demonstrate an oral presentation using a presentation board.

**ARCHITECTURAL DRAFTING 2**

CADD 210

3 Credits

11 hours of lecture - 44 hours of lab

Continuance of architectural drafting from CADD 141, with a focus on refinement and using industry standards. Create a drawing set for a residential structure, with review by local professionals. Prerequisite: A grade of "C" or better in CADD 141. [GE]

**Course Outcomes:**

- Create a detailed drawing set for a residential structure, with review by local professionals.

- Demonstrate application of architectural industry adopted drafting standards throughout a drawing set.
- Demonstrate use of architectural industry adopted CADD applications for the purpose of creating a drawing set.

## **AUTOCAD CUSTOMIZATION**

CADD 214

3 Credits

11 hours of lecture - 44 hours of lab

Customizing buttons and toolbars, using AutoLISP to create new AutoCad commands.

Introduction to custom dialog boxes. Prerequisite: A grade of "C" or better in CADD 142. [GE]

### **Course Outcomes:**

- State facts about the use of the acad.pgp file.
- Edit and use the acad.pgp file.
- State facts about menu macro syntax and toolbar button operation/customization.
- Create simple button and toolbar systems.
- State the basic syntax of AutoLISP.
- Document AutoLISP source code.
- Create basic AutoLISP programs that involve: interactive queries, coordinate manipulation, data type conversion, program flow control, entity list manipulation, and file I/O.
- State facts about filename extension conventions for AutoLISP files, and respective differences.
- Discuss the use of user defined facilities (custom commands, buttons, etc.) within AutoCAD.
- Discuss the basic interrelation of AutoLISP with DCL and Visual Basic (time permitting).

## **INTEGRATED COMPUTATIONAL DESIGN**

CADD 216

3 Credits

11 hours of lecture - 44 hours of lab

Use of computational simulation within CADD applications in the design and analysis of engineering problems. Also, use of integrated surface/solid modeling techniques, and use of CADD in documentation of designs and analyses. Prerequisite: A grade of "C" or better in ENGR 150 or CADD 150. [GE]

### **Course Outcomes:**

- Edit models using a combination of solids and surfacing tools and methodologies
- Create, analyze, and document foundational problems using SolidWorks Simulation tools.
- Create, analyze, and document foundational problems using SolidWorks Flow Simulation tools
- Create, analyze, and document foundational problems using SolidWorks Motion tools.

## **CIVIL DRAFTING 2**

CADD 230

3 Credits

11 hours of lecture - 44 hours of lab

Continuance of civil drafting from CADD 143, with a focus on refinement and using industry standards. Create a drawing set for a residential subdivision, with review by local professionals.

Prerequisite: A grade of "C" or better in CADD 143. [GE]

### **Course Outcomes:**

- Discuss the use of Civil CADD in the world today.
- Identify aspects of business ethics in civil engineering and land development.
- Identify facts about default file/drawing data arrangements.
- Discuss types of maps and their uses.
- Create new non-continuous line types.
- Discuss title blocks, sheet sizes, and scales used in civil drafting.
- Create blocks and block libraries for common civil graphical elements.
- Create tables, symbol references, and other annotation elements.
- Compare public versus private projects, and consider the interfacing of a plot to the public way
- Identify aspects of basic road design; speeds, slope, drainage, curbing.
- Identify aspects of driveways, sidewalks, planting strips, and swales.
- Identify considerations of sheet and scale effects while preparing to plot a drawing.
- Identify aspects of slope, grade, pipe sizes and connections.
- Identify aspects of entering survey data into drawing.
- Identify aspects of existing site plan considerations.
- Identify aspects of aligning and stationing a civil project.
- Identify aspects of horizontal plan, profile, and existing contour information.
- Identify aspects of contour modifications for new work and profile presentation.
- Add and determine elevation and station information from profiles and alignments.
- Create, modify, and combine surfaces.
- Identify aspects of utility planning, such as sanitary, storm, and water.
- Create detailed drawings for civil projects, with review by local professionals.
- Demonstrate application of industry adopted drafting standards throughout a drawing set for a civil project.
- Demonstrate use of industry adopted CADD applications for the purpose of creating a drawing set for a civil project.

## **MECHANICAL DRAFTING 2**

CADD 240

3 Credits

11 hours of lecture - 44 hours of lab

Continuance of mechanical drafting from CADD 144 and/or CADD 154, with a focus on refinement and using industry standards. Create a drawing set for a residential subdivision, with review by local professionals. Prerequisite: A grade of "C" or better in CADD 154. [GE]

### **Course Outcomes:**

- Create a detailed drawing set for a mechanical assembly, with review by local professionals.
- Demonstrate application of industry adopted drafting standards throughout a the drawing set for a mechanical assembly.
- Demonstrate use of industry adopted CADD applications for the purpose of creating a drawing set for a mechanical assembly.

## **SELECTED TOPICS**

CADD 280

1 - 5 Credits

55 hours of lecture

Course focuses on selected topics in EMET. Topics vary, and course theme and content change to reflect new topics. Because the course varies in content, it is repeatable for credit for different topics. [GE]

### **Course Outcomes:**

- Complete objectives as listed in the course syllabus for the current instance of this individually selected CADD topic course.

### **SPECIAL PROJECTS**

CADD 290

1 - 6 Credits

Opportunity to plan, organize and complete special projects approved by the department.

Prerequisite: Consent of instructional unit. [GE]

#### **Course Outcomes:**

- Demonstrate learning objectives as listed in a prior agreement determined and signed by you and the supervising instructor.

### **CADD CAPSTONE PRACTICUM**

CADD 299

5 Credits

11 hours of lecture - 88 hours of lab

Capstone project to expand knowledge by studying selected CADD topics in selected major area of study (architectural, civil, mechanical, or other) and producing a comprehensive portfolio-documented project. Projects must be pre-approved by the instructor. Prerequisite: Consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Complete and comprehensively document a capstone CADD project in a selected major area of study: architectural, civil, mechanical, or other.
- Create prints of line drawings and picture images using a variety of CADD software applications.
- Demonstrate appropriate application of drawing view and annotation layout, and use of drafting standards on line drawings.
- Demonstrate beginning design skills.
- Communicate your design ideas through both written and graphical means.

## **College and Academic Preparation**

### **JUMPSTART: READING & WRITING**

CAP 005

1 - 6 Credits

66 hours of lecture

Development of standards-based reading and writing skills in the contexts of science and social studies to successfully transition into appropriate High School 21 courses. Concurrent enrollment in CAP 006. Prerequisite: Current CASAS test scores in Math and Reading. Minimum score of 211-255 on CASAS Reading Test.

#### **Course Outcomes:**

- Determine purpose and select appropriate reading or writing strategies.
- Monitor comprehension and adjust reading strategies.
- Analyze and integrate information with prior knowledge to address reading or writing purpose.
- Pay attention to conventions of English language usage, including grammar, spelling and sentence structure, to minimize barriers to reader's comprehension.



- Seek feedback and revise to enhance the effectiveness of the written communication.

### **JUMPSTART: MATH**

CAP 006

1 - 6 Credits

66 hours of lecture

Development of standards-based math skills in order to successfully transition into appropriate level of High School 21 courses. Concurrent enrollment in CAP 005. Prerequisite: Current CASAS test scores in Math and Reading. Score of 211-255 on CASAS Math Test.

#### **Course Outcomes:**

- Understand, interpret, and work with pictures, numbers, and symbolic information.
- Apply knowledge of mathematical concepts and procedures to figure out how to answer a question, solve a problem, make a prediction or carry out a task that has a mathematical dimension.
- Determine degree of precision required, then define and select problem-solving data.
- Solve problems using appropriate quantitative procedures and verify that the results are reasonable.
- Communicate results using a variety of mathematical representations, including graphs, charts, tables, and algebraic models.

### **FAST TRACK 1: PORTFOLIO**

CAP 011

2 Credits

22 hours of lecture

Improve the ability to listen actively, speak so others can understand, read with understanding, and convey ideas in writing while developing a career portfolio. Upon successful completion of Fast Track 1, students will have gained the study skills as well as the academic skills to transition into an I-BEST program or Fast Track 2. Concurrent enrollment in CAP 012, CAP 013, CAP 014, and CAP 015. Prerequisite: Current CASAS test scores in all skills. CASAS test score between 201 and 220 reading. ESL student must score at least 200 in listening.

#### **Course Outcomes:**

- Give a professional elevator speech.
- Write a professional resume.
- Write a professional cover letter.
- Complete a mock job interview.
- Organize a professional career portfolio.

### **FAST TRACK 1: READING/WRITING**

CAP 012

6 Credits

66 hours of lecture

In this class, you will improve your ability to read with understanding and convey your ideas in writing. Upon successful completion of Fast Track 1, you will have gained the study skills as well as the academic skills to transition into an I-BEST program or Fast Track 2. Concurrent enrollment in CAP 011, CAP 013, CAP 014, and CAP 015. Prerequisite: Current CASAS test scores in all skills. CASAS test score between 201 and 220 in reading. ESL student must score at least 200 in listening.

#### **Course Outcomes:**

- Demonstrate knowledge of specialized vocabulary.
- Apply reading strategies to a variety of texts.
- Write complete simple sentences.
- Write complete compound sentences.
- Write complete complex sentences.
- Write an effective paragraph on a single topic.
- Take effective notes from a lecture.

### **FAST TRACK 1: COMMUNICATION**

CAP 013

3 Credits

33 hours of lecture

In this class, you will improve your ability to listen actively and speak so others can understand. Upon successful completion of Fast Track 1, you will have gained the study skills as well as the academic skills to transition into an I-BEST program or Fast Track 2. Concurrent enrollment in CAP 011, CAP 012, CAP 014, and CAP 015. Prerequisite: Current CASAS test scores in all skills. CASAS test score between 201 and 220 reading. ESL students must score at least 201 in listening.

#### **Course Outcomes:**

- Complete an informational interview.
- Give a professional presentation with group members.
- Give an individual presentation.

### **FAST TRACK 1: TECHNOLOGY**

CAP 014

3 Credits

33 hours of lecture

In this class, you will improve your ability to use technology. Upon successful completion of Fast Track 1, you will have gained the study skills as well as the academic skills to transition into an I-BEST program or Fast Track 2. Concurrent enrollment in CAP 011, CAP 012, CAP 013, and CAP 015. Prerequisite: Current CASAS test scores in all skills. CASAS test score between 201 and 220 in reading. ESL students must score at least 201 in listening.

#### **Course Outcomes:**

- Send professional e-mails with Clark College student email account.
- Send professional messages with Canvas.
- Post professional comments on Canvas discussion forums.
- Use Google Docs to create a presentation.
- Use search engines to find reliable Internet sources.

### **FAST TRACK 1: STUDY SKILLS**

CAP 015

2 Credits

22 hours of lecture

Strengthen study skills and reflect on various strategies and characteristics of successful college students. Upon successful completion of Fast Track 1, students will have gained the study skills as well as the academic skills to transition into an I-BEST program or Fast Track 2. Concurrent enrollment in CAP 011, CAP 012, CAP 013, and CAP 014. Prerequisite: Current CASAS test scores in all skills. CASAS test score between 201 and 220 in reading. ESL students must score at least

201 in listening.

**Course Outcomes:**

- Organize a 3-ring binder with course materials and notes.
- Effectively use an organized daily planner.
- Demonstrate knowledge of goal setting, time management and stress management.
- Demonstrate knowledge of learning styles, study techniques and test-taking strategies.
- Demonstrate knowledge of college resources.

**INTENSIVE MATH REVIEW**

CAP 045

8 Credits

88 hours of lecture

A rigorous course designed for students who want to prepare for credit-bearing math classes or prepare for the GED math exam. Topics covered include whole numbers, fractions, decimals, signed numbers, percent, geometry, standard/metric measurement and basic algebra. Application problems and test-taking/study skills will be emphasized. Prerequisite: CASAS Math Score of 221; successful completion of ABE Math Level 3; or permission of department. [PNP]

**Course Outcomes:**

- Accurately solve and explain basic problems involving addition, subtraction, division and multiplication of whole numbers, fractions, and decimals
- Write a reduced ratio, rate, and solve for an unknown variable in a proportion.
- Use a calculator to calculate and check work.
- Identify, demonstrate and apply effective study and test taking techniques.
- Identify and demonstrate techniques for solving application problems.
- Describe and apply concepts and procedures related to real and signed numbers involving geometry, measurement and percents.

**INTEGRATED MATH AND PERSONAL FINANCE**

CAP 051

10 Credits

110 hours of lecture

For students needing to learn or review math fundamentals. Focus on reading, writing, computing, and interpreting basic mathematical information using whole numbers and benchmark fractions, decimals and percents. Introduces basic patterns/algebra concepts, measurement/geometry concepts and organization and interpretation of data. Applies skills and knowledge to solving 1-2 step application problems contextualized in personal financial situations related to work, education and daily living. Successful completion of the course will provide 1.0 elective credit toward the HS21+ diploma. Prerequisite: CASAS Math score of 200-220.

**Course Outcomes:**

- Read, write, compare, estimate, and round whole numbers, decimals, and benchmark fractions.
- Add, subtract, multiply, and divide with multi-digit whole numbers, decimals, and benchmark fractions.
- Compute and use simple ratio relationships, unit rates and benchmark percents.
- Identify basic mathematical patterns, use simple formulas, and solve simple one-step equations.
- Recognize and apply geometric concepts including points, lines, angles, perimeter, area, and volume.
- Recognize and accurately use common measurement tools.

- Read, interpret and create basic charts and representation of data.
- Use the basic functions of a calculator.
- Apply the listed mathematical skills and knowledge to solve 1-2 step application problems contextualized in personal financial situations related to work, education and daily living.

## **INTEGRATED MATH AND PERSONAL FINANCE A**

CAP 052

5 Credits

55 hours of lecture

For students needing to learn or review math fundamentals. Focus on reading, writing, computing, and interpreting basic mathematical information using whole numbers and benchmark fractions, decimals and percents. Introduces basic patterns/algebra concepts, measurement/geometry concepts and organization and interpretation of data. Applies skills and knowledge to solving 1-2 step application problems contextualized in personal financial situations related to work, education and daily living. Prerequisite: CASAS Math score of 200-220.

### **Course Outcomes:**

- Read, write, compare, estimate, and round whole numbers, decimals, and benchmark fractions.
- Add, subtract, multiply, and divide with multi-digit whole numbers, decimals, and benchmark fractions.
- Compute and use simple ratio relationships, unit rates and benchmark percent's.
- Identify basic mathematical patterns, use simple formulas, and solve simple one-step equations.
- Recognize and apply geometric concepts including points, lines, angles, perimeter, area, and volume.
- Recognize and accurately use common measurement tools.
- Read, interpret and create basic charts and representation of data.
- Use the basic functions of a calculator.
- Apply the listed mathematical skills and knowledge to solve 1-2 step application problems contextualized in personal financial situations related to work, education and daily living.

## **INTEGRATED MATH AND PERSONAL FINANCE B**

CAP 053

5 Credits

55 hours of lecture

For students needing to learn or review math fundamentals. Focus on reading, writing, computing, and interpreting basic mathematical information using whole numbers and benchmark fractions, decimals and percents. Introduces basic patterns/algebra concepts, measurement/geometry concepts and organization and interpretation of data. Applies skills and knowledge to solving 1-2 step application problems contextualized in personal financial situations related to work, education and daily living. Successful completion of the course will provide 1 elective credit toward the HS21+ diploma. Prerequisite: CASAS Math score of 200-220 and successful completion of CAP 052.

### **Course Outcomes:**

- Read, write, compare, estimate, and round whole numbers, decimals, and benchmark fractions.
- Add, subtract, multiply, and divide with multi-digit whole numbers, decimals, and benchmark fractions.
- Compute and use simple ratio relationships, unit rates and benchmark percentages.
- Identify basic mathematical patterns, use simple formulas, and solve simple one-step

equations.

- Recognize and apply geometric concepts including points, lines, angles, perimeter, area, and volume.
- Recognize and accurately use common measurement tools.
- Read, interpret and create basic charts and representation of data.
- Use the basic functions of a calculator.
- Apply the listed mathematical skills and knowledge to solve 1-2 step application problems contextualized in personal financial situations related to work, education and daily living.

## **INTEGRATED MATH AND SCIENCE**

CAP 054

10 Credits

110 hours of lecture

An integrated math and science course covering the fundamentals of physics, chemistry, and applied mathematical concepts and procedures to answer a question, solve a problem, make a prediction or carry out a task that has a mathematical dimension. Weekly quizzes based on science concepts and whole numbers, fractions, benchmark percents, decimals, basic geometry, beginning algebra, measurement and computational skills to solve 1-2 step contextualized real life word problems. Successful completion of the course will provide 1 credit for Math and 1 credit for Science toward the HS21+ diploma. Prerequisite: CASAS Math score of 211-235 or successful completion of CAP 051 or 053.

### **Course Outcomes:**

- Read, write, and interpret mathematical information using whole numbers, fractions, decimals, percent, simple formulas, beginning algebra, basic geometry, & standard units of measurement.
- Integrate quantitative or technical information expressed in words in text with a version of that information expressed visually (e.g., in a flow chart, diagram, model, graph, or table).
- Analyze, understand and extract information from scientific text using reading strategies.
- Application of the scientific method
- Make inferences based on scientific data.
- Determine the meaning of symbols, key terms, and other specific science and math words and phrases.
- Calculate using the TI-30XS calculator.

## **INTEGRATED MATH AND SCIENCE A**

CAP 055

5 Credits

55 hours of lecture

An integrated math and science course covering the fundamentals of physics, chemistry, and applied mathematical concepts and procedures to answer a question, solve a problem, make a prediction or carry out a task that has a mathematical dimension. Weekly quizzes based on science concepts and whole numbers, fractions, benchmark percents, decimals, basic geometry, beginning algebra, measurement and computational skills to solve 1-2 step contextualized real life word problems. Prerequisite: CASAS Math score of 211-235 or successful completion of CAP 051 or 053.

### **Course Outcomes:**

- Read, write, and interpret mathematical information using whole numbers, fractions, decimals, percent, simple formulas, beginning algebra, basic geometry, & standard units of measurement.
- Integrate quantitative or technical information expressed in words in text with a version of

- that information expressed visually (e.g., in a flow chart, diagram, model, graph, or table).
- Analyze, understand and extract information from scientific text using reading strategies.
- Application of the scientific method.
- Make inferences based on scientific data.
- Determine the meaning of symbols, key terms, and other specific science and math words and phrases.
- Calculate using the TI-30XS calculator.

## **INTEGRATED MATH AND SCIENCE B**

CAP 056

5 Credits

55 hours of lecture

An integrated math and science course covering the fundamentals of physics, chemistry, and applied mathematical concepts and procedures to answer a question, solve a problem, make a prediction or carry out a task that has a mathematical dimension. Weekly quizzes based on science concepts and whole numbers, fractions, benchmark percents, decimals, basic geometry, beginning algebra, measurement and computational skills to solve 1-2 step contextualized real life word problems. Successful completion of the course will provide 1 credit for Math and 1 credit for Science toward the HS21+ diploma. Prerequisite: CASAS Math score 211-235 and successful completion of CAP 055.

### **Course Outcomes:**

- Read, write, and interpret mathematical information using whole numbers, fractions, decimals, percent, simple formulas, beginning algebra, basic geometry, & standard units of measurement.
- Integrate quantitative or technical information expressed in words in text with a version of that information expressed visually (e.g., in a flow chart, diagram, model, graph, or table).
- Analyze, understand and extract information from scientific text using reading strategies.
- Application of the scientific method.
- Make inferences based on scientific data;
- Determine the meaning of symbols, key terms, and other specific science and math words and phrases.
- Calculate using the TI-30XS calculator.

## **INTEGRATED MATH AND HEALTH**

CAP 057

10 Credits

110 hours of lecture

Designed for students who want to prepare for credit bearing math classes or for CAP 060. Curriculum includes whole number, fractions, decimals, signed numbers, percent, geometry, standard/metric measurement and basic algebra. Application problems and test taking/study skills will be emphasized. This contextualized course will also provide opportunities for students to acquire the knowledge and practice the skills necessary to maintain an active and healthy life. Students earning a passing grade will move into Math 030, Business Math 102 or CAP 060 depending on individual educational goals. Successful completion of the course will provide 1 credit for Math and 1 credit for Health toward the HS21+ diploma. Prerequisite: CASAS Math score of 221-245 or successful completion of CAP 054 or 056.

### **Course Outcomes:**

- Accurately solve and explain basic operations with integers, fractions, decimals, proportions and percent with and without a calculator.
- Evaluate algebraic expressions and solve equations.

- Create and interpret visual representations such as charts, graphs and tables.
- Identify, demonstrate and apply effective study and test taking techniques.
- Describe and apply concepts and procedures involving geometry and measurement.
- Identify and demonstrate techniques for solving application problems.
- Demonstrate knowledge and skills necessary to maintain a healthy and active lifestyle.

## **INTEGRATED MATH AND HEALTH A**

CAP 058

5 Credits

55 hours of lecture

Designed for students who want to prepare for credit bearing math classes or for CAP 060. Curriculum includes whole number, fractions, decimals, signed numbers, percent, geometry, standard/metric measurement and basic algebra. Application problems and test taking/study skills will be emphasized. This contextualized course will also provide opportunities for students to acquire the knowledge and practice the skills necessary to maintain an active and healthy life. Prerequisite: CASAS Math score of 221-245 or successful completion of CAP 054 or 056.

### **Course Outcomes:**

- Accurately solve and explain basic operations with integers, fractions, decimals, proportions and percent with and without a calculator.
- Evaluate algebraic expressions and solve equations.
- Create and interpret visual representations such as charts, graphs and tables.
- Identify, demonstrate and apply effective study and test taking techniques.
- Describe and apply concepts and procedures involving geometry and measurement.
- Identify and demonstrate techniques for solving application problems.
- Demonstrate knowledge and skills necessary to maintain a healthy and active lifestyle.

## **INTEGRATED MATH AND HEALTH B**

CAP 059

5 Credits

55 hours of lecture

Designed for students who want to prepare for credit bearing math classes or for CAP 060. Curriculum includes whole number, fractions, decimals, signed numbers, percent, geometry, standard/metric measurement and basic algebra. Application problems and test taking/study skills will be emphasized. This contextualized course will also provide opportunities for students to acquire the knowledge and practice the skills necessary to maintain an active and healthy life. Students earning a passing grade will move into Math 030, Business Math 102 or CAP 060 depending on individual educational goals. Successful completion of the course will provide 1 credit for Math and 1 credit for Health toward the HS21+ diploma. Prerequisite: CASAS Math score of 221-245 and successful completion of CAP 058.

### **Course Outcomes:**

- Accurately solve and explain basic operations with integers, fractions, decimals, proportions and percent with and without a calculator.
- Evaluate algebraic expressions and solve equations.
- Create and interpret visual representations such as charts, graphs and tables.
- Identify, demonstrate and apply effective study and test taking techniques.
- Describe and apply concepts and procedures involving geometry and measurement.
- Identify and demonstrate techniques for solving application problems.
- Demonstrate knowledge and skills necessary to maintain a healthy and active lifestyle.

## **INTENSIVE MATH REVIEW II**

CAP 060

8 Credits

88 hours of lecture

Designed for students who want to prepare for the Mathematical Reasoning portion of the GED exam as well as earn 1.0 credit for HS21+ and directly transition to credit-bearing math courses. Curriculum includes proportional reasoning and problem solving in context. Introduces linear and quadratic equations, inequalities, and statistics and probability models. Emphasizes skills pertinent to successful transitioning to college. Successful completion of the course will provide 1 credit for Math toward the HS21+ diploma. Prerequisite: CASAS Math score of 230-255 or successful completion of CAP 057 or 059.

### **Course Outcomes:**

- Reason quantitatively and use units to solve problems.
- Write, interpret and simplify an expression.
- Simplify, analyze, and write polynomial expressions.
- Write, interpret, solve, and graph linear equations, inequalities, and quadratic equations.
- Analyze and solve pairs of simultaneous linear equations algebraically and graphically.
- Express and interpret functions as tables, in written form and graphically.
- Analyze proportional relationships and use them to solve real-world and mathematical problems including geometric problems and linear equations.
- Read and interpret data in graphs, charts and other data representations including: bar, line and circle graphs, scatter, dot and box plots and histograms.
- Determine sample space and use probability models to interpret data and predict outcomes.
- Incorporate appropriate use of the IT-30X in mathematical reasoning and problem solving.

## **INTEGRATED ENGLISH AND HEALTH**

CAP 061

10 Credits

110 hours of lecture

For students who want to prepare for the GED or the HS21+ diploma. Uses a model that strengthens science with a focus on health, contextualized with English writing skills, in order to enhance the students' lives in an adult secondary education ABE Washington State Health and English course. Students will gain a deeper understanding of the human body's systems while improving reading and writing skills. Successful completion of the course will provide 1 credit for Health toward the HS21+ diploma. Prerequisite: CASAS Reading score of 200-220.

### **Course Outcomes:**

- Integrate text and visuals.
- Identify and use basic sentence structures with proper punctuation.
- Ask and answer questions to help determine or clarify the meaning of words and phrases related to health and basic science.
- Use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text).
- Use the illustrations and details in a health and science texts to describe key ideas (e.g., charts and diagrams).
- Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.

## **INTEGRATED ENGLISH AND HEALTH A**

CAP 062

5 Credits



55 hours of lecture

For students who want to prepare for the GED or the HS21+ diploma. Uses a model that strengthens science with a focus on health, contextualized with English writing skills, in order to enhance the students' lives in an adult secondary education ABE Washington State Health and English course. Students will gain a deeper understanding of the human body's systems while improving reading and writing skills. Prerequisite: CASAS Reading score of 200-220.

**Course Outcomes:**

- Integrate text and visuals.
- Identify and use basic sentence structures with proper punctuation.
- Ask and answer questions to help determine or clarify the meaning of words and phrases related to health and basic science.
- Use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text).
- Use the illustrations and details in a health and science texts to describe key ideas (e.g., charts and diagrams).
- Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.

**INTEGRATED ENGLISH AND HEALTH B**

CAP 063

5 Credits

55 hours of lecture

For students who want to prepare for the GED or the HS21+ diploma. Uses a model that strengthens science with a focus on health, contextualized with English writing skills, in order to enhance the students' lives in an adult secondary education ABE Washington State Health and English course. Students will gain a deeper understanding of the human body's systems while improving reading and writing skills. Successful completion of the course will provide 1 credit for Health toward the HS21+ diploma. Prerequisite: CASAS Reading score of 200-220 and successful completion of CAP 062.

**Course Outcomes:**

- Integrate text and visuals.
- Identify and use basic sentence structures with proper punctuation.
- Use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text).
- Use the illustrations and details in a health and science texts to describe key ideas (e.g., charts and diagrams).
- Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.

**INTEGRATED ENGLISH AND WA STATE HISTORY**

CAP 064

10 Credits

110 hours of lecture

For students who want to prepare for the GED or the HS21+ diploma. Uses a contextualized model to strengthen English communication skills in order to enhance the students' lives in an adult secondary education ABE Washington State history course. Provides a social, political, economic history of the Pacific Northwest with particular emphasis on the state of Washington, including Native American history and gender/ethnic history. Successful completion of the course will provide 1 credit for English and 1 credit for WA State History toward the HS21+ diploma. Prerequisite: CASAS Reading score of 211-235 or successful completion of CAP 061 or CAP 063.

**Course Outcomes:**

- Identify and determine facts and key events in WA's timeline from birth of the state to present by creating and interpreting charts, graphs and tables.
- Observe, discuss, and write about WA's Native American Heritage using compare/contrast, reading for inferences.
- Relate WA's history to area surroundings through research on the Lewis and Clark Expedition.
- Identify the White Settlers movement through WA State and the impact on WA's Native American population using cause and effect.
- Identify and demonstrate an understanding of the Washington State government structure, current leaders, government trends, and major political parties.

**INTEGRATED ENGLISH AND WA STATE HISTORY A**

CAP 065

5 Credits

55 hours of lecture

For students who want to prepare for the GED or the HS21+ diploma. Uses a contextualized model to strengthen English communication skills in order to enhance the students' lives in an adult secondary education ABE Washington State history course. Provides a social, political, economic history of the Pacific Northwest with particular emphasis on the state of Washington, including Native American history and gender/ethnic history. Prerequisite: CASAS Reading score of 211-235 or successful completion of CAP 061 or 063.

**Course Outcomes:**

- Identify and determine facts and key events in WA's timeline from birth of the state to present by creating and interpreting charts, graphs and tables.
- Observe, discuss, and write about WA's Native American Heritage using compare/contrast, reading for inferences.
- Relate WA's history to area surroundings through research on the Lewis and Clark Expedition.
- Identify the White Settlers movement through WA State and the impact on WA's Native American population using cause and effect.
- Identify and demonstrate an understanding of the Washington State government structure, current leaders, government trends, and major political parties.

**INTEGRATED ENGLISH AND WA STATE HISTORY B**

CAP 066

5 Credits

55 hours of lecture

For students who want to prepare for the GED or the HS21+ diploma. Uses a contextualized model to strengthen English communication skills in order to enhance the students' lives in an adult secondary education ABE Washington State history course. Provides a social, political, economic history of the Pacific Northwest with particular emphasis on the state of Washington, including Native American history and gender/ethnic history. Successful completion of the course will provide 1 credit for English and 1 credit for WA State History toward the HS21+ diploma. Prerequisite: CASAS Reading score of 211-235 and successful completion of CAP 065.

**Course Outcomes:**

- Identify and determine facts and key events in WA's timeline from birth of the state to present by creating and interpreting charts, graphs and tables.
- Observe, discuss, and write about WA's Native American Heritage using compare/contrast,

reading for inferences.

- Relate WA's history to area surroundings through research on the Lewis and Clark Expedition.
- Identify the White Settlers movement through WA State and the impact on WA's Native American population using cause and effect.
- Identify and demonstrate an understanding of the Washington State government structure, current leaders, government trends, and major political parties.

## **INTEGRATED ENGLISH AND FINE ART**

CAP 067

10 Credits

110 hours of lecture

For students who want to prepare for the GED or the HS21+ diploma. Uses a contextualized model to strengthen English communication skills while focusing on artistic understanding and appreciation in order to enhance the students' lives in an adult secondary education ABE Washington State Fine Arts course. Students will gain a deeper understanding of the arts and how to evaluate the impressions gained by exposure to different forms of media. Successful completion of the course will provide 1 credit for English and 1 credit for Fine Arts toward the HS21+ diploma. Prerequisite: CASAS Reading score of 221-245 or successful completion of CAP 064 or 066.

### **Course Outcomes:**

- Connect and respond to social and global issues in fine arts, while learning correct format, sentence structure, and grammar.
- Demonstrate the ability to organize knowledge/ideas for expression in the production of art in a variety of media.
- Analyze and respect different responses to specific art works in various cultures/communities through portfolio creation.
- Demonstrate an understanding of Visual Arts as a basic aspect of history/human experience.
- Create visual solutions to define a problem and reflect on possible solutions.
- Use aesthetic criteria to analyze and respond to art and make connections across disciplines, cultures, place and time.

## **INTEGRATED ENGLISH AND FINE ART A**

CAP 068

5 Credits

55 hours of lecture

For students who want to prepare for the GED or the HS21+ diploma. Uses a contextualized model to strengthen English communication skills while focusing on artistic understanding and appreciation in order to enhance the students' lives in an adult secondary education ABE Washington State Fine Arts course. Students will gain a deeper understanding of the arts and how to evaluate the impressions gained by exposure to different forms of media. Prerequisite: CASAS Reading score 221-245 or successful completion of CAP 064 or 066.

### **Course Outcomes:**

- Connect and respond to social and global issues in fine arts, while learning correct format, sentence structure, and grammar.
- Demonstrate the ability to organize knowledge/ideas for expression in the production of art in a variety of media.
- Analyze and respect different responses to specific art works in various cultures/communities through portfolio creation.
- Demonstrate an understanding of Visual Arts as a basic aspect of history/human experience.

- Create visual solutions to define a problem and reflect on possible solutions.
- Use aesthetic criteria to analyze and respond to art and make connections across disciplines, cultures, place and time.

## **INTEGRATED ENGLISH AND FINE ART B**

CAP 069

5 Credits

55 hours of lecture

For students who want to prepare for the GED or the HS21+ diploma. Uses a contextualized model to strengthen English communication skills while focusing on artistic understanding and appreciation in order to enhance the students' lives in an adult secondary education ABE Washington State Fine Arts course. Students will gain a deeper understanding of the arts and how to evaluate the impressions gained by exposure to different forms of media. Successful completion of the course will provide 1 credit for English and 1 credit for Fine Arts toward the HS21+ diploma. Prerequisite: CASAS Reading score of 221-245 and successful completion of CAP 068.

### **Course Outcomes:**

- Connect and respond to social and global issues in fine arts, while learning correct format, sentence structure, and grammar.
- Demonstrate the ability to organize knowledge/ideas for expression in the production of art in a variety of media.
- Analyze and respect different responses to specific art works in various cultures/communities through portfolio creation.
- Demonstrate an understanding of Visual Arts as a basic aspect of history/human experience.
- Create visual solutions to define a problem and reflect on possible solutions.
- Use aesthetic criteria to analyze and respond to art and make connections across disciplines, cultures, place and time.

## **INTEGRATED ENGLISH AND US HISTORY & GOVERNMENT**

CAP 070

10 Credits

110 hours of lecture

For students who want to earn credits toward their High School 21 diploma or for the GED Social Studies and Language Arts reading and writing exam. Curriculum includes the contextualization of US government and history along with critical reading and writing skills. Successful completion of the course will provide 1 credit for English and 1 credit for US History & Government toward the HS21+ diploma. Prerequisite: CASAS Reading score of 236 or above or successful completion of CAP 067 or 069.

### **Course Outcomes:**

- Identify and write simple, compound and complex sentences related to US Government and US history.
- Write short and extended responses that compare, contrast, summarize, and analyze details in US Government and US History.
- Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
- Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
- Use technology, including the Internet, to produce, publish, and update individual or shared writing products.

## **INTEGRATED ENGLISH AND US HISTORY & GOVERNMENT**

CAP 071

5 Credits

55 hours of lecture

For students who want to earn credits toward their High School 21 diploma or for the GED Social Studies and Language Arts reading and writing exam. Curriculum includes the contextualization of US government and history along with critical reading and writing skills. Prerequisite: CASAS Reading score of 236-255 or successful completion of CAP 067 or 069.

### **Course Outcomes:**

- Identify and write simple, compound and complex sentences related to US Government and US history.
- Write short and extended responses that compare, contrast, summarize, and analyze details in US Government and US History.
- Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
- Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
- Use technology, including the Internet, to produce, publish, and update individual or shared writing products.

## **INTEGRATED ENGLISH AND US HISTORY & GOVERNMENT**

CAP 072

5 Credits

55 hours of lecture

For students who want to earn credits toward their High School 21 diploma or for the GED Social Studies and Language Arts reading and writing exam. Curriculum includes the contextualization of US government and history along with critical reading and writing skills. Successful completion of the course will provide 1 credit for English and 1 credit for US History & Government toward the HS21+ diploma. Prerequisite: CASAS Reading score of 236-255 and successful completion of CAP 071.

### **Course Outcomes:**

- Identify and write simple, compound and complex sentences related to US Government and US history.
- Write short and extended responses that compare, contrast, summarize, and analyze details in US Government and US History.
- Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
- Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
- Use technology, including the Internet, to produce, publish, and update individual or shared writing products.

## **INTENSIVE ENGLISH REVIEW**

CAP 073

8 Credits

88 hours of lecture

Emphasizes reading and writing skills through a step-by-step process. Written responses to assigned readings include planning, organizing, drafting and revising paragraphs and extended responses. Reading strategies with an emphasis on argument analysis and organizational skills will be a central theme. In-class and out-of-class reading and writing is required. Successful completion of the course will provide 1 credit for English toward the HS21+ diploma. Prerequisite: CASAS Reading score of 245-255 or successful completion of CAP 070 or 072.

**Course Outcomes:**

- Demonstrate writing as a process.
- Write clearly and effectively.
- Write in a variety of forms for different audiences and purposes.
- Independently use writing as a tool for learning in academic, personal, and career situations.
- Analyze and evaluate own growth as a writer.
- Analyze and evaluate the effectiveness of own writing and that of others.

**INTEGRATED SCIENCE AND CWP**

CAP 074

10 Credits

110 hours of lecture

For students who want to prepare for the GED or the HS21+ diploma. Uses a contextualized model to strengthen science skills while focusing on lab science in order to enhance the students' lives in an adult secondary education ABE Washington State Contemporary World Problems course. Students will gain a deeper understanding of the Sciences and how they relate to current world problems. Successful completion of the course will provide 1 credit for Science and 1 credit for Contemporary World Problems toward the HS21+ diploma. Prerequisite: CASAS Reading score of 236-255 or successful completion of CAP 067 or 069.

**Course Outcomes:**

- Identify, understand, and apply hypothesis.
- Apply scientific processes and use sampling techniques to answer scientific questions.
- Integrate text and visuals.
- Analyze text structure and cite textual evidence.
- Research, evaluate, and support conclusions.

**INTEGRATED SCIENCE AND CONTEMPORARY WORLD PROB A**

CAP 075

5 Credits

55 hours of lecture

For students who want to prepare for the GED or the HS21+ diploma. Uses a contextualized model to strengthen science skills while focusing on lab science in order to enhance the students' lives in an adult secondary education ABE Washington State Contemporary World Problems course. Students will gain a deeper understanding of the Sciences and how they relate to current world problems. Prerequisite: CASAS Reading score of 236-255 or successful completion of CAP 067 or 069.

**Course Outcomes:**

- Identify, understand, and apply hypothesis.
- Apply scientific processes and use sampling techniques to answer scientific questions.
- Integrate text and visuals.
- Analyze text structure and cite textual evidence.
- Research, evaluate, and support conclusions.

## **INTEGRATED SCIENCE AND CONTEMPORARY WORLD PROB B**

CAP 076

5 Credits

55 hours of lecture

For students who want to prepare for the GED or the HS21+ diploma. Uses a contextualized model to strengthen science skills while focusing on lab science in order to enhance the students' lives in an adult secondary education ABE Washington State Contemporary World Problems course. Students will gain a deeper understanding of the Sciences and how they relate to current world problems. Successful completion of the course will provide 1 credit for Science and 1 credit for Contemporary World Problems toward the HS21+ diploma. Prerequisite: CASAS Reading score of 236-255 and successful completion of CAP 075.

### **Course Outcomes:**

- Identify, understand, and apply hypothesis.
- Apply scientific processes and use sampling techniques to answer scientific questions.
- Integrate text and visuals.
- Analyze text structure and cite textual evidence.
- Research, evaluate, and support conclusions.

## **INTEGRATED OCCUPATIONAL EDUCATION**

CAP 077

5 Credits

55 hours of lecture

For students who want to earn credit toward High School 21 or students who want to explore career possibilities while learning up-to-date computer applications to help them prepare professional online and hard copy job portfolios. Students will investigate personal career pathways and create educational pathways to the career. Successful completion of the course will provide 1 credit for Occupational Education toward the HS21+ diploma. Prerequisite: CASAS Reading score of 221-255.

### **Course Outcomes:**

- Research multiple career pathways.
- Create an educational pathway to a career.
- Create an online job portfolio: a. letter of interest b. resume c. past job description resource page.
- Participate in mock interviews
- Take multiple job inventories to better understand career goals via WOIS and/or the career center or other current resources via web.

## **TRANSITIONAL STUDIES PREPARATION**

CAP 078

2 Credits

22 hours of lecture

For students who want to prepare for the HS21+ diploma. This course is required in the 1st or 2nd quarter of a students' HS21+ pathway and is structured around the SBCTC Transitions Standards checklist. Primary goal is to provide specific program requirements, goal setting and promote student success as they transition. Successful completion of the course will provide 0.5 credit for Electives toward the HS21+ diploma. Prerequisite: CASAS Reading score of <200-255.

### **Course Outcomes:**

- Identify a pathway to complete HS21+ program.
- Create transition goals and identify potential barriers.
- Gain specific knowledge of the requirements of HS21+ program.
- Identify key campus resources.
- Define and clarify the role of a community college student.
- Research and identify study skills specific to students' learning styles and individual environment.

## **TRANSITIONAL STUDIES CAPSTONE**

CAP 079

2 Credits

22 hours of lecture

A culminating course for students to demonstrate the knowledge and skills they acquired during their HS21+ experience at Clark College. Engages students in a project/experience that focuses on demonstrating learning and proficiency. Includes a reflective portfolio demonstrating research, communication and technology skills and synthesizing their learning with the future possibilities of their individual transitions. Successful completion of the course will provide 0.5 credit for Electives toward the HS21+ diploma. Prerequisite: CASAS Math and Reading score of 246-255 or successful completion of CAP 060, 073, and CAP 074 or 076.

## **CAP SPECIAL TOPICS**

CAP 080

1 - 10 Credits

110 hours of lecture

Variable topics in Basic Education Career and Academic Prep. Content to reflect the selected topics. Because the course varies in content, it is repeatable for credit for different topics. Individual topics are listed in the quarterly class schedule. Outcomes are determined by level of placement into the course and are based on the Washington State Basic Education Learning Indicators. Students must attempt a CASAS post test after 45 hours of attendance in this course. Prerequisite: Appropriate placement by ABE, ESL, GED level completion, CASAS testing, or permission of department.

### **Course Outcomes:**

- Demonstrate an understanding of the core concepts of the selected topic.
- Apply the core concepts of the selected topic to the foundational principles of this course.

## **COLLEGE PREPARATION**

CAP 081

3 Credits

33 hours of lecture

For transitional studies whose intent is to transition to college-level, credit-bearing classes. Focus is on making a successful transition to college life. Topics include goal setting, personal management skills, developing an academic plan, developing cultural competence and communication skills, career exploration and financial literacy, and an introduction to student resources at the college. Successful completion of the course will provide 0.5 credit for Electives toward the HS21+ diploma. Prerequisite: CASAS Reading score 221-255.

### **Course Outcomes:**

- Describe campus resources and their relationship to student success.
- Utilize Clark College technology.
- Develop a two-quarter educational plan that works toward academic goals and increases



understanding of the Academic Advising process.

- Define and discuss introductory concepts of power, privilege and inequity.
- Identify and apply personal learning styles and associated learning strategies.
- Apply introductory understanding of financial literacy to personal budgeting and college funding options.

### **TRANSITIONAL STUDIES ELECTIVE: SERVICE**

CAP 082

3 Credits

33 hours of lecture

Students will explore civic engagement and community-based problem-solving. Successful completion of the course will provide 0.5 credit for Electives toward the HS21+ diploma.

Prerequisite: CASAS Reading score of <200-255.

#### **Course Outcomes:**

- Demonstrate understanding of civic engagement through service learning.
- Identify different approaches to community building.
- Identify issues of inequity that contribute to community concerns.
- Create a personal career pathway in the non-profit sector or government agencies.

### **TRANSITIONAL STUDIES ELECTIVE: DRAMA**

CAP 083

3 Credits

33 hours of lecture

Enhances reading, writing, speaking and listening skills through readings and activities focused in dramatic arts. One complete play will be read plus a variety of excerpts from classical and contemporary monologues, plays, movies and television. Elements of stagecraft will be discussed. Successful completion of the course will provide 0.5 credit for Electives toward the HS21+ diploma. Prerequisite: CASAS Reading score of <200-255.

#### **Course Outcomes:**

- Develop an understanding of the elements of dramatic arts: plot, setting, characterization, and theme.
- Compare and contrast the structure of drama and prose.
- Apply speaking strategies in pace, tone, and volume to effectively communicate with listeners.
- Examine drama as a reflection of cultural and social contexts.

### **TRANSITIONAL STUDIES ELECTIVE: BOOK CLUB**

CAP 084

3 Credits

33 hours of lecture

Develop reading strategies to enhance their enjoyment of life-long reading of different genres. Comprehensive and critical analysis in connection to the reading and the student's own life and culture. A typical week may include lecture presentations, class and/or small group discussion, group activities, short readings or quizzes. Regular attendance is required as well as a time commitment of 5-8 hours outside of class each week. Successful completion of the course will provide 0.5 credit for Electives toward the HS21+ diploma. Prerequisite: CASAS Reading score of 221-255 or successful completion of CAP 067 or 069.

#### **Course Outcomes:**

- Monitor and enhance comprehension using a wide range of strategies.
- Determine two or more central ideas of a text and analyze their development over the course of the text.
- Draw evidence from literary or informational texts to support analysis, reflection, and research.
- Organize and analyze information (both implied and directly stated) and reflect upon its meaning using a variety of strategies such as applying relevant information, summarizing, drawing conclusions from detailed reading.
- Analyze the various elements of a novel such as plot, themes, character development, and point of view.

### **TRANSITIONAL STUDIES: INDEPENDENT FITNESS**

CAP 085

3 Credits

33 hours of lecture

Acquire the knowledge and practice the skills necessary to maintain an active and healthy lifestyle. Each student will design, implement, document, and evaluate a goal-oriented fitness program. Recommended for highly motivated individuals by allowing for choice of types of activities and location of activities. A minimum of 4-5 hours of exercise/activity is mandatory each week. Successful completion of the course will provide 0.5 credit for Physical Education toward the HS21+ diploma. Prerequisite: CASAS Reading score of 211-255.

#### **Course Outcomes:**

- Design, implement and document a goal oriented fitness program.
- Identify five or more personal benefits of becoming more physically active.
- Consistently participate in physical activity for 4-5 hours per week.

### **TRANSITIONAL STUDIES: READING**

CAP 087

4 Credits

44 hours of lecture

This course assists students in developing reading and study habits for college-level courses. The course develops reading skills via a three-part progression: active-reading strategies, interpretive skills to shape and draw meaning from a text, and responding to texts in your own writing. The course emphasizes application of active-reading, interpretive, and evaluative (responsive) reading habits with college-level expository, argumentative, and fictional texts. Prerequisite: CASAS Score of 230 or above.

#### **Course Outcomes:**

- Use pre-reading, while-reading, and post-reading strategies to monitor and improve comprehension of range of college-level materials.
- Identify purpose, topic, main idea, supporting details, and organizational patterns in single and multi-paragraph texts.
- Use textual evidence to support inferences drawn from texts.
- Analyze, summarize, and respond logically to texts.
- Employ vocabulary building strategies, such as using context clues and using a college-level dictionary.

### **I-BEST SUPPORT CLASS**

CAP 091

1 - 5 Credits

55 hours of lecture

Designed to provide additional instruction and support for student success in I-BEST designated classes. Reviews important concepts and vocabulary introduced during I-BEST classes and skills to communicate clearly and accurately using vocabulary and expressions commonly used in the I-BEST academic, work place and job search environment. Offers activities to strengthen basic skills while studying in an I-BEST program. Students must be concurrently enrolled in an I-BEST designated class. Concurrent with designated I-BEST courses. Prerequisite: Admission into an I-BEST program.

**Course Outcomes:**

- Students will complete objectives as determined by the course instructor.
- Students will apply the core concepts of the foundational principles of the concurrent courses in the IBEST cohort.

## Computer Graphics Technology

### PHOTOSHOP RASTER GRAPHICS

CGT 101

4 Credits

22 hours of lecture - 44 hours of lab

Fundamentals of digital imaging using Adobe Photoshop. Focus on software tools and techniques to capture, correct, create and combine images for print and web. Topics include input devices, resolution, tone and color correction, retouching, painting, drawing, image manipulation, compositing, automation, graphic formats, design and reproduction considerations. [GE]

**Course Outcomes:**

- Proficiently utilize digital production tools, including computers, software, input devices and printers.
- Skillfully work with Photoshop and digital media to create original visual solutions.
- Be proactive and self-sufficient in utilizing resources and resolving technical issues.
- Develop file management skills to effectively categorize, maintain, find and archive digital resources.
- Articulate copyright laws and practice ethical behavior in utilizing content and other materials.

### ILLUSTRATOR VECTOR GRAPHICS

CGT 102

4 Credits

22 hours of lecture - 44 hours of lab

Fundamentals of vector drawing using Adobe Illustrator. Focus on software tools and techniques to draw, trace, transform and combine graphics for print and web. Topics include drawing tools, path editing, shape manipulation, blending, shading, object layering, typography, graphic formats, design and reproduction considerations. [GE]

**Course Outcomes:**

- Proficiently utilize digital production tools, including computers, software, input devices and printers.
- Skillfully work with Illustrator and digital media to create original visual solutions.
- Manipulate abstract, representational or symbolic form to communicate a specific message.
- Develop and/or work within a design process using iterative improvement and revision cycles.

- Develop file management skills to effectively categorize, maintain, find and archive digital resources.

## **INDESIGN PAGE LAYOUT**

CGT 103

4 Credits

22 hours of lecture - 44 hours of lab

Fundamentals of page layout using Adobe InDesign. Focus on software tools and techniques to combine text and graphics into visual layouts for print communications. Topics include document design, color and typographic principles, copyfitting, spatial organization, visual hierarchy, file and font management, prepress issues, marketing and printing considerations. [GE]

### **Course Outcomes:**

- Skillfully work with InDesign and digital media to create original visual solutions.
- Analyze target audience and needs to develop effective graphic design solutions.
- Develop and/or work within a design process using iterative improvement and revision cycles.
- Utilize analysis and critique methods to improve creative and technical strategies.
- Practice methods of presentation including mounting and creating comprehensive mock-ups.

## **WEB MULTIMEDIA CONTENT I**

CGT 104

4 Credits

22 hours of lecture - 44 hours of lab

Introduction to content development strategies used to create and combine multimedia elements for web presentation or mobile communication. Focus on conceptual and visual design, user, client and marketing considerations. Activities include using technologies to produce static and interactive media, motion graphics, 2D animation, integrated audio and visual, and dynamic interfaces. [GE]

### **Course Outcomes:**

- Create solutions in a navigable way of consuming content using a variety of media and formats.
- Integrate interactive components to build user-centered interfaces and functionality.
- Create structured content and extract design using standards-based coding, styles and scripting.
- Be proactive and self-sufficient in utilizing resources and adapting to changing technology.
- Develop project management skills to plan, organize and orchestrate successful completion of project goals.

## **USER EXPERIENCE DESIGN**

CGT 105

4 Credits

22 hours of lecture - 44 hours of lab

Investigation into the field of usability and interaction design. Focus on strategies and best practices to better understand how to create successful user experiences for web presentation or mobile communication. Topics include usability, interactivity, user research, testing scenarios, navigational models, information architecture and interface design. Students will design and conduct usability testing. [GE]

### **Course Outcomes:**

- Analyze target audience and needs to develop effective user experience design solutions.
- Utilize research findings to help shape creative or technical strategies.
- Create solutions in a navigable way of consuming content using a variety of media and formats.
- Capture data and user interactions and employ content management and data services.
- Integrate interactive components to build user-centered interfaces and functionality.

## **SOCIAL MEDIA EXPLORATION**

CGT 106

3 Credits

22 hours of lecture - 22 hours of lab

Exploration of current practices in the use of social media and internet resources for professional development, networking, collaboration, communication, marketing and advertising. Focus on the strengths, roles and issues of various social media tools. Activities include developing and implementing a social media strategy for personal branding and professional networking. [GE]

### **Course Outcomes:**

- Develop an understanding of how cultural context and social factors inform and influence consumer resources.
- Be proactive and self-sufficient in utilizing resources and adapting to changing technology.
- Develop self-awareness, express yourself clearly, listen critically to others, seek and respond to feedback.
- Write, debate and speak intelligently about society, communications, media and technology.
- Articulate the legal, ethical and responsible use of information and technology.

## **COOPERATIVE WORK EXPERIENCE**

CGT 199

1 - 5 Credits

165 hours of clinical

Supervised work experience in an approved job. Completion of specific learning objectives and employer evaluation. Completion of, or concurrent enrollment in HDEV 195, 198 or 200 required. Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Develop appropriate educational and occupational learning objectives that are measurable and job-specific.
- Integrate classroom theory with practical, on-the-job work experience.
- Develop professional attitudes and skills essential for obtaining and sustaining employment,.

## **WEB VIDEO PRODUCTION**

CGT 201

4 Credits

22 hours of lecture - 44 hours of lab

Fundamentals of video production for web delivery. Focus on all aspects of the video production workflow from concept to capture to multimedia integration and post-production processing. Topics include conceptual design, storytelling, video shooting techniques, non-linear editing, sound editing, media formats, compression and publishing for web presentation. [GE]

### **Course Outcomes:**

- Create purposeful video projects that communicate relevance and have a unique voice.

- Skillfully work with digital video, audio and media to create original visual solutions.
- Proficiently utilize digital production tools, including cameras, computers and software.
- Build relationships of trust, mutual respect and productive interactions.
- Construct verbal explanations for visual solutions that address intent, strategy and compositional choices.

## **WEB DESIGN I**

CGT 205

4 Credits

22 hours of lecture - 44 hours of lab

Fundamentals of web design and site development. Focus on web authoring standards, tools and techniques to conceive, design, produce and publish websites. Topics include client and marketing analysis, information architecture, conceptual and visual design, workflow and team process, coding, content integration and website testing. Prerequisite: A grade of "C" or better in CTEC 122 HTML Fundamentals. [GE]

### **Course Outcomes:**

- Analyze target audience and needs to develop effective web design solutions.
- Create structured content and extract design using standards-based coding, styles and scripting.
- Understand the production workflow and how it informs design decisions.
- Work cooperatively as part of a team and contribute in both leadership and supportive roles.
- Develop project management skills to plan, organize and orchestrate successful completion of project goals.
- Prepare a client brief or proposal, including business, marketing, timeline and technical requirements.

## **WEB DESIGN II**

CGT 206

4 Credits

22 hours of lecture - 44 hours of lab

Further study in web design and site development. Focus on web authoring trends and strategic methodology to better understand how to extend website functionality and value. Topics include strategies such as cross platform and browser compatibility, content management, search engine optimization, site statistics, accessibility, project management and maintenance planning. Prerequisite: A grade of "C" or better in CGT 205. [GE]

### **Course Outcomes:**

- Explore, adopt and apply current and emerging web practices, languages and technologies.
- Capture data and user interactions and employ content management and data services.
- Consistently produce projects with professional-quality craftsmanship.
- Be flexible, adapt to unanticipated situations and resolve conflicts.
- Communicate and clarify ideas through well-written business correspondence, proposals and client briefs.
- Work with clients, programmers and other third parties to determine pricing estimates and production workflow.

## **PROFESSIONAL PRACTICES**

CGT 214

4 Credits

22 hours of lecture - 44 hours of lab

Practical experience and understanding of the business of design and freelancing. Emphasis on professional practices and processes. Instructor-supervised professional project development working with clients to design print and web-based communications. May include industry field trips, interviews, research, online or in-person events and team-based projects. Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Interact, collaborate and implement projects with peers, clients or others in various work environments.
- Effectively organize and manage web and graphic design projects (project, people, time & file management) .
- Use written, verbal and visual means to effectively present and communicate portfolio or client projects.
- Identify professional organizations, industry resources and networking opportunities in the creative community.
- Familiarize yourself with the pros and cons of business practices and managing client expectations.
- Demonstrate work and business ethics and legal, responsible use of information and technology.

**CAPSTONE PRACTICUM**

CGT 240

4 Credits

22 hours of lecture - 44 hours of lab

An opportunity to extend your knowledge through the study of selected topics in your major area of study and to produce a comprehensive portfolio project. Projects must be pre-approved with the instructor. Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Explore, adopt and apply current and emerging practices, languages and technologies.
- Effectively organize and manage web and graphic design projects (project, people, time & file management) .
- Interact, collaborate and implement projects with peers, clients or others in various work environments.
- Use written, verbal and visual means to effectively present and communicate portfolio or client projects.
- Consistently produce projects with professional-quality craftsmanship.

**SELECTED TOPICS**

CGT 280

1 - 5 Credits

55 hours of lecture

The course focuses on selected topics in Computer Graphics Technology. Topics vary, and course theme and content change to reflect new topics. Because the course varies in content, it is repeatable for credit for different topics. Individual topics are listed in the quarterly class schedules. Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate an understanding of the core concepts of the selected topic.
- Apply the core concepts of the selected topic to the foundational principles of the course.

## **SPECIAL PROJECTS**

CGT 290

1 - 3 Credits

Opportunity to plan, organize and complete special projects approved by the department.  
Prerequisite: Consent of Instructional Unit.

### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## **Chemistry**

### **SKILLS FOR PRE-HEALTH CHEMISTRY**

CHEM 095

3 Credits

33 hours of lecture

For students who have little to no previous chemistry experience, preparation for the fast-paced and intensive experience of CHEM& 121, required for health occupation fields. Topics include measurements, density, nomenclature, properties of elements and compounds, understanding the periodic table, writing and balancing chemical equations, the mole, and the application of mathematical operations used in chemical problem solving. Prerequisite: Eligibility for MATH 093, 095 or equivalent or consent of Instructional Unit. Students cannot receive credit for both CHEM 050 and CHEM 095.

### **Course Outcomes:**

- Demonstrate skills necessary to succeed in a college-level quantitative class.
- Express scientific quantities appropriately.
- Analyze and solve scientific word problems using dimensional analysis.
- Demonstrate quantitative reasoning skills by solving problems in a step-by-step process.
- Describe the subatomic particles and the general structure of the atom.
- Explain the organization of the periodic table; use the table to categorize elements.
- Apply IUPAC nomenclature (naming) rules for covalent and ionic compounds.
- Interpret simple molecular structures.
- Classify changes in and properties of matter.
- Define components of a chemical reaction.
- Write balanced chemical reactions.

### **CHEMICAL CONCEPTS W/LAB**

CHEM&110

5 Credits

44 hours of lecture - 22 hours of lab

Introductory chemistry course to fulfill the General Education Science with Laboratory requirement, intended for non-science majors who will not take additional chemistry. Focus on unit factor and equation problem solving skills as related to chemical concepts, also stoichiometry and stoichiometric problem solving skills. Topics include the structure of the atom, chemical reactions, and chemical and physical properties to describe matter. [NS, SE]

### **Course Outcomes:**

- Use dimensional analysis to analyze and solve scientific word problems.
- Algebraically manipulate formulas to solve for a particular variable.



- Demonstrate organizational ability.
- Know the subatomic particles.
- Demonstrate knowledge of the organization of the periodic table; use the table to categorize elements.
- Write nuclear reactions.
- Apply IUPAC nomenclature (naming) rules for covalent and ionic compounds.
- Define and perform calculations pertaining to empirical and molecular formulas.
- Define matter.
- Identify changes and properties of matter.
- Define components of a chemical reaction.
- Write balanced chemical reactions.
- Predict chemical behavior for chemical entities in aqueous solutions.
- Apply lecture concepts in lab environment.
- Report experimental results.
- Perform experiments.
- Evaluate experimental results.
- Prepare lab reports.
- Summarize results.

## **INTRO TO CHEMISTRY: PRE-HEALTH**

CHEM&121

5 Credits

44 hours of lecture - 22 hours of lab

Topics in general chemistry applicable to students seeking a 2-year degree in the health-occupations fields. Unit-factor method is applied to problem solving. Topics covered include units of measurement, atomic structure, chemical bonding, energy, the mole concept, nomenclature of inorganic compounds, writing and balancing equations, properties of gases, solutions and colloids, reaction rates and equilibrium, acids, bases and salts, radiation and health. Completion of elementary algebra recommended. Prerequisite: A grade of "C" or better in CHEM 050 or 095 and eligibility for MATH 093/095; or eligibility for MATH 111. Formerly CHEM 111. [NS,SE]

### **Course Outcomes:**

- Measure and record scientific quantities appropriately.
- Analyze and solve scientific word problems using dimensional analysis.
- Demonstrate quantitative reasoning skills by solving problems in a step-by-step process.
- Algebraically manipulate formulas to solve for a particular variable.
- Describe the subatomic particles and the general structure of the atom.
- Explain the organization of the periodic table; use the table to categorize elements.
- Explain the differences between ionic and covalent compounds.
- Apply IUPAC nomenclature (naming) rules for covalent and ionic compounds.
- Draw simple molecular structures.
- Predict the geometric shape of molecules.
- Classify changes in and properties of matter.
- Predict properties of ideal gases given specific conditions.
- Explain properties of matter based upon forces between particles.
- Define components of a chemical reaction.
- Write balanced chemical reactions.
- Classify and predict acid-base reactions based on patterns.
- Analyze the energetics of a chemical reaction in the context of overall enthalpy changes and reaction rates.
- Explain the basic characteristics of chemical equilibria.
- Apply knowledge of intermolecular forces to describe how solutions are formed.
- Describe, both qualitatively and quantitatively, how the concentration of a solution affects its properties.
- Apply lecture concepts in lab environment.

- Perform experiments.
- Report, evaluate and summarize experimental results.

## **INTRO TO ORGANIC/BIOCHEM**

CHEM&131

5 Credits

44 hours of lecture - 22 hours of lab

Aspects of organic and biochemistry emphasizing how chemicals affect functioning of the human body. Applicable to students seeking a 2-year degree in the health-occupations fields. Topics covered include aliphatic and aromatic compounds, alcohols, ethers, amines, aldehydes, ketones, carboxylic acids and their derivatives, carbohydrates and carbohydrate metabolism, lipids and lipid metabolism, proteins and protein metabolism, enzymes and hormones, nucleic acids and the chemistry of heredity, body fluids and the human circulation system and nutrition. Prerequisite: Grade of "C" or better in CHEM& 121. Formerly CHEM 112. [NS,SE]

### **Course Outcomes:**

- Recognize organic molecules by functional group classification.
- Describe the bonding patterns as it pertains to the shape of organic molecules.
- Recognize isomeric forms in organic molecules.
- Describe the role that functional groups and shape play in physical properties of organic molecules.
- Classify a select number of organic chemical reactions based on the functional groups used in the reaction.
- Predict the outcome of organic chemical reactions based on functional group analysis of the reactants.
- Relate common types of organic chemical reactions to biochemical systems.
- Identify structural and physical differences between lipids and other biological molecules.
- Differentiate between lipid classifications using structural features.
- Relate organic chemical reaction types to the reactions of lipids in metabolic processes.
- Apply the concept of isomerism to lipids, as it relates to structure and physical properties for this class of molecule.
- Identify structural and physical differences between carbohydrates and other biological molecules.
- Differentiate between carbohydrate classifications using structural features.
- Relate organic chemical reaction types to the reactions of carbohydrates in metabolic processes.
- Apply the concepts of chirality and isomerism to carbohydrates, as it relates to structure and physical properties for this class of molecule.
- Identify structural and physical differences between proteins and other biological molecules.
- Differentiate between amino acid classifications as it relates to structural features or differences in acidity/basicity at various pH.
- Relate organic chemical reaction types to the reactions of amino acids and proteins in metabolic processes.
- Apply the concepts of chirality and isomerism to amino acids.
- Recognize different levels of protein structure related to different bonding forces within the molecule.
- Identify structural and physical differences between nucleic acids and other biological molecules.
- Differentiate between nucleosides and nucleotides.
- Recognize nucleosides and nucleotides used in DNA and RNA synthesis.
- Describe the cellular processes involving nucleic acids.
- Apply the concept of intermolecular forces to the structure and physical properties of DNA and RNA.
- Distinguish between different types of RNA based on their functions in protein synthesis.
- Relate organic chemical reaction types to the reactions used in the catabolism of lipids,

carbohydrates and proteins.

- Describe the role of ATP, ADP, NAD/NADH and FAD/FADH<sub>2</sub> in energy production during metabolism.
- Apply lecture concepts in lab environment.
- Perform experiments.
- Report, evaluate and summarize experimental results.

## GENERAL CHEMISTRY PREPARATION

CHEM&139

4 Credits

44 hours of lecture

For students who need additional background in applied mathematics and chemistry to enroll in the CHEM& 141-142-143 sequence for science and engineering majors. Topics include scientific methods of measurement, significant figures, nomenclature, properties of elements, compounds, and solutions, the periodic table, writing and balancing chemical equations, and focused (extensive) practice on stoichiometric problem solving. Prerequisite: A grade of "C" or better in MATH 093, 095 or equivalent or consent of Instructional Unit. Formerly CHEM 100. [SE]

### Course Outcomes:

- Analyze and solve scientific word problems using dimensional analysis.
- Algebraically manipulate formula to solve for a specific variable.
- Perform calculations converting between temperature scales (°C, °F, K).
- Describe the structure of an atom, including the role of subatomic particles.
- Describe the organization of the periodic table; use the table to categorize elements.
- Apply IUPAC nomenclature (naming) rules for covalent and ionic compounds.
- Define and perform calculations pertaining to empirical and molecular formula.
- Define matter.
- Define chemical and physical changes.
- Classify changes in and properties of matter.
- Define components of a chemical reaction.
- Write balanced chemical reactions.
- Classify chemical reactions based on pattern and/or chemical process.

## GENERAL CHEMISTRY I

CHEM&141

4 Credits

44 hours of lecture

First of a 3-quarter sequence designed for science and engineering majors. Applications of the scientific method by correlating theory with experimental observation. Topics include systems of measurement, atomic structure, chemical bonding and shape, stoichiometric calculations, properties of gases, nomenclature of inorganic compounds, and writing and balancing equations. Concurrent enrollment in CHEM& 151, or consent of Instructional Unit. Prerequisite: Eligibility for MATH 111 and a grade of "C" or better in CHEM& 139 or equivalent or recommending score on Clark's general chemistry placement test. [NS, SE]

### Course Outcomes:

- Analyze and solve scientific word problems using dimensional analysis.
- Algebraically manipulate formulas to solve for a particular variable.
- Describe the subatomic particles and the structure of the atom.
- Describe the historical advances leading to our current understanding of the structure of the atom.
- Explain the organization of the periodic table; use the table to categorize elements.

- Apply IUPAC nomenclature (naming) rules for covalent and ionic compounds.
- Define and perform calculations pertaining to empirical and molecular formulas.
- Predict the bonding patterns and geometric shape of molecules.
- Classify changes in and properties of matter.
- Predict properties of ideal gases given specific conditions.
- Define components of a chemical reaction.
- Write balanced chemical reactions.
- Classify and predict chemical reactions based on pattern and/or chemical process.
- Predict and explain heat transfers involved in chemical and physical processes.
- Describe the general properties of light.
- Explain the quantitative relationship between light and the electronic structure of the atom.
- Describe solutions in which water is the solvent.

## GENERAL CHEMISTRY II

CHEM&142

4 Credits

44 hours of lecture

Second of a 3-quarter sequence designed for science and engineering majors. Applications of the scientific method by correlating theory with experimental observation. Topics include properties of liquids and solids, solutions, equilibria, reaction kinetics, acid-base theories, ionic equilibria and an introduction to organic chemistry. Concurrent enrollment in CHEM& 152, or consent of Instructional Unit. Prerequisite: A grade of "C" or better in CHEM& 141 and CHEM& 151. [NS, SE]

### Course Outcomes:

- Apply a working knowledge of algebra and dimensional analysis to solve complex problems requiring creativity and analytical thinking.

## GENERAL CHEMISTRY III

CHEM&143

4 Credits

44 hours of lecture

Third of a three-quarter sequence designed for science and engineering majors. Applications of the scientific method by correlating theory with experimental observation. Topics include ionic equilibria, thermodynamics, nuclear chemistry, electrochemistry, transition metal chemistry, and applications of all chemical concepts to the elements on the periodic table. Concurrent enrollment in CHEM& 153 is recommended. Prerequisite: A grade of "C" or better in CHEM& 142 and CHEM& 152. [NS, SE]

### Course Outcomes:

- Analyze and solve scientific word problems using dimensional analysis.
- Algebraically manipulate formulas to solve for a particular variable.
- Solve quadratic equations using the quadratic formula.
- Predict properties and electronic structure of transition metals.
- Name coordination compounds.
- Predict the structure, geometry and chemical properties of coordination compounds.
- Predict spectrochemical properties of coordination compounds with various ligands.
- Describe the arrangement of subatomic particles, including the relative stability of nuclei.
- Predict products of nuclear reactions and write balanced nuclear equations.
- Define and use vocabulary associated with thermodynamics.
- Explain quantitative relationships between enthalpy, temperature, entropy, Gibb's Free Energy, cell potential and the equilibrium constant for a process.
- Use enthalpy, temperature, entropy, Gibb's Free Energy, cell potential and / or the

- equilibrium constant for a process to predict reaction spontaneity.
- Given standard reduction potential values, write balanced equations for electrochemical reactions.
  - Diagram voltaic cells.
  - Describe solutions in which water is the solvent.
  - Mathematically and graphically predict pH and buffering properties of solutions containing acids and / or bases.
  - Predict the solubility of ionic compounds, including complex ions, in neutral, acidic and basic solutions.

## **GENERAL CHEMISTRY LABORATORY I**

CHEM&151

1 Credits

33 hours of lab

First of a 3-quarter lab sequence designed for science and engineering majors, to coincide with CHEM& 141 General Chemistry I. Applications of the scientific method by correlating theory with experimental observation. Topics include systems of measurement, observing and affecting chemical reactions, energy considerations, chemical behavior of aqueous systems, the nature of chemical bonding, gas laws, graphing techniques, using technological interfaces to collect and manipulate data, and mathematical calculations to support chemical observations. Students must register for CHEM& 141, or consent of Instructional Unit. [NS, SE]

### **Course Outcomes:**

- Explain and employ basic laboratory safety rules.
- Apply IUPAC nomenclature (naming) rules for covalent and ionic compounds.
- Perform calculations associated with data acquired in lab to correct precision.
- Classify chemical reactions.
- Investigate chemical principles and theories.
- Predict and evaluate the bonding and structure of a molecule.
- Safely use common laboratory equipment and glassware.
- Demonstrate good sample handling technique including quantitative transfer.
- Record observations.
- Collect and manipulate data using a technological interface.
- Analyze data mathematically and graphically.

## **GENERAL CHEMISTRY LABORATORY II**

CHEM&152

1 Credits

33 hours of lab

Second of a 3-quarter lab sequence designed for science and engineering majors, to coincide with CHEM& 142 General Chemistry II. Applications of the scientific method by correlating theory with experimental observation. Topics include phenomena of solid and liquid states, colligative properties of aqueous and non-aqueous systems, reaction kinetics, general equilibria, acid/base equilibria, graphing techniques, using technological interfaces to collect and manipulate data, and mathematical calculations to support chemical observations. Concurrent enrollment in CHEM& 142, or consent of Instructional Unit. Prerequisite: A grade of "C" or better in CHEM& 141 and CHEM& 151, or consent of Instructional Unit. [NS, SE]

### **Course Outcomes:**

- Explain and employ basic laboratory safety rules.
- Apply IUPAC nomenclature (naming) rules for covalent and ionic compounds.
- Investigate chemical principles and theories.

- Predict relationships between bonding, structure and physical properties of compounds.
- Safely use common laboratory equipment and glassware.
- Demonstrate good sample handling technique.
- Record observations.
- Collect and manipulate data using a technological interface and standard lab equipment.
- Analyze data mathematically and graphically.

### **GENERAL CHEMISTRY LABORATORY III**

CHEM&153

2 Credits

11 hours of lecture - 33 hours of lab

Third of a 3-quarter lab sequence to coincide with CHEM& 143 General Chemistry III for science and engineering majors. Applications of the scientific method by correlating theory with experimental observation. Topics include chemical and ionic equilibria, acid-base theories of aqueous solutions and selected principles of electrochemistry, gravimetric analysis, coordination chemistry, volumetric analysis, inorganic synthesis, and the statistical handling of data.

Completion of or concurrent enrollment in CHEM& 143 with a grade of "C" or better. Prerequisite: A grade of "C" or better in CHEM& 142 and CHEM& 152, or consent of Instructional Unit. [NS, SE]

#### **Course Outcomes:**

- Explain and employ basic laboratory safety rules.
- Apply basic statistics tools for the evaluation of data.
- Perform calculations associated with data acquired in lab to correct precision.
- Investigate compounds through indicator, potentiometric and redox titrations.
- Investigate chemical principles and theories.
- Investigate complex-ion and solution equilibria.
- Safely use common laboratory equipment and glassware.
- Demonstrate good sample handling technique including quantitative transfer.
- Record observations.
- Collect and manipulate data using a technological interface.
- Analyze data mathematically and graphically.
- Present data, calculations and results graphically and in writing.

### **COOPERATIVE WORK EXPERIENCE**

CHEM 199

1 - 5 Credits

165 hours of clinical

Supervised work experience in an approved job. Completion of specific learning objectives and employer evaluation. Completion of, or concurrent enrollment in, HDEV 195, 198, or 200 required. Prerequisite: Consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Fulfill job requirements of their internship provider.

### **ORGANIC CHEMISTRY I**

CHEM&241

4 Credits

44 hours of lecture

First of a 3-quarter sequence designed for science and engineering majors, or students seeking a career in the health professions. Topics include mechanistic approach applied to hydrocarbons and

alkenes, spectroscopic methods, molecular orbitals, hybridization, resonance, acid/base theory, nomenclature, structure and reactivity, kinetic and thermodynamic theories of reactions. Concurrent enrollment in CHEM& 251 is required, or consent of Instructional Unit. Prerequisite: A grade of "C" or better in CHEM& 143, or consent of Instructional Unit. [NS,SE]

**Course Outcomes:**

- Apply the concepts of covalent bonding and molecular orbitals to describe shapes and energies observed in general classes of organic molecules.
- Relate the roles acids and bases in general chemistry to organic molecules.
- Define the concept of pKa relative to acidity and general reactivity observed for organic molecules.
- Compare and contrast structural and chemical differences (including acidity) for all organic functional groups.
- Relate structural and chemical differences in functional groups with physical properties for organic molecules.
- Use the IUPAC nomenclature (naming) system to alkanes, alkenes, cycloalkanes, cycloalkenes.
- Distinguish structural and electronic differences between alkanes and alkenes.
- Describe physical differences in structure as a result of bond rotations and their effects on energetic forms of alkanes and cycloalkanes.
- Distinguish isomers present in alkanes and alkenes and cyclic variants of each.
- Use different structural representations to describe alkanes and alkenes and cyclic variants of each.
- Use reaction energy diagrams, thermodynamic principles and bond dissociation energies to describe organic reactions.
- Classify organic reactions based upon type of mechanism.
- Identify organic reaction mechanisms with respect to type of reaction.
- Describe the mechanics behind addition of reactants across an alkene.
- Describe the stereochemical consequences resulting from different mechanisms of addition.
- Apply addition reaction chemistry to a wide variety of alkenes and cycloalkenes.
- Review all previous material specific to the reaction of alkenes, including spectroscopy and IUPAC nomenclature.
- Distinguish between the main types of molecular spectroscopy used in organic chemistry.
- Apply the concepts underlying spectroscopic methods (IR, NMR, UV) as it pertains to data analysis and interpretation.
- Utilize data from a single spectroscopic technique to confirm the identity of a known organic molecule.
- Utilize data from multiple spectroscopic techniques to identify an unknown organic molecule.
- Identify stereogenic centers.
- Assign Absolute Configuration of Stereogenic Carbons.
- Describe the stereochemical consequences resulting from different mechanisms of addition.
- Use stereochemical nomenclature (naming) rules when naming of organic molecules.

**ORGANIC CHEMISTRY II**

CHEM&242

4 Credits

44 hours of lecture

Second of a 3-quarter sequence designed for science and engineering majors, or students seeking careers in the health professions. Topics include organic synthesis and mechanistic approach applied to polar molecules; topics may include alcohols, ethers, organometallic compounds, aromatic systems, aldehydes and ketones. Concurrent enrollment in CHEM& 252 is required, or consent of Instructional Unit. Prerequisite: A grade of "C" or better in CHEM& 241 and CHEM& 251, or consent of Instructional Unit. [NS, SE]

**Course Outcomes:**

- Application of functional group transformations involving formation or reaction of Alcohols, Ethers and Epoxides.
- Describe functional group transformations involving formation or reaction of alcohols, ethers and epoxides.
- Relate the mechanics behind addition of reactants across an alkene or alkyne (but not the mechanisms behind oxidation or reduction).
- Describe the stereochemical consequences resulting from different mechanisms of addition.
- Apply addition reaction chemistry to a wide variety of alkenes and cycloalkenes.
- Review all previous material, specific to the reaction of alkenes and alkynes, including spectroscopy and IUPAC nomenclature.
- Applications of functional group transformations involving formation or reaction of the alkyne functional group.
- Describe the mechanics behind addition of reactants across an alkyne.
- Apply addition reaction chemistry to a wide variety of alkynes.
- Review all previous material, specific to the reaction of alkynes, including spectroscopy and IUPAC nomenclature.
- Use stereochemical nomenclature (naming) rules when naming of organic molecules.
- Describe the stereochemical outcome from any organic reaction.
- Identify nucleophile and electrophile in substitution reactions.
- Differentiate between first order and second order processes as it relates to nucleophilic substitution.
- Use reaction energy diagrams, thermodynamic principles and bond dissociation energies to describe the mechanisms of substitution reactions.
- Examine transition state theory as it applies to reaction outcome.
- Examine the effect of reaction conditions (solvent, temperature, substrate) on substitution reaction mechanisms.
- Apply the concepts of nucleophile and electrophile to elimination reactions.
- Differentiate between first order and second order processes as it relates to elimination reactions.
- Use reaction energy diagrams, thermodynamic principles and bond dissociation energies to describe the mechanisms of elimination reactions.
- Examine transition state theory as it applies to reaction outcome.
- Examine the effect of reaction conditions (solvent, temperature, substrate) on elimination reaction mechanisms.
- Summarize substrate reactivity that favors substitution or elimination.
- Summarize reaction conditions that favors substitution or elimination.
- Describe the mechanics behind addition of halides to an alkane.
- Describe the stereochemical consequences resulting from a radical mechanism of addition.
- Describe the differences between radical processes for alkane carbon vs. allylic carbon.
- Describe the differences between radical processes that for alkyl chlorides and bromides.
- Review all previous material to the formation of alkyl halides, including spectroscopy and IUPAC nomenclature.
- Name and identify benzene and substituted benzene compounds.
- Describe the energetic stability of benzene as compared to alkenes, dienes and conjugated dienes.
- Identify and explain why molecules are aromatic using Hückel's Rule.
- Relate applicable molecular orbital theory to describe aromatic systems and their stability.
- Use the inscribed polygon method to predict aromaticity.
- Review all previous material, specific to Spectroscopy and IUPAC nomenclature, of benzene and aromatic compounds.
- Differentiate between nucleophilic substitution and electrophilic substitution.
- Compose the general mechanism for electrophilic aromatic substitution (EAS).
- Categorize organic functional groups on benzene as electron donating (EDG) or electron withdrawing (EWG) groups.
- Employ general electrophilic aromatic substitution (EAS) reaction conditions to benzene and substituted benzene substrates.
- Examine substituents effects on benzene substrates during an EAS reaction.



- Employ EAS reactions to small molecules multi-step organic synthesis.

## ORGANIC CHEMISTRY III

CHEM&243

4 Credits

44 hours of lecture

Third of a 3-quarter sequence designed for science and engineering majors, or students seeking careers in the health professions. Topics include mechanistic and synthetic approach applied to polar molecules; topics may include reactions of carboxylic acids and derivatives, dicarbonyl compounds, amines, conjugated systems, polymer systems and an introduction to biomolecules. Prerequisite: A grade of "C" or better in CHEM& 242 and CHEM& 252, or consent of Instructional Unit. [NS, SE]

### Course Outcomes:

- Review functional group transformations involving the formation or reaction of carbonyl compounds.
- Review the mechanics behind the addition of nucleophiles to a carbonyl (but not the mechanisms behind oxidation or reduction).
- Describe the stereochemical consequences resulting from different mechanisms of addition to carbonyl.
- Apply addition reaction chemistry to a wide variety of carbonyl compounds.
- Review all previous material specific to the reaction of carbonyl compounds, including spectroscopy and IUPAC nomenclature.
- Review functional group transformations involving the formation or reaction of aldehydes and ketones.
- Review the mechanics behind addition of H- and R- to aldehydes and ketones.
- Apply a wide variety of nucleophiles to addition reactions with aldehydes and ketones.
- Review all previous material specific to the reaction of aldehydes and ketones, including spectroscopy and IUPAC nomenclature.
- Review the acidity of carboxylic acids (effects of electron withdrawing and electron donating groups).
- Describe functional group transformations involving formation or reaction of carboxylic acid and derivatives.
- Apply nucleophilic acyl substitution reaction chemistry to a wide variety of carboxylic acid derivatives.
- Review all previous material specific to the reaction of carboxylic acid derivatives, including spectroscopy and IUPAC nomenclature.
- Predict substitution reactions of carbonyl compounds at the alpha-carbon in relation to enols, enolates and tautomerization.
- Describe enolate formation at the alpha-carbon of carbonyl compounds.
- Review base strength and its effect on enolate formation.
- Apply enolate reaction chemistry to a variety of carbonyl compounds.
- Review all previous material specific to enolate reactions, including spectroscopy and IUPAC nomenclature.
- Utilize enolates as nucleophiles to create carbon-carbon bonds
- Review the mechanics behind condensation reactions and its application to the aldol reaction.
- Use aldol reaction chemistry with a wide variety of carbonyl derivatives.
- Review all previous material specific to the reaction of enolates, including spectroscopy and IUPAC nomenclature.
- Compare functional group transformation reactions of amines.
- Relate the importance of amine and imine functional group transformations to organic small molecule synthesis.
- Describe the physical properties of amines and amine derivatives.
- Describe the basicity of amines and its utility in organic synthesis.
- Apply reaction chemistry to utilize amines in synthetic chemistry.

- Describe the role amine and carboxylic acid functional groups play in the function and reactions of amino acids and peptides.
- Apply all previous material to the reaction of amines, including spectroscopy and IUPAC nomenclature.

### **ORGANIC CHEMISTRY LABORATORY I**

CHEM&251

1 Credits

44 hours of lab

First of a 3-quarter laboratory sequence designed for science and engineering majors, or students seeking a career in the health professions. Focus on basic organic laboratory techniques such as recrystallizations, melting points, distillations, reflux, extractions, chromatography, and spectroscopy; laboratory notebook-keeping skills and scientific writing methods. Concurrent enrollment in CHEM& 241, or consent of Instructional Unit. Prerequisite: A grade of "C" or better in CHEM& 143 and CHEM& 152, or consent of Instructional Unit. [NS, SE]

#### **Course Outcomes:**

- Explain and employ basic laboratory safety rules.
- Apply the principles of organic chemistry relevant to lecture content in CHEM 241.
- Perform calculations associated with data acquired in lab to correct precision.
- Identify chemical reactions based on reaction type or outcome using data obtained through lab experimentation.
- Predict and evaluate the quality of experimental data.
- Use and evaluate organic reactions presented from the chemical literature to obtain lab results.
- Use technology to create, present and disseminate lab procedures and results.
- Safely use common laboratory equipment and glassware.
- Demonstrate good sample handling technique including quantitative transfer.
- Collect and manipulate data using a technological interface.
- Record observations.

### **ORGANIC CHEMISTRY LABORATORY II**

CHEM&252

1 Credits

44 hours of lab

Second of a 3-quarter laboratory sequence designed for science and engineering majors, or students seeking a career in the health professions. Focus on organic laboratory techniques, spectroscopic characterization of molecules, and introduction to synthetic techniques, including multi-step syntheses and handling moisture- or air-sensitive compounds. Concurrent enrollment in CHEM& 242, or consent of Instructional Unit. Prerequisite: A grade of "C" or better in CHEM& 241 and CHEM& 251, or consent of Instructional Unit. [NS, SE]

#### **Course Outcomes:**

- Explain and employ basic laboratory safety rules.
- Apply the principles of organic chemistry relevant to lecture content in CHEM 242.
- Perform calculations associated with data acquired in lab to correct precision.
- Identify chemical reactions based on reaction type or outcome using data obtained through lab experimentation.
- Predict and evaluate the quality of experimental data.
- Use and evaluate organic reactions presented from the chemical literature to obtain lab results.
- Use technology to create, present and disseminate lab procedures and results.

- Safely use common laboratory equipment and glassware.
- Demonstrate good sample handling technique including quantitative transfer.
- Record observations.
- Collect and manipulate data using a technological interface.
- Analyze data mathematically and graphically.

### **ORGANIC CHEMISTRY LABORATORY III**

CHEM&253

2 Credits

11 hours of lecture - 44 hours of lab

Third of a 3-quarter sequence designed for science and engineering majors, or students seeking careers in the health professions. Advanced synthetic techniques, project-based experiments and identification. CHEM& 253 replaces CHEM 214 (beginning in Spring 2009). Prerequisite: A grade of "C" or better in CHEM& 242 and CHEM& 252, or consent of Instructional Unit. [NS, SE]

#### **Course Outcomes:**

- Explain and employ basic laboratory safety rules.
- Apply the principles of organic chemistry relevant to lecture content in CHEM 243.
- Perform calculations associated with data acquired in lab to correct precision.
- Identify chemical reactions based on reaction type or outcome using data obtained through lab experimentation.
- Predict and evaluate the quality of experimental data.
- Use and evaluate organic reactions presented from the chemical literature to obtain lab results.
- Use technology to create, present and disseminate lab procedures and results.
- Safely use common laboratory equipment and glassware.
- Demonstrate good sample handling technique including quantitative transfer.
- Record observations.
- Collect and manipulate data using a technological interface.
- Analyze data mathematically and graphically.

### **SPECIAL PROJECTS**

CHEM 290

1 - 6 Credits

Opportunity to plan, organize and complete special projects approved by the department. Prerequisite: Consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## **Chinese**

### **CHINESE I**

CHIN&121

5 Credits

55 hours of lecture

First of a three-quarter sequence in elementary Mandarin Chinese. Emphasis on listening/speaking skills, with additional practice in reading/writing. Course intended for students with little or no previous experience in studying Chinese. [HA, SE] [PNP]

### **Course Outcomes:**

- Use simple phrases and sentences to describe self, family and friends, where we live and some of our pastimes. Interact in a simple way, provided that the other person is prepared to repeat or rephrase things at a slower rate of speech and help the student
- Understand familiar words and very basic phrases concerning self, family and immediate concrete surroundings.
- Understand short texts that consist of simple sentences, high frequency words, assigned vocabulary, and familiar names or words such as cognates.
- Write simple connected text on topics which are familiar or of personal interest. Write personal letters describing experiences and impressions.
- Identify and explain differences and similarities between the target culture(s) and US culture.

### **SELECTED TOPICS**

CHIN 280

1 - 5 Credits

55 hours of lecture

Course focuses on selected topics in Chinese. Topics vary and course theme and content change to reflect new topics. Because the course varies in content, it is repeatable for credit for different topics.

#### **Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of Chinese.

## **Criminal Justice**

### **INTRODUCTION TO CRIMINAL JUSTICE**

CJ& 101

5 Credits

55 hours of lecture

Philosophy and history of criminal justice. Interrelations of police, courts, and corrections. Discussion of career opportunities and qualifications for various careers in criminal justice. Prerequisite: SOC& 101 (SOC 101) or PSYC& 100 (PSYC 101). [SE,SS]

#### **Course Outcomes:**

- Obtain an informed overview of the basic components of the justice processes.
- Recognize the major sources of crime data, its uses and limitations.
- Demonstrate knowledge of the role of policing in a modern society.
- Determine and explain criminal court systems and adversarial concepts.
- Define and discuss the functions of correctional systems and the purpose of punishments.
- Explain the basic differences between the juvenile and adult systems.

### **INTRODUCTION TO CORRECTIONS**

CJ& 105

3 Credits

33 hours of lecture

An overview of local, state and federal correctional agencies. The historical development of correctional policies and practices. The exploration of debates surrounding the role and effectiveness of criminal sentences, institutional procedures, technological developments, special

populations, etc. [SE, SS]

**Course Outcomes:**

- Understand the evolution of punishment.
- Understand the variety of ways society punishes people who break criminal laws.
- Understand the historical development of correctional institutions.
- Understand the theories, philosophy and goals of punishment.
- Discuss the differences between jails and prisons and the different persons held in each.
- Discuss the differences between male, female, and juvenile institutions.
- Understand the incarceration experience.
- Understand what prisoners face when released from incarceration.
- Discuss, evaluate, and devise solutions to current controversial issues in correctional administration.
- Understand the history of penal institutions, as well as what the future may hold for our prisons and jails as the world changes.

**Communication Studies**

**INTRO TO MASS MEDIA**

CMST&102

5 Credits

55 hours of lecture

Examination of the interdependence of mass communication and society in the US with emphasis on media literacy and conscious consumption of mass mediated messages. [HA, SE]

**Course Outcomes:**

- Identify the various types of mass media and their impacts on society.
- Analyze mass media messages.
- Discuss interdependence between the mass media and its consumers.

**COMPETITIVE SPEAKING AND DEBATE**

CMST 171

3 Credits

33 hours of lecture

For students interested in intercollegiate speech/debate competition. Emphasis on debate/persuasive speaking, attention given to other forms of speech events and tournament management. Prerequisite: A grade of "C" or better in CMST& 220 (or CMST 101), or consent of Instructional Unit. [HB, SE]

**Course Outcomes:**

- Create speeches and/or interpretive performances that are suitable for collegiate competition.
- Develop, organize and defend arguments for any topic in a limited amount of time.
- Demonstrate an ability to be productive with others in a competitive environment.
- Increase self confidence in their presentational skills.
- Participate in scheduled speech competitions.

**COMPETITIVE SPEAKING AND DEBATE**

CMST 172

3 Credits

33 hours of lecture

For students interested in intercollegiate speech/debate competition. Emphasis on informative speaking and interpretive reading. Attention given to debate and other forms of speech events. Prerequisite: A grade of "C" or better in CMST& 220 (or CMST 101), or consent of Instructional Unit. [HB, SE]

**Course Outcomes:**

- Create speeches and/or interpretive performances that are suitable for collegiate competition.
- Develop, organize and defend arguments for any topic in a limited amount of time.
- Demonstrate an ability to be productive with others in a competitive environment.
- Increase self confidence in their presentational skills.
- Participate in scheduled speech competitions.

**COMPETITIVE SPEAKING AND DEBATE**

CMST 173

3 Credits

33 hours of lecture

For students interested in intercollegiate speech/debate competition. Emphasis on audience analysis and other forms of forensics activities. Prerequisite: A grade of "C" or better in CMST& 220 (CMST 101) or consent of Instructional Unit. [HB, SE]

**Course Outcomes:**

- Create speeches and/or interpretive performances that are suitable for collegiate competition.
- Develop, organize and defend arguments for any topic in a limited amount of time.
- Demonstrate an ability to be productive with others in a competitive environment.
- Increase self confidence in their presentational skills.
- Participate in scheduled speech competitions.

**COOPERATIVE WORK EXPERIENCE**

CMST 199

1 - 5 Credits

Supervised work experience in an approved job. Completion of specific learning objectives and employer evaluation. Completion of, or concurrent enrollment in HDEV 195, 198 or 200 required. Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Meet the specific outcomes agreed upon by the individual student, the instructor and the site supervisor.

**INTERPERSONAL COMMUNICATION**

CMST&210

5 Credits

55 hours of lecture

Person-to-person communication emphasizing theoretical principles and their application. How self-concept, perception, verbal and non-verbal attributes and attitudes influence communication within the family, between friends, and at work. [C, SE, HA]

**Course Outcomes:**

- Identify the interpersonal communication process and the characteristics of a competent communicator.
- Explain the relationship between self-concept and communication.
- Recognize influences on perception.
- Identify effective and ineffective verbal and nonverbal communication.
- Apply effective listening techniques.
- Identify relationships between emotions and communication.
- Analyze how communication affects relational dynamics.
- Identify ways to manage interpersonal conflicts.
- Explain the influence of diversity on interpersonal communication.

## **INTERCULTURAL COMMUNICATION**

CMST 216

5 Credits

55 hours of lecture

Examination of the impact of culture on communication. Analysis of patterns of communications which affect the ability to establish clear understanding and effective interpersonal relationships. Skills to improve communication across cultural boundaries. [HA, SE]

### **Course Outcomes:**

- Demonstrate understanding of theories, principles, and concepts related to intercultural communication.
- Demonstrate the ability to apply intercultural concepts to human interaction.
- Identify barriers to intercultural communication.
- Recognize the influence of globalization on communication.

## **PUBLIC SPEAKING**

CMST&220

5 Credits

55 hours of lecture

Introduction to speechmaking based primarily on a traditional public speaking approach. Aids students in developing theoretical understanding and practical application of oral communication skills. Techniques in controlling speech anxiety, how to structure and organize information to present to a variety of audiences; and physical and vocal delivery skills. [C,HA,SE]

### **Course Outcomes:**

- Identify anxiety reduction techniques used in the Public Speaking experience.
- Utilize effective listening strategies to provide constructive feedback to speakers.
- Demonstrate effective speech organization and outlining strategies.
- Analyze and adapt messages to targeted audiences.
- Determine and employ the most effective delivery style for the situation.
- Identify reasoning fallacies.
- Use appropriate research strategies to find credible sources.
- Design and effectively use presentational aids.
- Apply rhetorical strategies to effective speech making.
- Demonstrate ethical public speaking principles.

## **SMALL GROUP COMMUNICATION**

CMST&230

5 Credits

55 hours of lecture

Small group communication emphasizing theoretical principles and their application, enabling students to become more comfortable and competent participants in the group communication process. Emphasis will be on the study and application of the dynamics of group development, problem solving methodologies, and the use of power, including leadership and conflict. Formerly titled CMST 201. Credit not allowed for both CMST 201 and CMST& 230. [C,SE,SS,HA]

**Course Outcomes:**

- Create and maintain a supportive communication climate through the use of verbal, nonverbal, and listening skills.
- Discuss how diversity influences the group process.
- Employ effective conflict management strategies.
- Apply appropriate processes for structured and creative problem solving.
- Plan and conduct effective meetings.
- Describe and recognize the developmental stages of groups.
- Identify group leadership theories and strategies.
- Demonstrate effective group member role behavior.

**PERSUASION SPEAKING**

CMST 240

5 Credits

55 hours of lecture

Introduction to the study of persuasion. Examines persuasion from both a theoretical and application perspective. Prerequisite: A grade of "C" or better in CMST& 220. [HA, SE]

**Course Outcomes:**

- Construct a persuasive message for a given situation that is logically sound, motivationally appealing, and ethical.
- Demonstrate persuasive skills through oral and written communication.
- Analyze and evaluate argumentation for structure, proof, fallacious reasoning, and logical strength.
- Apply persuasive concepts and theories to a variety of situations.
- Develop competency in sound defense of arguments.
- Critically evaluate evidence and information for use in argument construction.
- Communicate persuasive messages in a culturally appropriate manner.

**COMPETITIVE SPEAKING AND DEBATE**

CMST 271

3 Credits

33 hours of lecture

For students interested in intercollegiate speech/debate competition. Emphasis given to advanced and independent studies in debate and persuasive speaking. Attention given to style. Students will manage the Clark College forensics tournament. Prerequisite: A grade of "C" or better in CMST 171, 172 or 173, or consent of Instructional Unit. [HB, SE]

**Course Outcomes:**

- Create speeches and/or interpretive performances that are suitable for collegiate competition.
- Develop, organize and defend arguments for any topic in a limited amount of time.
- Demonstrate an ability to be productive with others in a competitive environment.
- Increase self confidence in their presentational skills.
- Participate in scheduled speech competitions.



## **COMPETITIVE SPEAKING AND DEBATE**

CMST 272

3 Credits

33 hours of lecture

For students interested in intercollegiate speech/debate competition. Emphasis given to advanced and independent studies in informative speaking and interpretive reading. Attention given to style. Prerequisite: A grade of "C" better in CMST 171, 172 or 173, or consent of Instructional Unit. [HB, SE]

### **Course Outcomes:**

- Create speeches and/or interpretive performances that are suitable for collegiate competition.
- Develop, organize and defend arguments for any topic in a limited amount of time.
- Demonstrate an ability to be productive with others in a competitive environment.
- Increase self confidence in their presentational skills.
- Participate in scheduled speech competitions.

## **COMPETITIVE SPEAKING AND DEBATE**

CMST 273

3 Credits

33 hours of lecture

For students interested in intercollegiate speech/debate competition. Attention given to advanced and independent audience analysis and other forensics activities. Prerequisite: A grade of "C" or better in CMST 171, 172 or 173, or consent of Instructional Unit. [HB, SE]

### **Course Outcomes:**

- Create speeches and/or interpretive performances that are suitable for collegiate competition.
- Develop, organize and defend arguments for any topic in a limited amount of time.
- Demonstrate an ability to be productive with others in a competitive environment.
- Increase self confidence in their presentational skills.
- Participate in scheduled speech competitions.

## **SELECTED TOPICS**

CMST 280

5 Credits

55 hours of lecture

The course focuses on selected topics in Communication Studies. Topics vary, and course theme and content change to reflect new topics. Because the course varies in content, it is repeatable for credit for different topics. Individual topics are listed in the quarterly class schedule. [SE]

### **Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of Communication Studies.

## **SPECIAL PROJECTS**

CMST 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the department.

Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## Construction Technology

### BLUEPRINT READING

CNST 106

3 Credits

33 hours of lecture

Construction blueprint reading for residential and light commercial. [GE]

**Course Outcomes:**

- Demonstrate a working knowledge of a set of residential blueprints.
- Demonstrate how to read and understand a set of residential plans.

### JOB ESTIMATING AND SCHEDULING

CNST 108

3 Credits

33 hours of lecture

Bid preparation activities from initial receipt of drawings and specifications, to the final submission of the bid to project owner. Scheduling of subcontractors to complete the project. Prerequisite: CNST 106 or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Create a viable cost estimate on a new, single family residence.

### CONSTRUCTION TECHNOLOGY I

CNST 111

6 Credits

66 hours of lecture

Basic concepts and theories of residential and commercial construction. Including design, finance, construction (general, mechanical, specialty), and marketing. [GE]

**Course Outcomes:**

- Explain the safety obligations of workers, supervisors, and managers to ensure a safe workplace.
- Demonstrate construction related safety practices.
- Demonstrate basic algebra and geometry as applied to the construction trades, such as calculating area, volume, and Pythagorean Theorem.

### CONSTRUCTION TECHNOLOGY I LAB

CNST 112

6 Credits

132 hours of lab

Application of the concepts and theories presented in CNST 111. Concurrent enrollment in CNST 111 required. [GE]

**Course Outcomes:**

- Continue to demonstrate construction related safety practices.
- Calculate estimation of construction project costs and materials.

**CONSTRUCTION TECHNOLOGY II**

CNST 121

6 Credits

66 hours of lecture

Basic concepts and theories of residential and commercial construction including design, finance, construction (general, mechanical, specialty), and marketing. Prerequisite: CNST 111. [GE]

**Course Outcomes:**

- Utilize terminology associated with building plans.
- Read and interpret plans, elevations, schedules, sections, and details contained in a set of building plans.
- Locate and interpret codes in a codebook.

**CONSTRUCTION TECHNOLOGY II LAB**

CNST 122

6 Credits

132 hours of lab

Application of the concepts and theories presented in CNST 121. Concurrent enrollment in CNST 121 required. Prerequisite: CNST 112. [GE]

**Course Outcomes:**

- Design a set of building plans.
- Use their knowledge of building plans and building codes to construct various projects such as scale model, shed, and house project.

**CONSTRUCTION TECHNOLOGY III**

CNST 131

6 Credits

66 hours of lecture

Basic concepts and theories of residential and commercial construction including design, finance, construction (general, mechanical, specialty), and marketing. Prerequisite: CNST 121. [GE]

**Course Outcomes:**

- Understand advanced building and engineering plans.
- Understand intermediate framing practices, such as complicated wall framing, roof framing, and stair framing while constructing a scale model house.
- Determine appropriate communication, teamwork, and problem solving skills relevant to the construction industry.

### **CONSTRUCTION TECHNOLOGY III LAB**

CNST 132

6 Credits

132 hours of lab

Application of the concepts and theories presented in CNST 131. Concurrent enrollment in CNST 131 required. Prerequisite: CNST 122. [GE]

#### **Course Outcomes:**

- Demonstrate how to read and interpret advanced building and engineering plans.
- Demonstrate intermediate principles of wood framing techniques while working on a scale model house and a large structure such as a house.
- Participate in appropriate communication, teamwork, and problem solving skills relevant to the construction industry.

### **COOPERATIVE WORK EXPERIENCE**

CNST 199

1 - 5 Credits

165 hours of clinical

Supervised work experience in an approved job. Completion of specific learning objectives and employer evaluation. Completion of, or concurrent enrollment in, HDEV 195, 198, or 200 required. Prerequisite: Consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Demonstrate the responsibilities and characteristics a productive worker should possess in the Construction Trades.
- Demonstrate understanding of learned theory of the Construction industry through successful completion of quality work experience.

### **CONSTRUCTION TECHNOLOGY IV**

CNST 211

6 Credits

66 hours of lecture

Basic concepts and theories of residential and commercial construction including design, finance, construction (general, mechanical, specialty), and marketing. Prerequisite: CNST 131. [GE]

#### **Course Outcomes:**

- Communicate effectively using construction related terminology.
- Locate, interpret and apply information.
- Perform essential construction operations and functions.
- Know and value professional construction related opportunities.
- Practice and value the importance of professionalism.
- Understand, define, practice and value work place safety.

### **CONSTRUCTION TECHNOLOGY IV LAB**

CNST 212

6 Credits

132 hours of lab

Application of the concepts and theories presented in CNST 211. Concurrent enrollment in CNST 211 required. Prerequisite: CNST 132. [GE]

**Course Outcomes:**

- Construct and pour a concrete foundation per specifications for student house project.
- Construct a floor system per specifications for student house project.
- Analyze appropriate communication, teamwork, and problem solving skills relevant to the construction industry.

**CONSTRUCTION TECHNOLOGY V**

CNST 221

6 Credits

66 hours of lecture

Basic concepts and theories of residential and commercial construction including design, finance, construction (general, mechanical, specialty), and marketing. Concurrent enrollment Lab required. Prerequisite: CNST 211. [GE]

**Course Outcomes:**

- Identify, explain, and demonstrate the procedures for laying out and framing walls and ceilings, including rough openings for doors and windows.
- Identify and explain how and why specific walls are engineered per specifications.
- Develop and demonstrate appropriate communication, teamwork, and problem solving skills relevant to the construction industry.

**CONSTRUCTION TECHNOLOGY V LAB**

CNST 222

6 Credits

132 hours of lab

Application of the concepts and theories presented in CNST 221. Concurrent enrollment in CNST 221 required. Prerequisite: CNST 212. [GE]

**Course Outcomes:**

- Construct exterior and interior walls per specifications for student house project.
- Demonstrate process for squaring, shearing, standing, and connecting exterior and interior walls for student house project.
- Influence others to use appropriate communication, teamwork, and problem solving skills relevant to the construction industry.

**CONSTRUCTION TECHNOLOGY VI**

CNST 231

6 Credits

66 hours of lecture

Basic concepts and theories of residential and commercial construction including design, finance, construction (general, mechanical, specialty), and marketing. Prerequisite: CNST 221. [GE]

**Course Outcomes:**

- Identify and explain the various kinds of roof styles and roof systems.
- Identify, explain, and demonstrate how to calculate length, layout, and cut rafters.
- Identify, explain, and demonstrate how to layout, build, and install trusses.
- Identify, explain, and demonstrate how to construct a roof system, including trusses, rafters, sheathing, and eve construction.
- Develop and demonstrate appropriate communication, teamwork, and problem solving skills

relevant to the construction industry.

### **CONSTRUCTION TECHNOLOGY VI LAB**

CNST 232

6 Credits

132 hours of lab

Application of the concepts and theories presented in CNST 231. Concurrent enrollment in CNST 231 required. Prerequisite: CNST 222. [GE]

#### **Course Outcomes:**

- Demonstrate how to prepare to receive a roof system such as trusses for student house project.
- Demonstrate how to install a roof system for student house project.
- Demonstrate how to install roofing materials, such as composition shingles for the student house project.
- Justify appropriate communication, teamwork, and problem solving skills relevant to the construction industry.

### **SPECIAL PROJECTS**

CNST 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the department.

Prerequisite: Consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Plan, coordinate and construct a project using all necessary learned skills of the Construction Industry.
- Establish a safety plan for all parties involved in the successful completion of the project.

## **College Preparation**

### **COLLEGE ESSENTIALS: INTRODUCTION TO CLARK**

COLL 101

2 Credits

22 hours of lecture

Introduction to Clark College for new students, focusing on making a successful transition to college life. Topics include goal setting, personal management skills, developing an academic plan, developing cultural competence and communication skills, financial literacy, and an introduction to student resources at the college. [GE, HR] [PNP]

#### **Course Outcomes:**

- Describe campus resources, including Career Services and Cannell Library, and their relationship to student success.
- Develop a two-quarter educational plan that works toward academic goals and increases understanding of the Academic Advising process.
- Define and discuss introductory concepts of power, privilege and inequity.
- Identify and apply personal learning styles and associated learning strategies.
- Apply introductory understanding of financial literacy to personal budgeting and college funding options.
- Utilize Clark College technology.

## CPR

### CHILD CARE CPR

CPR 033

0 Credits

6 hours of lecture

Pediatric CPR - specifically designed for parents and child care providers. Focus is on home safety, infant and child CPR. This course fulfills the state licensing requirement for child care providers.

#### Course Outcomes:

- Initiate the Chain of Survival.
- Perform prompt, high-quality chest compressions for adult, child, and infant victims.
- Initiate early use of and AED.
- Provide appropriate rescue breaths.
- Practice 2-rescuer team CPR.
- Relieve choking.

## Computer Science

### COMPUTER SCIENCE I C++

CS& 131

5 Credits

55 hours of lecture

Introduction to the C++ programming language. Emphasis on object-oriented programming (OOP) design principles and their implementation in C++, addressing issues of reusability, efficiency, and style. Prerequisite: A grade of "C" or better in CSE 121 or CTEC 125, or consent of Instructional Unit. [SE]

#### Course Outcomes:

- Course is in suspension, pending curricular review.

### COMPUTER SCIENCE I JAVA

CS& 141

5 Credits

55 hours of lecture

Introduction to the Java programming language. Emphasis on object-oriented design and development of portable, multithreaded, event-driven software. Prerequisite: A grade of "C" or better in CSE 121 or CTEC 125, or consent of Instructional Unit. [CP, SE]

#### Course Outcomes:

- Course is in suspension, pending curricular review.

## Computer Science & Engineering

### ENGINEERING AND COMPUTER SCIENCE ORIENTATION

CSE 101

1 Credits

22 hours of lab

Orientation for students interested in Engineering and Computer Science. Topics include exposure to Engineering and Computer Science educational/career opportunities and challenges, with emphasis on effective planning, communication, teamwork appropriate to these career fields. Credit not allowed for both CSE 101 and ENGR 101. [SE]

**Course Outcomes:**

- Explore Computer Science careers and education field.
- Recognize the importance and key elements of educational planning.
- Practice using available resources and effectiveness tools relevant to area of interest.

**INTRO TO ELECTRICAL/COMPUTING**

CSE 120

5 Credits

44 hours of lecture - 33 hours of lab

Introduction to electrical/computer science and engineering processes, principles, problem-solving techniques, and contemporary tools. Applies in-class learning to hands-on projects and explores current industry trends and implications. Prerequisite: MATH 103. [SE]

**Course Outcomes:**

- Explore Computer Science careers and education field.
- Recognize the importance and key elements of educational planning.
- Practice using available resources and effectiveness tools relevant to area of interest.

**INTRODUCTION TO C**

CSE 121

5 Credits

55 hours of lecture

Introduction to the C programming language. Emphasis on program design, verification, and testing. Programming related concepts in computer science will be covered. Prerequisite: A grade of "C" or better in MATH& 151 (MATH 113), ENGR 120, CSE 120, ENGR 109 (ENGR 111) or CTEC 121; or consent of Instructional Unit. [SE]

**Course Outcomes:**

- Analyze and explain computer programs involving fundamental programming constructs.
- Apply debugging and code tracing techniques to find code defects.
- Demonstrate the ability to work effectively in a team.
- Apply software development life cycle, problem partitioning, decomposition and top-down design approaches.

**DISCRETE STRUCTURES**

CSE 215

5 Credits

55 hours of lecture

Discrete structures and analysis techniques for computing by building on students' skills in programming and logic. Topics include: functions, relations and their properties; sets, sequences and tuples; probability, counting (permutations and combinations); propositional logic and logical connectives; introduction to predicate logic and its limitations; formal proof strategies (counterexample, contraposition); contradiction, recursion, computational complexity; trees,



graphs and traversal strategies; modeling computation (finite state & turing machines).  
Prerequisite: A grade of "C" or better in CSE 121 and ENGR 250.

**Course Outcomes:**

- 1) Analyze and Design C or C++ programs using: \* Functions, relations and their properties  
\* Sets, sequences and tuples \* Probability, counting (permutations and combinations) \*  
Propositional logic and logical connectives \* Introduction to predicate

**INTRODUCTION TO DATA STRUCTURES**

CSE 222

5 Credits

55 hours of lecture

Fundamentals of data structures and advanced programming techniques used in high-level languages such as C. Topics: trees, heaps, hash tables, sorting, searching, recursion, and algorithm analysis. Prerequisite: A grade of "C" or better in CSE 121 and CSE 224, or consent of Instructional Unit. [SE]

**Course Outcomes:**

- Be familiar with common Abstract Data Types, their applications, and typical algorithms and data structures used in implementation.
- Design, code, test and debug recursive functions; Compare and contrast recursion with iterative strategies.
- Analyze and contrast fundamental sorting and searching algorithms with respect to execution time and memory requirements.
- Demonstrate the ability to work effectively in a team.

**DATA STRUCTURES & OBJECT-ORIENTED PROGRAMMIN**

CSE 223

5 Credits

55 hours of lecture

Study of data structures and the analysis of algorithms, object-oriented programming, concurrency, memory management. Prerequisite: A grade of "C" or better in CSE 215 and CSE 222, or consent of Instructional Unit. [SE]

**Course Outcomes:**

- Apply object oriented design and programming concepts using the Java programming language.
- Design, code and test programs in an object-oriented language, demonstrating the use of encapsulation and Abstract Data Types.

**PROGRAMMING TOOLS**

CSE 224

5 Credits

55 hours of lecture

Study of tools and techniques that facilitate programming and debugging, including debuggers, profilers, and scripting. Prerequisite: A grade of "C" or better in CSE 121 or consent of Instructional Unit. [SE]

**Course Outcomes:**

- Using Linux/Unix commands (ls, pwd, more, less, who, ..) to get information users, files and

processes.

- Design, code and debug Linux/Unix shell scripts, sed, awk, ...
- Utilize source code control (cvs, rcs, ...) and Linux/Unix make utility to manage the revisions and configuration of a program consisting of multiple source files and directories.
- Use a source code debugger (i.e. gdb) to trace execution, review variables during execution and set breakpoints in debugging a program.
- Design, code and debug a graphical user interface while focusing on ease-of-use.
- Use profiler (gprof) and understand its application.
- Demonstrate the ability to work effectively in a team.

## **SPECIAL PROJECTS**

CSE 290

1 - 5 Credits

Opportunity to plan, organize, and complete special projects approved by the department.

Prerequisite: Consent of Instructional Unit. [SE]

### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## **Computer Technology**

### **INTRODUCTION TO COMPUTING**

CTEC 100

3 Credits

33 hours of lecture

Overview of computer information systems. Introduces computer hardware, communications, systems, and human resources, exploring their integration and application in society. Extensive coverage of terminology. Class constitutes a general introduction to computer systems and how they are used. [GE]

### **Course Outcomes:**

- Identify roles and impact that digital technology has on professional and personal life.
- Identify conventions, and interacts for managing libraries, files and folders.
- Identify software and hardware technologies for appropriate needs and tasks.
- Recognize appropriate network and internet technologies and apply them to specific tasks.

### **COMPUTING ESSENTIALS**

CTEC 101

2 Credits

22 hours of lecture

Introduction to basic skills and problem solving involved with computer hardware, operating systems, and application programs with a special emphasis on conventions and skills universal to a variety of computing settings and skills which promote portability between systems and applications. Provides an overview of key skills in a variety of operating system environments and digital interactive settings. Skills and topics include: essential interactions in major operating system environments, basic hardware components of a personal computer system, an overview of file formats and management with an emphasis on backup and portable document strategies, basic interactions in e-mail and worldwide web including how to document and save web pages, and a survey of the purposes of various types of application programs. [GE]

**Course Outcomes:**

- Identify roles and impact that digital technology has on one's professional and personal life.
- Identify conventions, and interactions for managing libraries, files and folders.
- Identify and define basics of software and hardware technology for appropriate needs and tasks.
- Recognize appropriate network and internet technologies and apply them to specific tasks.

**INTRODUCTION TO WINDOWS**

CTEC 102

3 Credits

33 hours of lecture

Introduction to the Windows GUI environment. Topics covered include: Windows startup, desktop and resource management, troubleshooting and Windows utilities. Work with graphics, perform object linking and embedding, and develop familiarity with the resources in Network Neighborhood. [GE]

**Course Outcomes:**

- Manage computer security.
- Manage libraries, files and folders.
- Manage software applications.
- Investigate and personalize Windows operating system.
- Maintain, enhance and troubleshoot Windows resources.

**INTRODUCTION TO MAC/OS**

CTEC 103

3 Credits

33 hours of lecture

Introduction to the Macintosh operating system. Course emphasizes the feel and function of the Macintosh, conveying the Macintosh as a visual environment. Visual cues and identification of the concepts that make a Macintosh unique will be stressed. [GE]

**Course Outcomes:**

- Perform basic skills common to the operation of most versions of the Macintosh operating system and software and apply those skills to other computer operating systems. These include the ability to navigate through the operating system, applications, and
- Interpret visual cues and clues found in the Macintosh platform/environment and make interactive decisions based on those cues and clues.
- Compare and contrast different Macintosh models, software and utilities to become an educated consumer and gain an understanding how technology associated Apple Computer originated, developed and evolved to the role and impact it plays in the world today.
- Create, modify, and distribute documents in software applications associated with the OSX environment.

**PC SUPPORT CUSTOMER SERVICE SKILLS**

CTEC 104

3 Credits

33 hours of lecture

Communication skills for working in a technical environment. Topics covered: professional ethics and behavior, health and safety issues, and developing a service attitude. [GE]

**Course Outcomes:**

- Develop communication skills necessary to provide customer support to all types of people at all levels of technical skill.
- Demonstrate the skills associated with customer support operations.
- Document all interactions with customers efficiently and effectively.
- Develop knowledge of health, safety, environmental and regulatory issues around the computer support field.

**INTRODUCTION TO THE INTERNET**

CTEC 105

3 Credits

33 hours of lecture

Introduction to global networking and the Internet from the user's perspective with an emphasis on the basic skills required to participate as a member of the Internet community. Topics include use of electronic mail, electronic discussion groups, accessing databases and on-line information from around the world, and downloading files from file archives. Overview of the social impact of networking technology, the Internet history, and culture. [GE]

**Course Outcomes:**

- Demonstrate a working knowledge of the foundational technologies that are responsible for operations and evolution of client/server technology, the Internet and the World Wide Web.
- Locate, evaluate, and utilize Internet-based information and media resources to accomplish a specific purpose.
- Demonstrate a working knowledge of frequently used Internet-based technologies for communication and media content creation that allow one to socially interact and collaborate with others.
- Identify the economic, legal and social issues surrounding today's Internet and demonstrate a working knowledge of best practices regarding online interactions with others as well as the proper ethical and legal use of information and media that is source

**COMMAND LINE ESSENTIALS FOR WINDOWS AND UNIX**

CTEC 110

3 Credits

33 hours of lecture

Preparation to interact with either a Windows System Command Prompt or a UNIX or UNIX-like Shell Prompt as a knowledgeable end-user. Prerequisite: Eligibility for ENGL 098. [GE]

**Course Outcomes:**

- Demonstrate, identify and apply common command line principles and how they relate to operating systems.
- Navigate and manipulate file systems.
- Explain the purpose and function of computer operating systems using Graphical User Interface (GUI) and the Command Line Interface (CLI).
- Recognize appropriate network and internet technologies and apply them to specific tasks.
- Distinguish similarities and differences between the Windows Command Prompt and the UNIX Shell Prompt.

**INTERNET RESEARCH AND LIVING ONLINE**

CTEC 115

2 Credits

22 hours of lecture

Introduction to global networking and the Internet from the student users' perspective, emphasizing basic skills required to do research and participate as members of the Internet community. Topics include network fundamentals, strategies for locating, analyzing and evaluating information, electronic mail, Internet-based communities, social, legal and ethical issues regarding Internet interactions. [GE]

**Course Outcomes:**

- Determine the type and depth of information needed.
- Find needed information effectively and efficiently.
- Evaluate information and information sources.
- Use information and technology to accomplish a specific purpose.
- Identify the economic, legal and social issues surrounding information, and use information ethically and legally.

**INTRO TO PROGRAMMING & PROBLEM SOLVING**

CTEC 121

5 Credits

55 hours of lecture

Fundamental concepts related to designing and writing computer programs and procedures. Topics covered include: problem-solving techniques, program design, coding, debugging, testing and documentation. The course stresses concepts common to all programming. Prerequisite: Eligibility for ENGL& 101 or PTWR 135 and a grade of "C" or better in MATH 095 or PTCS 110. [Q, SE]

**Course Outcomes:**

- Identify and solve problems using analysis and proper design techniques for business and arithmetic problems producing specifications for inputs, processing steps, and output.
- Design, properly desk-check, and then implement solution algorithms from specifications using data, control and object structures appropriate to the problem.
- Test and debug programs to assure working, maintainable end products.

**HTML FUNDAMENTALS**

CTEC 122

4 Credits

44 hours of lecture

Introduction to website development through the mastery of the fundamentals of HTML, XHTML, and CSS coding for web pages. Intended to give the student the basic skills required to hand-code web pages from scratch. A website will be developed in compliance with current web standards, practices, and usability. Topics include: XHTML, HTML5, CSS, CSS#, web server organization and structure, text editors, images, links, lists, forms, tables, and code validation. [SE]

**Course Outcomes:**

- Demonstrate competency with basic HTML elements including links, lists, forms, tables, images, and basic tags.
- Create and debug a website which is easy to navigate and complies with web standards.
- Design proper HTML syntax which accommodates for cross-browser incompatibilities.
- Foster an ability to interact, collaborate and implement projects with peers, clients or others in various work environments.
- Research and demonstrate knowledge of up-to-date web standards, CSS, HTML, and basics of HTML5 beyond those topics covered in the course.

## **JAVASCRIPT**

CTEC 126

5 Credits

55 hours of lecture

Introduction to the fundamentals and concepts of JavaScript including web scripting with jQuery, AJAX, and related libraries. Student will create dynamic websites and code demonstrating for debugging and testing JavaScript based design and code functionality. Prerequisite: A grade of "C" or better in CTEC 121 and CTEC 122. [GE]

### **Course Outcomes:**

- Create a well-formed website in basic HTML and CSS that complies with web, usability, accessibility standards, and has been designed to accommodate for browser compatibility and future innovation.
- Demonstrate competency (including links, lists, forms, tables, images, and basic tags) in proper syntax with basic HTML and CSS elements .
- Demonstrate knowledge and the ability to research up-to-date and emerging web standards such as CSS3 and HTML5.
- Interact, collaborate and implement projects with peers in a simulated client environment.

## **PHP WITH SQL I**

CTEC 127

5 Credits

55 hours of lecture

This course is an introduction to the server-side programming language PHP and its use in creating dynamic web applications, providing students with a functional knowledge of database design, SQL statements, dynamic web applications, and the methods implemented in PHP for manipulating MySQL databases. Prerequisite: A grade of "C" or better in CTEC 121 and CTEC 122. [GE]

### **Course Outcomes:**

- Utilize different contextual information to determine and track application state, and set proper logical choices based on determinant information.
- Understand the basics of database design and manipulation in use with PHP and build a dynamic web-based application.
- Reference and research resources for information and solutions regarding PHP.
- Demonstrate command of the PHP syntax and core programming elements.

## **MICROSOFT MTA WINDOWS OS FUNDAMENTALS**

CTEC 130

3 Credits

33 hours of lecture

Fundamental Windows interactions and key skills and issues important in providing support for Windows users. Topics include basic interactions with Windows, system configuration, installing and upgrading systems, managing devices, system maintenance and other support issues. Course is based on the Windows Operating System Microsoft Technology Associate (MTA) Certification, which students will have an opportunity to earn as a component of the course curriculum. [GE]

### **Course Outcomes:**

- Investigate and personalize Windows operating system
- Manage libraries, files and folders

- Manage software applications
- Manage computer security
- Maintain, enhance and troubleshoot Windows resources

### **MICROSOFT MTA NETWORKING FUNDAMENTALS**

CTEC 131

3 Credits

33 hours of lecture

Foundational concepts and skills associated with computer networking. Topics include basics of local area networking and wide area networks, the OSI Model, wired and wireless networks, Internet Protocol/Transmission Control Protocol (TCP/IP), and network security. Course is based on the Networking Fundamentals Microsoft Technology Associate (MTA) Certification which students will have an opportunity to earn as a part of the course curriculum. [GE]

#### **Course Outcomes:**

- Describe and demonstrate knowledge of the hardware and software components needed for a network
- Communicate the concepts of network operating systems, protocols and security
- Identify the types of media and topologies used for networking
- Administer a network using common network utilities and software
- Explain standards and network models and how they relate to hardware and software

### **MICROSOFT MTA SECURITY FUNDAMENTALS**

CTEC 133

5 Credits

55 hours of lecture

Introduces concepts and fundamentals of network security. Topics include security layers, operating system security, network security and security software. Course is based on the Security Fundamentals Microsoft Technology Associate (MTA) Certification, which students will have an opportunity to earn as a component of the course curriculum. Prerequisite: A grade of "C" or better in CTEC 131 or NTEC 221, or consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Describe and demonstrate security layers as they pertain to physical, Internet and wireless security.
- Identify and practice operating systems security fundamentals including authentication, permissions, password and audit policies, encryption and malware protection.
- Identify and practice network security fundamentals including firewalls, Network Access Protection (NAP), network isolation, and protocols.
- Demonstrate and install security software, protecting clients, servers and email.

### **MICROSOFT MTA DATABASE ADMIN**

CTEC 134

5 Credits

55 hours of lecture

Provides a foundational overview of concepts, practices, and operation as associated with designing, developing and administrating a database. Topics include core database concepts, creating database objects, manipulating data, data storage, and administrating a database. Students will have an opportunity to earn the Microsoft Database Administration Fundamentals Micro Technology Associate (MTA) certification as a component of the course curriculum.

Familiarity with Windows and MS Office highly recommended. [GE]

**Course Outcomes:**

- Demonstrate a knowledge of core database concepts including how data is stored in tables, relational data base concepts, data manipulation language (DML), and data definition language (DDL).
- Demonstrate the ability to create database objects.
- Demonstrate the ability to select, insert, update, and delete data.
- Demonstrate a working knowledge of data storage.
- Demonstrate the ability to apply security procedures, backups and restores to a database.

**INTRODUCTION TO UNIX**

CTEC 140

5 Credits

55 hours of lecture

An introduction to the structure and use of the UNIX operating system. Topics covered include: file management, common utilities, and (basic) shell programming. Prerequisite: A grade of "C" or better in MATH 090 or 091, or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Determine command string required to produce a specific solution utilizing basic commands to take advantage of the many features of the system.
- Demonstrate fluency with the shell command language control structures in interactive and scripting activities.
- Interpret and modify existing shell scripts, as well as create simple shell scripts to automate repetitive tasks.
- Discuss UNIX/Linux history and features and their place among modern operating systems.

**UNIX SYSTEM ADMINISTRATION**

CTEC 141

5 Credits

55 hours of lecture

Fundamental concepts, ideas and practices of administrating the UNIX operating system. Topics include account management, file systems, startup and shutdown, printing, security, backups, configuration, optimization and basic networking. Prerequisite: A grade of "C" or better in CTEC 140, or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Install and configure Linux operating system.
- Prepare user accounts and groups.
- Setup various network servers.
- Utilize various TCP/IP protocols.

**WEB SERVER TECHNOLOGY**

CTEC 145

5 Credits

55 hours of lecture

Foundations of web server technologies with a focus on skills useful for web development. Topics include installation and configuration of Apache, MySQL, and PHP, and best practices in security. Interact with UNIX using basic commands in command line and GUI environments, administrate



and maintain web hosting accounts. Prerequisite: A grade of "C" or better in CTEC 122 and CTEC 127, or consent of the Instructional Unit. [GE]

**Course Outcomes:**

- Install and configure Apache, MySQL, and PHP.
- Interact with UNIX using basic commands in command-line and GUI environments.
- Administrate and maintain web hosting accounts.
- Utilize and demonstrate security best practices in web environments.

**WORDPRESS I**

CTEC 160

5 Credits

55 hours of lecture

An overview of the WordPress platform for individuals seeking to create websites for personal or professional use. Basics on WordPress use, installation, content management, and configuration as well as intermediate and more advanced areas such as WordPress Themes, Plugins, and use of advanced settings. Prior web publishing experience not required. Familiarity with web browsers and email is highly recommended. Prerequisite: A grade of "C" or better in ENGL& 101 or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate competency in web publishing skills with WordPress core elements, features and options.
- Demonstrate working knowledge and skills for customizing an existing WordPress Theme for a variety of publishing formats and content types.
- Demonstrate the ability of WordPress interactivity and integration with SEO, marketing, and the social web.
- Demonstrate the ability to create a professional WordPress site.

**BUSINESS WEB PRACTICES**

CTEC 165

4 Credits

44 hours of lecture

Business Web Practices surveys business standards and professional best practices for professions associated with web content creation, web design, and web development. Topics include distinctions between freelance, contracted and salaried work environments, web production practices in content strategy, project management, workflow and version control, current practices in marketing, web analytics and search engine optimization, and legal and ethical issues. [GE]

**Course Outcomes:**

- Demonstrate knowledge of various work environments that employ web professionals and current commercial practices associated with web-related professions.
- Demonstrate knowledge and understanding of technical considerations of current web delivery systems and how to select a model for a specific mission or client.
- Design web marketing strategies that demonstrate an understanding of current best practices in search engine optimization, marketing, and analytics.
- Demonstrate an understanding of current best practices in ethical and legal issues related to the web.

## **INTRODUCTION TO ACCESS**

CTEC 180

3 Credits

33 hours of lecture

Introductory and intermediate skills for Microsoft Access for people who use and maintain Access databases. Topics include creation of tables, queries, forms and subforms, reports and subreports, and macros using both design view and wizards. Introduction to special fields such as memos, OLE and drop-down menus within the tables and forms; and using validation rules and referential integrity to insure the data is 'clean'. Cannot receive credit for both CTEC 180 and BTEC 180. [GE]

### **Course Outcomes:**

- Demonstrate the ability to create and modify Access Tables.
- Demonstrate the ability to create and modify Access Queries.
- Demonstrate the ability to create and modify an Access Form and SubForm.
- Demonstrate the ability to create and modify an Access Report and SubReport.
- Demonstrate the ability to use OLE objects in an Access Table and Form.
- Demonstrate the ability to import tables from another database, text document or spreadsheet.
- Demonstrate the ability to use, label and discuss database objects and terminology.

## **INTRODUCTION TO DATABASE DESIGN USING ACCESS**

CTEC 181

5 Credits

55 hours of lecture

Database design for those who need to design, create, and maintain databases. Presents the information level databases design concepts relative to any relational database structure (DBMS), and then focuses on the physical level design of a database using MS Access as the DBMS. Topics covered are: Intro to DB Management, The Relational Model Database Normalization Design Methodology, and Creation of Tables, Queries, Forms, Reports and Macros using MS Access. This is a beginning course and requires no prior experience in database design or Access. It does assume prior knowledge of MS Windows. [GE]

### **Course Outcomes:**

- Identify and effectively use the appropriate technology to achieve a desired outcome or result (Information) .
- Locate information applicable to task, discipline, and/or occupation (Communication) .
- Synthesize information appropriately (Communication) .
- Evaluate information and its sources critically (Information) .

## **COOPERATIVE WORK EXPERIENCE**

CTEC 199

1 - 5 Credits

Supervised work experience in an approved job. Completion of specific learning objectives and employer evaluation. Prerequisite: Consent of Instructional Unit and completion of or concurrent enrollment in HDEV 195, 198 or 200 required. [GE]

### **Course Outcomes:**

- Develop appropriate educational and occupational learning objectives that are measurable and job-specific.
- Integrate classroom theory with practical, on the job work experience.
- Develop attitudes and skills essential for obtaining and sustaining employment.

## **PC HELP DESK WORK EXPERIENCE**

CTEC 200

1 - 5 Credits

11 hours of lecture

Work experience for Computer Support Specialist students. Students will work at the Student run CTEC Help Desk. Days and times are arranged to meet both student schedules and the help desk mission. Students earning the CSS degree or CSS certification are required to sign up for at least 2 credits and will be expected to work 3 hours per week per credit at the Student Help Desk. Other course work outside of Help Desk shifts will be required. Prerequisite: A grade of "C" or better in CTEC 104 or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Develop communication skills necessary to provide computer support to all types of people at all levels of technical skill.
- Demonstrate the skills associated with computer support desk operations.
- Manage a customer database of calls and repair orders efficiently and effectively.
- Develop knowledge of health, safety, environmental and regulatory issues around the computer support field.

## **INTRODUCTION TO MANAGED INFORMATION SYSTEMS**

CTEC 205

5 Credits

55 hours of lecture

Overview of the role of management information systems in business by supporting a wide range of organizational functions from routine organizational transactions to managerial strategic decision making. Emphasis is on terminology associated with IT and hands-on labwork utilizing common business and IT applications. Familiarity with computer application software highly recommended. Prerequisite: A grade of "C" or better in ENGL& 101. [GE]

### **Course Outcomes:**

- Understand, communicate and utilize basic I.S. terminology and concepts used in system designs and architectures
- Demonstrate an understanding of key benefits, capabilities, and limitations provided by the use of I.S. within organizations.
- Compare, contrast, and demonstrate understanding of commonly used information systems in businesses & organizations.
- Understand the opportunities present in an I.S. career as well as the ethical responsibilities inherent with the use of I.S. based tools.
- Achieve familiarity and basic proficiency of the following business software & apps: Microsoft Excel Microsoft Access

## **COMPTIA STRATA COMPUTER AND IT SUPPORT**

CTEC 212

5 Credits

55 hours of lecture

Survey of foundational computer support skills and knowledge designed for those who are exploring or preparing for careers in the information technology or office environments. Students will learn basic skills in setting up PC workstations and peripherals, conduct software installation, identify compatibility issues, recognize/prevent basic security risks and perform preventative maintenance of computers. Curriculum is based on the Comp TIA Strata certification.

Prerequisite: A grade of "C" or better in CTEC 100 or 102, or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate an understanding of major hardware components such as CPUs, motherboards, memory, expansion cards, connection types, data storage, video output and image input devices and printers.
- Perform and configure basic installations of Operating Systems and software.
- Identify and apply best common practices for physical and digital security.
- Demonstrate and implement best practices regarding environmental impact issues in the IT industry.

**COMPTIA A+ FUNDAMENTALS**

CTEC 213

4 Credits

44 hours of lecture

Fundamentals of computer technology, basic networking installation and configuration for PCs and mobile computing devices. Covers outcomes and objectives related to the CompTIA A+ 220-801 exam. [GE]

**Course Outcomes:**

- Differentiate between among various components, their purposes and properties.
- Compare and contrast various connection interfaces and explain their purpose.
- Evaluate and select appropriate components for a custom configuration to meet customer specifications or needs.
- Compare and contrast network devices their functions and features.

**COMPTIA A+ OPERATING SYSTEMS & NETWORKING**

CTEC 214

4 Credits

44 hours of lecture

Covers the skills required to install, configure and troubleshoot PC operating systems and networking software for desktop computers and mobile devices. Covers outcomes and objectives related to the CompTIA A+ 220-802 exam. NTEC 221 or CTEC 131 recommended. Prerequisite: A grade of "C" or better in CTEC 110 Command Line Essentials. [GE]

**Course Outcomes:**

- Install and configure operating systems.
- Set up and configure Windows networking for desktop computers and mobile devices.
- Perform preventative maintenance procedures and demonstrate common prevention methods.
- Troubleshoot common security issues.
- Troubleshoot common problems occurring with hardware and software.

**PHP WITH SQL II**

CTEC 227

5 Credits

55 hours of lecture

A continuation of the CTEC 127, PHP I course, extending PHP skills with object-oriented programming, API management, PHP security, AJAX integration, and version control. Current best practices in the commercial web industry will be emphasized. Prerequisite: A grade of "C" or

better in CTEC 127, or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate the ability to analyze professional web-based PHP applications for the purposes of extension, adaptation, and other modification.
- Use PHP to produce professional portable and dynamic web applications.
- Design and implement an integrated solution with PHP and SQL with a demonstrated ability to create advanced SQL queries.
- Demonstrate an ability to identify and interact with resources of the PHP community.

**API AND ADVANCED INTEGRATION**

CTEC 228

5 Credits

55 hours of lecture

Application Programming Interface (API) and Advanced Integration will provide the skills and knowledge to use and create APIs that provide integration between programs and services on the web. Students will create or augment an API as a final course project. Prerequisite: A grade of "C" or better in CTEC 126 and CTEC 127 or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate a basic working knowledge of open source and third proprietary APIs and the use of libraries and classes in developing APIs.
- Write APIs while demonstrating current and fundamental knowledge of web services, development standards, conventions and design paradigms.
- Demonstrate a working knowledge of how APIs are developed, maintained and supported for social media and other environments that integrate APIs.
- Develop an API with read/write capabilities.

**UNIX NETWORK ADMINISTRATION & SECURITY**

CTEC 240

5 Credits

55 hours of lecture

Skills development for configuring and administering a TCP/IP network. Topics include configuring basic networking, client services, file sharing services, major network services, cryptography, user, file, and network security, and other relevant topics. Prerequisite: A grade of "C" or better in CTEC 141, or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Course outcomes are suspended due to class deactivation/inactivity

**WORDPRESS II**

CTEC 260

5 Credits

55 hours of lecture

Overview of intermediate and advanced concepts and fundamentals of the WordPress platform emphasizing its features and capabilities as a development environment. Topics include installation and configuration, problem-solving and debugging WordPress, and development of themes, frameworks and plugins. Additionally, students will research, interact, and make contributions to the WordPress Community while demonstrating industry standards and best practices. Prerequisite: A grade of "C" or better in CTEC 122, CTEC 160, and CTEC 127 or consent

of Instructional Unit. [GE]

**Course Outcomes:**

- Install and configure WordPress for self-hosted, multisite, and integrated installations.
- Develop a WordPress site which incorporates standard WordPress functionality, structure, and organization.
- Customize a WordPress theme and create a WordPress Theme framework.
- Write a WordPress Plugin to add functionality to a WordPress site.
- Research, interact, and make contributions to the WordPress Community while demonstrating industry standards and best practices.

**SELECTED TOPICS**

CTEC 280

1 - 6 Credits

66 hours of lecture

Varying topics. May be repeated for credit. [GE]

**Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of Computer Technology.

**SPECIAL PROJECTS**

CTEC 290

1 - 5 Credits

Opportunity to plan, organize, and complete special projects approved by the department.

Prerequisite: Consent of instructional unit. [GE]

**Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

**CAPSTONE EXPERIENCE**

CTEC 295

3 Credits

33 hours of lecture

Capstone experience for CTEC degree and certificate, to assess and refine final skill set. Focus on developing and engaging in learning experiences to demonstrate and expand workplace skills and abilities. Development of employment-package resources and job-acquisition strategies.

Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

**Dental Hygiene**

**DENTAL HYGIENE COMPETENCIES LAB**

DH 013

1 Credits

22 hours of lab

Application of concepts and topics presented in DH 111, 112, 113, 114, 211, 212, and 213. Continued development of skills and techniques related to dental hygiene competencies. Concurrent enrollments in DH 111, 112, 113, 114, 211, 212 or 213 required.

**Course Outcomes:**

- Apply concepts and topics presented in DH 111, 112, 113, 114, 211, 212, and 213.
- Continue development of skills and techniques related to dental hygiene competencies.

**COOPERATIVE WORK EXPERIENCE**

DH 199

1 - 5 Credits

165 hours of clinical

Supervised work experience in an approved job. Completion of specific learning objectives and employer evaluation. Completion of, or concurrent enrollment in, HDEV 195, 198, or 200 required. Prerequisite: Consent of Instructional Unit. [GE] [PNP]

**Course Outcomes:**

- Fulfill the job requirements of their internship provider.

**PHARMACOLOGY I**

DH 282

1 Credits

11 hours of lecture

Introduction to the classification, pharmacodynamics, dosages, and therapeutic effects of drugs most commonly encountered or prescribed by the dental office. Topics include drugs of abuse, autonomic nervous system, gastrointestinal, respiratory, vitamin, and minerals. Prerequisite: Consent of Dental Hygiene Program. [GE]

**Course Outcomes:**

- Using case studies and text material, determine FDA indication for side effects and doses for common drugs.
- Determine contraindications and patient implications of drug therapy in forming a dental hygiene care plan.
- Correctly spell drug names of the most common drugs.
- Correctly record in the patient's treatment record the patient's medical conditions and medications used to manage them.
- Understand the drugs that a patient may be taking and the conditions for which the drugs are used.
- Prevent emergency situations by understanding the patient's medical condition and medications.

**CLINICAL DENTAL HYGIENE TECHNIQUES I**

DH 283

6 Credits

33 hours of lecture - 66 hours of lab

Basic theory and pre-clinical practice at the introductory level in patient assessment, care planning, management, and periodontal therapy. Includes prevention and control of oral disease and proper safety and infection control procedures. Prerequisite: Consent of the Dental Hygiene

Program. [GE]

**Course Outcomes:**

- Recognize, recall, and define basic dental terminology.
- Describe roles and functions of the dental hygienist.
- Demonstrate a comprehensive understanding of the concept of disease transmission and prevention.
- Explain the importance of oral aid usage.
- Demonstrate self-correction skills and formulate a plan for success while assessing skills and methods for oral self care.
- Explain and demonstrate the fundamental skills necessary for effective performance of the treatment techniques presented in this course.
- Use APA formatting to accurately cite resources in-text and on the reference page.

**ORAL MEDICINE**

DH 284

2 Credits

22 hours of lecture

Introduction to the evaluation of medical/dental histories in preparation for dental hygiene treatment. Includes the most commonly encountered oral and systemic diseases, pertinent drugs, and introduction in managing dental/medical emergencies. Prerequisite: Consent of the Dental Hygiene Program [GE]

**Course Outcomes:**

- Manage the patient record as a legal document and maintain its accuracy and consistency.
- Identify the dental health needs of individuals and assist them in the development of appropriate and individualized self-care regimens.
- Encourage patients to assume responsibility for their health and promote adherence to self-care regimens.
- Articulate ethical principles relevant to dental hygiene and practice with personal and professional integrity.
- Maintain honesty in relationships with patients, colleagues, and other professionals.
- Serve all patients and the community without discrimination.
- Ensure the privacy of the patient during dental hygiene treatment and counseling and maintain the confidentiality of patient records.
- Communicate professional knowledge verbally and in writing to patients, colleagues, and other professionals.
- Perform a risk assessment of patient data to formulate a dental hygiene care plan.

**PERIODONTICS I**

DH 285

3 Credits

22 hours of lecture - 22 hours of lab

Introduction to histological and clinical characteristics of normal and diseased periodontium. Introduction to tooth accumulated materials and preventive oral aids. [GE]

**Course Outcomes:**

- Chart periodontal conditions using the correct charting notations.
- Relate, orally and in writing, a basic understanding of the principles involved in the etiology and prevention of disease.
- Discuss and utilize basic knowledge of the anatomy of cells and tissues as related to the head and neck anatomy learned in class and reviewed in prerequisite courses.



- Discuss and explain the histological and clinical characteristics of normal and diseased periodontium, as discussed in the course module, PowerPoints, and class discussions.
- Assess skills and methods for oral self care, demonstrate self-correction skills, and formulate a plan for success.
- Identify the components of a periodontal assessment, their appearance in health and disease, and their significance.
- Interpret periodontal findings from a chart and discuss the ramifications.
- Demonstrate proper spelling and use of scientific terms encountered in this course as listed in textbooks, class handouts, PowerPoints, and class discussions.

## **DENTAL ANATOMY**

DH 286

3 Credits

33 hours of lecture

Anatomy, embryology, and histology of the human dentition and surrounding oral structures as they apply to the practice of dental hygiene. Emphasis on tooth development and associated vocabulary, tooth identification and differentiation, and tooth numbering systems. Prerequisite: Consent of the Dental Hygiene Program. [GE]

### **Course Outcomes:**

- Define, interpret, and apply basic dental nomenclature when communicating with lay persons and fellow healthcare professionals.
- Demonstrate knowledge and understanding of basic tooth anatomy as it relates to periodontal and restorative dental hygiene care.
- Describe the composition and structure of enamel, dentin, and pulpal tissues as they relate to dental health and/or disease.
- Demonstrate knowledge of the embryology and histology of tooth development and eruption including a representative timeline for development.
- Given one or more pictures of a tooth or given a tooth model, identify the tooth by name and by using the FDI and Universal numbering systems.
- Describe the morphological and histological changes in dentin, enamel, and pulp due to aging and the effects of these changes on dental treatment.
- Compare and contrast primary and secondary teeth including their eruption sequences, chemical composition, potential for decay, and dental hygiene instrumentation.
- State the principles of tooth formation and development in relation to the most common clinical abnormalities found in both children and adults including their dental hygiene treatment implications.

## **SPECIAL PROJECTS**

DH 290

1 - 15 Credits

Opportunity to plan, organize and complete special projects approved by the department. Prerequisite: Consent of Instructional Unit. [GE] [PNP]

### **Course Outcomes:**

- Demonstrate learning outcomes as determined by the supervising instructor.

## **INTRODUCTION TO DIGITAL MANAGEMENT SYSTEMS**

DH 292

1 Credits

22 hours of lab

An introduction to axiUm - the digital management system designed for dental patient records, student clinical assessments, and radiography. Students will learn to navigate the system, enter data pertaining to clinical patient treatment, and track clinical skills assessments. Prerequisite: Consent of the Dental Hygiene Program. [GE]

**Course Outcomes:**

- Navigate the axiUm digital management system.
- Given a simulated dental hygiene patient, enter all pertinent information into axiUm.

**INTRODUCTION TO DENTAL MATERIALS/ASSISTING**

DH 301

3 Credits

22 hours of lecture - 22 hours of lab

Introduction to properties and manipulation of basic restorative materials including resin, bases, liners, varnishes, cements, and sealants. Introduction to four-handed chairside assisting, study model preparation, and pit and fissure sealant application. Clinical practice through assisting in restorative situations. Prerequisite: Consent of the Dental Hygiene Program. [GE]

**Course Outcomes:**

- Obtain diagnostic alginate impressions.
- Assist dentists and hygienists in a restorative clinical setting.
- Correctly manipulate bases, liners, resins, varnishes, and cements.
- Determine the need for pit and fissure sealant placement based on a risk assessment.
- Correctly place pit and fissure sealants.
- Compare the rationale for placement of various materials.
- Pour, trim, and finish a study model.
- Define the terminology necessary for discussion of the properties of dental materials.

**HEAD AND NECK ANATOMY**

DH 303

3 Credits

33 hours of lecture - 6 hours of lab

Embryological, histological, and anatomical development of the head and neck as it applies to the practice of dental hygiene. Prerequisite: Consent of the Dental Hygiene Program. [GE]

**Course Outcomes:**

- Demonstrate the development of an anatomical vocabulary associated with structures of the head and neck.
- Given a specific abnormality of the head and neck, recognize and discuss the embryologic and anatomic explanation for the clinical findings.
- Document in a patient record all anatomical deviations from the norm using appropriate anatomical vocabulary.
- Distinguish normal anatomical structures of the head and neck from the abnormal or atypical, including the implications for dental care and treatment.
- Identify and be able to describe the potential roles the dental hygienist might play using information gained in this course.
- Describe the location of the anatomical structures of the head and neck discussed in class in relationship to one another.

## **EDUCATIONAL THEORY AND APPLICATION**

DH 304

2 Credits

22 hours of lecture

Survey of principles and concepts of teaching and learning and use of motivational techniques as they apply to both group and individual education and cultural differences. Students will develop skills as a dental health educator and dental health resource person. Prerequisite: Consent of the Dental Hygiene Program. [GE]

### **Course Outcomes:**

- Develop a basic understanding of adult and child learning theories.
- Participate as an educator of groups and individuals in a variety of settings.
- Communicate professional knowledge to peers, instructors, and patients verbally and in writing.
- Develop a unit of instruction for a clinical or laboratory unit of study.
- Create an assessment technique to evaluate instructional methods.

## **CLINICAL DENTAL HYGIENE TECHNIQUES II**

DH 313

5 Credits

17 hours of lecture - 77 hours of lab

Emphasis on the principles of instrumentation and patient management. Clinical practice in oral prophylaxis, preventive procedures, and patient management at the introductory level.

Prerequisite: Consent of the Dental Hygiene Program. [GE]

### **Course Outcomes:**

- Explain and demonstrate clinical skills to effectively make, facilitate, and implement responsible clinical decisions at the introductory level.
- Discern and manage ethical issues and problems in the practice of dental hygiene.
- Retrieve information from a variety of sources, including the library, experts, and computer technology.
- Demonstrate an awareness of patient welfare and perform actions appropriate with maintaining the physical and mental well being of the patient.
- Using correct APA formatting, research a current topic and relate the information to your role as a dental hygienist.
- Demonstrate safety protocol in clinic and while dealing with clinically related matters.

## **CLINICAL DENTAL HYGIENE TECHNIQUES III**

DH 314

5 Credits

17 hours of lecture

Clinical practice at the introductory and developmental levels in patient assessment, care planning, management, and periodontal therapy. Includes prevention and control of oral disease and proper safety and infection control procedures. Prerequisite: Consent of the Dental Hygiene Program. [GE]

### **Course Outcomes:**

- Analyze and accurately record assessment data on the health status of the patient.
- Use critical decision making skills to formulate an evidence-based and patient-centered comprehensive care plan.
- Use academic writing skills to develop a literature review utilizing correct APA formatting.
- Evaluate the effectiveness of planned clinical and educational services and modify as

necessary.

- Discuss and manage ethical issues and problems in the practice of dental hygiene.
- Apply life-long learning skills to classroom and clinical situations.
- Provide care designed to promote and maintain oral health.
- Provide planned educational services using appropriate interpersonal communication skills and educational strategies to promote optimal health.
- Demonstrate professionalism by personally practicing actions and characteristics consistent with being a professional.

## **CLINICAL DENTAL HYGIENE TECHNIQUES IV**

DH 321

4 Credits

88 hours of lab

Clinical practice at the introductory and developmental levels in patient assessment, care planning, management, and periodontal therapy. Includes prevention and control of oral disease and proper safety and infection control procedures. Prerequisite: Consent of the Dental Hygiene Program. [GE]

### **Course Outcomes:**

- Use critical decision making skills to formulate an evidence-based and patient-centered comprehensive care plan.
- Demonstrate the ability to acquire, synthesize, and communicate information in a critical, scientific, and effective manner.
- Demonstrate the highest ethical and professional standards in all aspects of patient care.
- Accurately collect, record, and analyze patient assessment data.
- Develop a commitment to personal assessment and achievement.
- Demonstrate professionalism by personally practicing actions and characteristics consistent with being a professional.
- Observe and be knowledgeable of all safety and infection control protocols in the clinic and when dealing with other clinically related matters.

## **ORAL RADIOLOGY I**

DH 323

3 Credits

22 hours of lecture - 22 hours of lab

Radiographic theory, equipment, patient safety, and techniques for exposing, processing, and mounting dental radiographs. Prerequisite: Consent of the Dental Hygiene Program. [GE]

### **Course Outcomes:**

- Discuss the effects of radiation on the human body.
- Discuss image formation and reasons for incorrect image formation.
- Explain and demonstrate correct radiographic mounting techniques.
- Explain and demonstrate correct radiographic processing and duplicating techniques.
- Identify normal landmarks on radiographs and differentiate from pathology.
- Describe and demonstrate correct radiograph exposure techniques.
- Describe and demonstrate correct film/sensor placement using the paralleling technique.
- Explain the principles of shadow casting.
- Discuss the physical principles involved in the production and clinical use of x-radiation.

## **ORAL RADIOLOGY II**

DH 324

1 Credits

22 hours of lab

Second in a series on radiographic theory application and radiographic image interpretation. Continued experience in exposing, processing and mounting, and critiquing dental radiographs. Prerequisite: Consent of the Dental Hygiene Program. [GE]

**Course Outcomes:**

- Expose radiographs utilizing the bisecting technique on a manikin.
- Recognize, assess, and correct errors in film/sensor placement, exposure, and processing.
- Identify normal landmarks on radiographs and differentiate from pathology.
- Interpret panoramic images.
- Develop the skills necessary to perform a pre-diagnostic examination of the bitewing and periapical radiographs included in a full-mouth survey.

**ORAL RADIOLOGY III**

DH 331

2 Credits

22 hours of lecture

Third in a series on radiographic theory application and image interpretation. Includes principles of radiation biology, quality assurance, radiation health and protection. Introduction of principles of contemporary panoramic radiographic techniques and comprehensive analysis of panoramic images. Prerequisite: Consent of the Dental Hygiene Program. [GE]

**Course Outcomes:**

- Explain and discuss the effects of radiation on the human body.
- Recognize, assess, and correct errors in film/sensor placement, exposure, and processing.
- Identify normal landmarks on radiographs and differentiate from pathology.
- Develop the skills necessary to perform a pre-diagnostic examination of a panoramic radiographic survey.

**GENERAL AND ORAL PATHOLOGY**

DH 344

3 Credits

33 hours of lecture

Fundamentals of oral pathology including the inflammatory processes, tumor development, metabolic pathways and developmental disturbances. Prerequisite: Consent of the Dental Hygiene Program. [GE]

**Course Outcomes:**

- Use correct descriptive terminology -- when communicating (written or oral) with dentists, clients, and other health professionals -- to describe pathological lesions when presented various cases, radiographs, slides.
- Formulate a correct differential diagnosis and definitive diagnosis (if possible with the information given) for different pathologic lesions, diseases, and conditions.
- Recognize, describe, and define normal lesions and variants of normal lesions.
- Conduct research using available resources to study different pathological entities.
- Use critical decision making skills to formulate a dental hygiene care plan based on a patient's pathological findings.
- Distinguish between normal lesions or conditions and pathologic, disease-related, lesions or conditions.

## **ETHICS AND THE PROFESSION**

DH 353

1 Credits

11 hours of lecture

Basic ethical principles and ethical problem solving methods. Includes the Principles of Ethics of the American Dental Hygienist Association and Washington State Laws applicable to the practice of dental hygiene. These elements will enable the student to apply professional attitudes and judgments when treating clinical patients. Prerequisite: Consent of the Dental Hygiene Program. [GE]

### **Course Outcomes:**

- Apply ethical principles and problem solving techniques relevant to dental hygiene practice.
- Describe duties covered by the Washington State Dental Practice Act governing the practice of dental hygiene.
- Contrast the legal versus ethical responsibilities of the dental hygienist.
- Apply professional and ethical standards that guide professional behavior.
- Acquire, synthesize, and communicate information in a critical, scientific, and effective manner.
- Develop life-long learning skills necessary to maintain competency and quality assurance in all dental hygiene endeavors.

## **LOCAL ANESTHESIA & PAIN CONTROL**

DH 364

4 Credits

25 hours of lecture - 33 hours of lab

Integration of anatomy, physiology, pharmacology and the most commonly encountered emergency procedures as they apply to the administration of local anesthesia. Clinical practice in the administration of local anesthesia is a required component of the course. Weekly clinical lab practice focuses on the 8 most commonly administered injections. Prerequisite: Consent of the Dental Hygiene Program. [GE]

### **Course Outcomes:**

- Document in the patient's record the appropriate information related to local anesthetic administration.
- Determine the most appropriate local anesthetic agent and techniques to be used with each clinic patient, and be prepared to respond appropriately to emergency situations should they occur.
- Safely and effectively administer the basic injections taught in this course with a minimum of patient discomfort.
- Formulate an appropriate plan for addressing the most common local and systemic emergency situations associated with local anesthetic administration.
- Use accepted infection control measures when preparing, administering, and disposing of local anesthetic materials.
- Analyze patient data correctly to determine the most appropriate treatment plan with respect to local anesthetic administration.

## **CARIOLOGY**

DH 373

2 Credits

22 hours of lecture

Presentation of cause, progression, and prevention of dental caries with an emphasis on fluoride

and other remineralization strategies. Prerequisite: Consent of the Dental Hygiene Program. [GE]

**Course Outcomes:**

- Demonstrate knowledge of caries preventive agents and OTC products and recommend the appropriate agents to fit individual patient needs.
- Assess the risk factors contributing to dental caries.
- Demonstrate an awareness and understanding of the principles involved in the etiology and prevention of dental disease.
- Calculate, determine, and explain appropriate fluoride recommendations.
- Demonstrate an understanding of and explain fluoride and other plaque/biofilm inhibiting agents (remineralization products) and their benefit to the patient.
- Evaluate the toxic nature of fluoride.

**PHARMACOLOGY II**

DH 383

1 Credits

11 hours of lecture

Continuation of the classification, pharmacodynamics, dosages, and therapeutic effects for drugs most commonly encountered or prescribed by the dental office. Topics include antimicrobial, antifungal, and antiviral medications, opioid and non-opioid analgesics, and cardiovascular medications. Prerequisite: Consent of the Dental Hygiene Program. [GE]

**Course Outcomes:**

- Using case studies and text material, determine FDA indication for side effects and doses for common drugs.
- Determine contraindications and patient implications of drug therapy in forming a dental hygiene care plan.
- Correctly spell drug names of the most common drugs.
- Correctly record in the patient's treatment record the patient's medical conditions and medications used to manage them.
- Understand the drugs that a patient may be taking and the conditions for which the drugs are used.
- Prevent emergency situations by understanding the patient's medical condition and medications.

**PHARMACOLOGY III**

DH 384

1 Credits

11 hours of lecture

Continuation of the classification, pharmacodynamics, dosages, and therapeutic effects for drugs most commonly encountered or prescribed by the dental office. Topics include endocrine, psychotherapeutic, sedative/hypnotic, anti-anxiety, anticonvulsants, ophthalmic, anti-neoplastic, immune function, anti-Parkinson, and Alzheimer's disease medications. Prerequisite: Consent of the Dental Hygiene Program. [GE]

**Course Outcomes:**

- Using case studies and text material, determine FDA indication for side effects and doses for common drugs.
- Determine contraindications and patient implications of drug therapy in forming a dental hygiene care plan.
- Correctly spell drug names of the most common drugs.
- Correctly record in the patient's treatment record the patient's medical conditions and

medications used to manage them.

- Understand the drugs that a patient may be taking and the conditions for which the drugs are used.
- Prevent emergency situations by understanding the patient's medical condition and medications.

### **DENTAL PUBLIC HEALTH - RESEARCH METHODS I**

DH 402

2 Credits

11 hours of lecture - 22 hours of lab

A systematic approach to the prevention and control of dental disease and the promotion of oral health through organized community efforts. Practical application of public health techniques in the assessment of the community to establish what types of oral health programs are needed. Basic principles of research and the development of the skills required for evaluation of professional research. Prerequisite: Consent of the Dental Hygiene Program. [GE]

#### **Course Outcomes:**

- Develop a broader understanding of the scope of the practice of public health and its contribution to community health.
- Utilize professional knowledge, judgment, and abilities to apply the principles of dental public health.
- Develop an oral health program plan through the application of the dental public health concepts.
- Create a written document using report writing skills consistent with community dental health professionals using correct APA formatting.
- Identify and partner with health professionals and community agencies that deliver oral health services.
- Read and analyze published research.
- Formulate research questions.
- Distinguish between observation, interviews, and surveys for collecting research data.

### **DENTAL PUBLIC HEALTH - RESEARCH METHODS II**

DH 403

2 Credits

11 hours of lecture - 22 hours of lab

Continuation of Dental Public Health - Research Methods I. Advanced application of public health concepts to plan, implement and evaluate oral health programs that prevent and control dental disease and promote oral health for a designated population. Basic principles of research and the development of the skills required for evaluation of professional research. Prerequisite: Consent of the Dental Hygiene Program. [GE]

#### **Course Outcomes:**

- Develop a broader understanding of the scope of the practice of public health and its contribution to community health.
- Utilize professional knowledge, judgment, and abilities to apply the principles of dental public health.
- Develop an oral health program plan through the application of the dental public health concepts.
- Create a written document using report writing skills consistent with community dental health professionals using correct APA formatting.
- Identify and partner with health professionals and community agencies that deliver oral health services.



- Collect and analyze qualitative and quantitative data following APA guidelines.

### **DENTAL PUBLIC HEALTH - RESEARCH METHODS III**

DH 404

1 Credits

22 hours of lab

Continuation of Dental Public Health - Research Methods II. Implementation and evaluation of oral health programs at a variety of community settings. Basic principles of research and the development of the skills required for evaluation of professional research. Prerequisite: Consent of the Hygiene Program. [GE]

#### **Course Outcomes:**

- Develop a broader understanding of the scope of the practice of public health and its contribution to community health.
- Utilize professional knowledge, judgment, and abilities to apply the principles of dental public health.
- Develop an oral health program plan through the application of the dental public health concepts.
- Create a written document using report writing skills consistent with community dental health professionals using correct APA formatting.
- Identify and partner with health professionals and community agencies that deliver oral health services.
- Analyze and display research data following APA guidelines.
- Communicate research results following APA guidelines.

### **CLINICAL DENTAL HYGIENE TECHNIQUES V**

DH 412

9 Credits

199 hours of lab

Introduction to development level of advanced instrumentation and patient treatment techniques. Prerequisite: Consent of the Dental Hygiene Program. [GE]

#### **Course Outcomes:**

- Use critical decision making skills to formulate an evidence-based and patient-centered comprehensive care plan.
- Demonstrate the ability to acquire, synthesize, and communicate information in a critical, scientific, and effective manner.
- Demonstrate the highest ethical and professional standards in all aspects of patient care.
- 4. Accurately collect, record, and analyze patient assessment data.
- Develop a commitment to personal assessment and achievement.
- Demonstrate professionalism by personally practicing actions and characteristics consistent with being a professional.
- Observe and be knowledgeable of all safety and infection control protocols in the clinic and when dealing with other clinically related matters.
- Demonstrate consistent proficiency in the removal of supragingival and subgingival calculus using correct techniques with a minimum amount of tissue trauma.
- Provide oral health care at extramural sites.
- Manage the patient record as a legal document and ensure its accuracy, consistency, and privacy.
- Control pain during treatment through the use of accepted clinical techniques.
- Complete assigned proficiencies for each term.
- Select, obtain, and interpret information using diagnostic tools.

- Provide radiographs of diagnostic quality.
- Determine the clinical outcome of dental hygiene interventions and determine an appropriate maintenance schedule.

## **CLINICAL DENTAL HYGIENE TECHNIQUES VI**

DH 413

9 Credits

199 hours of lab

Developmental level of advanced instrumentation and patient treatment techniques. Prerequisite: Consent of the Dental Hygiene Program. [GE]

### **Course Outcomes:**

- Use critical decision making skills to formulate an evidence-based and patient-centered comprehensive care plan.
- Demonstrate the ability to acquire, synthesize, and communicate information in a critical, scientific, and effective manner.
- Demonstrate the highest ethical and professional standards in all aspects of patient care.
- Accurately collect, record, and analyze patient assessment data.
- Develop a commitment to personal assessment and achievement.
- Demonstrate professionalism by personally practicing actions and characteristics consistent with being a professional.
- Observe and be knowledgeable of all safety and infection control protocols in the clinic and when dealing with clinically related matters.
- Demonstrate consistent proficiency in the removal of supragingival and subgingival calculus using correct techniques with a minimum amount of tissue trauma.
- Provide oral health care at extramural sites.
- Manage the patient record as a legal document and ensure its accuracy, consistency, and privacy.
- Control pain during treatment through the use of accepted clinical techniques.
- Complete assigned proficiencies for each term.
- Select, obtain, and interpret information using diagnostic tools.
- Provide radiographs of diagnostic quality.
- Determine the clinical outcome of dental hygiene interventions and determine an appropriate maintenance schedule.

## **CLINICAL DENTAL HYGIENE TECHNIQUES VII**

DH 414

10 Credits

220 hours of lab

Demonstration and integration of advanced skills and knowledge with an emphasis on preparation for the practice of dental hygiene. Prerequisite: Consent of the Dental Hygiene Program [GE]

### **Course Outcomes:**

- Use critical decision making skills to formulate an evidence-based and patient-centered comprehensive care plan.
- Demonstrate the ability to acquire, synthesize, and communicate information in a critical, scientific, and effective manner.
- Demonstrate the highest ethical and professional standards in all aspects of patient care.
- Accurately collect, record, and analyze patient assessment data.
- Develop a commitment to personal assessment and achievement.
- Demonstrate professionalism by personally practicing actions and characteristics consistent with being a professional.

- Observe and be knowledgeable of all safety and infection control protocols in the clinic and when dealing with other clinically related matters.
- Demonstrate consistent proficiency in the removal of supragingival and subgingival calculus using correct techniques with a minimum amount of tissue trauma.
- Provide oral health care at extramural sites.
- Manage the patient record as a legal document and ensure its accuracy, consistency, and privacy.
- Control pain during treatment through the use of accepted clinical techniques.
- Complete assigned proficiencies for each term.
- Select, obtain, and interpret information using diagnostic tools.
- Provide radiographs of diagnostic quality.
- Determine the clinical outcome of dental hygiene interventions and determine an appropriate maintenance schedule.

### **RESTORATIVE DENTISTRY I**

DH 431

2 Credits

11 hours of lecture - 22 hours of lab

Introduction to restorative techniques with emphasis on placement of amalgam and clinical experience with sealant application. Prerequisite: Consent of the Dental Hygiene Program. [GE]

#### **Course Outcomes:**

- Carve an amalgam restoration which restores the functional anatomy of a tooth on a dentoform.
- Demonstrate effective sealant placement on a patient.
- Place a matrix and wedge with correct adaptation, contour, and contact on a dentoform tooth.
- Place a rubber dam on a dentoform using appropriate armamentarium to achieve effective isolation.
- Demonstrate self-assessment and self-correction skills when carving amalgam restorations.

### **RESTORATIVE DENTISTRY II**

DH 432

5 Credits

22 hours of lecture - 66 hours of lab

Laboratory practice in expanded duties as allowed by Washington State law. Emphasis on placement of amalgam and composite restorations. Prerequisite: Consent of the Dental Hygiene Program. [GE]

#### **Course Outcomes:**

- Use proper handling techniques with hazards related to amalgam and mercury.
- Accurately place, carve, finish, and polish amalgam restorations.
- Effectively integrate clinical diagnostic technique into patient care.
- Accurately place, carve, and finish composite restorations.
- Correctly use appropriate intermediary materials for all restorations.
- Demonstrate self-assessment skills and formulate a plan for improvement.
- Demonstrate compliance with Washington State law by preparing to provide restorative services.

### **RESTORATIVE DENTISTRY III**

DH 433

4 Credits

11 hours of lecture - 66 hours of lab

Clinical and laboratory practice in expanded duties as allowed by Washington State law. Topics include restorative dentistry and associated procedures, dental analgesia, local anesthetic, current dental material evaluation and product selection for use in clinical practice. Prerequisite: Consent of the Dental Hygiene Program. [GE]

**Course Outcomes:**

- Accurately place and finish amalgam and composite restorations on clinical patients.
- Confer with the dentist concerning the patient's oral health assessment, treatment plan, pain control methodologies, and patient management skills using appropriate and ethical professional language.
- Communicate treatment needs and procedures to the patient using appropriate terminology and ethical professionalism at all times.
- Use four-handed techniques, assist effectively in all clinical settings, and use materials appropriately.
- Use appropriate handling techniques with hazardous materials and utilize all current infection control procedures.
- Review and update a complete medical history and determine conditions pertinent to restorative treatment.
- Conduct a nutritional risk assessment, establish goals, use education strategies and appropriate communication with the patient as an active participant.
- Use appropriate pain control procedures and techniques.
- Maintain accuracy and patient confidentiality at all times when managing patient records.
- Determine the patient's satisfaction with the dental hygiene care received.
- Assess the placement and finishing of restorations in the lab and formulate a plan for skill improvement.
- Accurately place, carve, and finish restorations.

**RESTORATIVE DENTISTRY IV**

DH 434

3 Credits

11 hours of lecture - 44 hours of lab

Mastery of restorative skills to include clinical and lab practice in expanded duties as allowed by Washington State law. Completion of restorative capstone project, encompassing depth and breadth of knowledge acquired from supportive course work. Prerequisite: Consent of the Dental Hygiene Program. [GE]

**Course Outcomes:**

- Place, carve, and finish amalgam restorations on clinical patients. Restorations will be carved to functional occlusion with no open contacts, marginal ridge discrepancies, voids, or overhangs.
- Plan treatment and formulate a care plan and educational strategies that addresses achievement of optimum oral health goals through collaboration with a caries active patient.
- Confer with the dentist concerning the patient's health, oral health assessment, treatment plan, pain control methodologies, and patient management skills, and record appropriately.
- Communicate treatment needs and procedures to the patient using appropriate terminology and ethical professionalism at all times.
- Place and finish composite restorations on clinical patients. Restorations will be finished to functional occlusion with correct contacts, smooth lustrous finish, and no voids or overhangs.
- Use four-handed techniques, assist effectively in all clinical settings, and use materials appropriately.
- Use appropriate handling techniques with hazardous materials and utilize all current infection control procedures.

- Conduct a nutritional risk assessment and then establish goals using educational strategies and appropriate communication skills with the patient as an active participant.
- Determine the patient's satisfaction with the dental hygiene care received.
- Assess the placement and finishing of restorations in the lab and formulate a plan for skill improvement.
- Communicate with the dentist throughout the procedure, using appropriate and ethical professional language at all times.
- Promote the values of the profession to the patient.
- Evaluate published reports using knowledge base and available resources.

### **SPECIAL NEEDS POPULATIONS I**

DH 451

1 Credits

11 hours of lecture

Issues regarding techniques and strategies for identifying, assessing, and treating patients with special needs and developing technological expertise to access special needs information through various media. Prerequisite: Consent of the Dental Hygiene Program. [GE]

#### **Course Outcomes:**

- Demonstrate caring to patients with special needs.
- Determine dental hygiene concerns and care for patients with special needs.
- Identify patients with special needs who require more skillful application of dental hygiene knowledge and ability.
- Identify and access resources to gather information regarding special needs.

### **SPECIAL NEEDS POPULATIONS II**

DH 452

1 Credits

11 hours of lecture

Researching academic, behavioral, and clinical techniques to determine the performance necessary in all phases of patient treatment for a population with special needs. In-depth independent research on a special needs population, as it relates to dental hygiene care. Prerequisite: Consent of the Dental Hygiene Program. [GE]

#### **Course Outcomes:**

- Determine dental hygiene concerns and care for patients with special needs.
- Critically analyze professionally published reports and information regarding special needs groups, and develop a written report using APA guidelines.
- Demonstrate the ability to use a variety of sources to access special needs information.
- Demonstrate the ability to communicate professional knowledge regarding a patient with special needs in a written report.

### **SPECIAL NEEDS POPULATIONS III**

DH 453

1 Credits

11 hours of lecture

Expansion of the research in academic, behavioral, and clinical techniques through the development and presentation of a table clinic in order to determine the performance necessary in all phases of patient treatment for a population with special needs. Prerequisite: Consent of the Dental Hygiene Program. [GE]

## **Course Outcomes:**

- Analyze various professional publications on a special needs related topic and apply this information in a table clinic format.
- Identify population risk factors and determine strategies to provide optimal care to patients with a variety of special needs.
- Acquire, synthesize, and communicate a dental hygiene special needs topic in a table clinic format, using APA guidelines.
- Demonstrate the use of a variety of sources to access information for special needs populations.

## **NITROUS OXIDE SEDATION**

DH 471

1 Credits

8 hours of lecture - 4 hours of lab

Exploration of nitrous oxide sedation as it applies to the practice of dentistry and dental hygiene. Emphasis on patient evaluation, pharmacodynamics, and administration methods and safety issues. Minimum of three clinical patient inductions and recoveries required. Meets multi state licensure requirements for the provisions of nitrous oxide and includes 10 hours of lecture, 3 clinical, and 1 hour written final for a total of 14 hours. Prerequisite: Consent of the Dental Hygiene Program. [GE]

### **Course Outcomes:**

- Administer effective nitrous oxide sedation to patient's maximizing patient comfort and anxiety reduction.
- Accurately record in the patient's record the appropriate information related to nitrous oxide administration.
- Provide nitrous oxide sedation using accepted infection control and safety procedures for both the student and the patient.
- Determine the percent of nitrous administered, given the liter flow of both nitrous oxide and oxygen.
- Identify the signs of oversedation and the methods used to prevent them.
- Accurately and thoroughly collect, analyze, and interpret the patient's medical and dental history in order to determine the appropriateness of nitrous oxide sedation.
- Routinely implement a self evaluation instrument during clinical and laboratory administration of nitrous oxide sedation.
- Complete State of Washington continuing education requirements for those administering Nitrous Oxide sedation.

## **PERIODONTICS II**

DH 472

2 Credits

22 hours of lecture

Etiological factors in the periodontal disease process including host response, contributing and risk factors, classifications of periodontal diseases, and HIV and periodontitis. Current methods used to assess and evaluate periodontal disease in a patient will be covered. Prerequisite: Consent of the Dental Hygiene Program. [GE]

### **Course Outcomes:**

- Demonstrate the use of websites to access information.
- Relate changes in the anatomy of the periodontium to the progression of periodontal disease.
- Know and explain the classifications, etiology, oral manifestations, and progression of the

different gingival and periodontal diseases.

- Understand the response of the host, with and without systemic and contributing factors, to gingival and periodontal diseases.
- Evaluate methods used to determine periodontal disease activity.
- Utilize radiographs as a diagnostic aid to evaluate periodontal disease activity.

### **PERIODONTICS III**

DH 473

2 Credits

22 hours of lecture

Evidence-based periodontal disease treatment modalities including non-surgical procedures, modulation of the host response, antimicrobials, lasers, and reevaluation and maintenance procedures. Prerequisite: Consent of the Dental Hygiene Program. [GE]

#### **Course Outcomes:**

- Demonstrate the use of websites to access information.
- Evaluate and describe the techniques for management of acute periodontal conditions, including HIV gingivitis/periodontitis.
- Analyze currently accepted antimicrobial treatment regimes.
- Understand and discuss indications, contraindications, objectives, and methodology for the most commonly performed periodontal surgical procedures.
- Analyze nonsurgical treatment modalities available for utilization on a periodontally active patient and determine which modalities to implement for patient care.
- Demonstrate peer and self-assessment skills and the ability to formulate a plan for success.
- Compare and evaluate treatment methods used to evaluate the effectiveness of various phases of periodontal therapy to prevent the recurrence of disease.

### **CAPSTONE**

DH 484

3 Credits

33 hours of lecture

The capstone course is an opportunity for students to demonstrate that they have achieved the learning outcomes established by the Clark College Dental Hygiene program. Designed to assess ethical, cognitive, affective, and psychomotor learning in a learner-centered and learner-directed manner. Students will create a resume and cover letter as well as develop their interview skills. The capstone course requires an e-portfolio, which serves as an instrument of program assessment. Prerequisite: Consent of the Dental Hygiene Program. [GE]

#### **Course Outcomes:**

- Analyze ethical and professional standards for dental hygienists in critical incidents.
- Identify and interpret the legal practice of dental hygiene within the State of Washington.
- Demonstrate knowledge of insurance codes used in the dental environment.
- Communicate in writing to other dental professionals in a resume and cover letter.
- Demonstrate knowledge of verbal communication skills for a job interview.
- Demonstrate how and when every program outcome has been met throughout your dental hygiene education.

## **CUMMINS ENGINES**

DIES 096

3 Credits

33 hours of lecture

Specialized training in Cummins engine theory, troubleshooting, tune-up, maintenance, repair, and safety.

### **Course Outcomes:**

- Identify various components on Cummins engines.
- Diagnose and repair system related defects.
- Describe and summarize system and electronic control operation.
- Utilize the Cummins INSITE diagnostic program.
- Utilize Cummins Quickserve web page.
- Tune-up a Cummins engine.

## **DIESEL FUNDAMENTALS**

DIES 111

5 Credits

55 hours of lecture

Introduction to diesel engine construction and principles of operation. Basics of physics and engineering as related to operation of diesel engines. Basic shop tools and safety. [GE]

### **Course Outcomes:**

- Define and practice safe shop procedures.
- Identify and explain the use of shop equipment and hand tools associated with diesel engine repair.
- Identify fasteners and their proper use.
- Identify and explain the function of diesel engine components.
- Develop and support ideas by analyzing and synthesizing material from several sources.

## **DIESEL PROCEDURES**

DIES 112

10 Credits

55 hours of lecture - 110 hours of lab

Disassembly, inspection, assembly, and adjustment of various diesel engines used in highway and off-highway vehicles. Concurrent enrollment in DIES 111 recommended. [GE] [PNP]

### **Course Outcomes:**

- Identify resources, service manuals, library and parts ordering literature.
- Understand and perform verbal and written instructions.
- Assume responsibility for his/her own learning.
- Locate sources for answers, identify and or contact vendors, suppliers, and resources.
- Exhibit self-discipline and good work habits and manage time wisely.
- Follow directions.
- Assess one's own work habits.

## **DIESEL ENGINES/FUEL SYSTEMS**

DIES 113

5 Credits

55 hours of lecture



Repair, adjustment and testing procedures for diesel engines, components and systems. Introduction to fuel systems used and electronic controls used on modern diesel engines. Concurrent enrollment in DIES 114 recommended. [GE]

**Course Outcomes:**

- Basic knowledge of systems related to the operation of diesel engines.

**DIESEL PROCEDURES**

DIES 114

10 Credits

55 hours of lecture - 110 hours of lab

Test, adjust, and diagnostics of engines and maintenance practices. Concurrent enrollment in DIES 113 recommended. [GE] [PNP]

**Course Outcomes:**

- Identify resources, service manuals, library and parts ordering literature along with understanding and performing verbal and written instructions.
- Assume responsibility for his or her learning.
- Locate sources for answers, identify and or contact vendors, suppliers, and resources.
- Exhibit self-discipline and good work habits and manage time wisely.
- Follow directions.
- Assess ones own work habits.

**DRIVE TRAINS**

DIES 115

5 Credits

55 hours of lecture

Principles of operation and basic construction of drive train components used in on- and off-highway equipment. Concurrent enrollment in DIES 116 recommended. [GE]

**Course Outcomes:**

- Demonstrate basic knowledge of systems related to heavy duty power trains.

**DIESEL PROCEDURES**

DIES 116

10 Credits

55 hours of lecture - 110 hours of lab

Disassembly, inspection, assembly, and adjustments of drive train components. Concurrent enrollment in DIES 115 recommended. [GE] [PNP]

**Course Outcomes:**

- Identify resources, service manuals, library and parts ordering literature along with understanding and performing verbal and written instructions.
- Assume responsibility for his or her learning.
- Locate sources for answers, identify and or contact vendors, suppliers, and resources.
- Exhibit self-discipline and good work habits and manage time wisely.
- Follow directions and assess ones own work habits. .

## **BASIC ELECTRICAL**

DIES 120

3 Credits

22 hours of lecture - 22 hours of lab

Introduction to basic electrical fundamentals needed by technicians to diagnose and repair vehicle electrical systems. Concurrent enrollment in DIES 112. [GE]

### **Course Outcomes:**

- Describe atomic structure
- Explain electron theory vs. conventional theory
- Explain Ohm's Law and apply it to real world situations
- Apply Ohm's Law to series, Parallel and Series-parallel circuits
- Describe Kirchhoff's First and Second Laws to Calculate Voltage Drop in a circuit
- Identify the characteristics of DC and AC
- Identify symbols and interpret electrical schematics
- Proper use and interpretation of test equipment including DVOM
- Identify electronic circuitry components and testing
- Understanding of magnetism and its uses in electronic circuits

## **ELECTRONIC ENGINE MANAGEMENT SYSTEMS**

DIES 121

3 Credits

22 hours of lecture - 22 hours of lab

Introduction to electronic engine management systems and emission technology. Concurrent enrollment in DIES 114. Prerequisite: A grade of "C" or better in DIES 120. [GE]

### **Course Outcomes:**

- Describe basic electronic engine management theory.
- Understand the language of computerized truck engine management systems.
- Describe the circuit layout of an electronically managed truck engine.
- Describe how an ECM processes inputs and uses programmed data to generate outputs.
- Identify current computer-controlled engines by OEM and engine series.
- Describe the processes used to reprogram a truck engine ECM with proprietary data.
- Define the principles of operation of various sensors.
- Describe the role that vehicle emissions play in the formation of smog.
- Outline the principles of operation of an opacity meter.
- Analyze diesel engine visible smoke emission.

## **ELECTRONIC VEHICLE CONTROL SYSTEMS**

DIES 122

3 Credits

22 hours of lecture - 22 hours of lab

Introduction to electronic controls used in diesel and heavy equipment. Concurrent enrollment in DIES 116. Prerequisite: A grade of "C" or better in DIES 120. [GE]

### **Course Outcomes:**

- Define terms associated with multiplex system
- Explain the basic concept of multiplexing
- Explain the purpose of data links SAE J1587, SAE J1708 and SAE J1939
- Test the J1939 data link for proper operation
- Explain multiplexing advantages for the M2 electrical system
- Identify the major components in the M2 electrical system

- Follow the communication on the J1939 DataBus
- Explain Smart Switch operation
- Find Freightliner service literature about adding multiplexed features
- Find and use the International Body Builder Resource Center
- Identify the major components in the Siemens VDO electrical system
- Identify the major components in the Dinex electrical system

## **INDUSTRIAL HYDRAULICS**

DIES 135

3 Credits

33 hours of lecture

Hands-on experience in recognizing, using, and troubleshooting hydraulic pumps, valves, motors, filters, hoses, piping, and fittings in hydraulic systems. [GE]

### **Course Outcomes:**

- Identify and distinguish various hydraulic schematic symbols
- Identify and distinguish the differences between directional controls, pressure controls, and flow controls and be able to analyze the cause and effect relationship of different types of circuits with respect to the principles of fluid power
- Describe, summarize, and paraphrase varied materials accurately.
- Develop and support ideas by analyzing and synthesizing material from several sources

## **COOPERATIVE WORK EXPERIENCE**

DIES 199

1 - 5 Credits

165 hours of clinical

Supervised work experience in an approved job. Completion of specific learning objectives and employer evaluation. Completion of, or concurrent enrollment in, HDEV 195, 198, or 200 required. Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Fulfill job requirements of the internship provider.

## **ELECTRICAL/ELECTRONIC SYSTEMS**

DIES 221

5 Credits

55 hours of lecture

Charging, starting, lighting, and control circuits and components used on heavy equipment and highway trucks. Concurrent enrollment in DIES 222 recommended. [GE]

### **Course Outcomes:**

- Identify and distinguish various electrical schematic symbols.
- Identify and distinguish series, parallel and series-parallel circuits and be able to analyze the cause and effect relationship of different types of circuits with respect to Ohm's law.
- Describe, summarize, and paraphrase varied materials accurately.
- Develop and support ideas by analyzing and synthesizing material from several sources.

## **DIESEL PROCEDURES**

DIES 222

6 Credits

33 hours of lecture - 66 hours of lab

Repair and maintenance of diesel and heavy equipment. Students will participate in customer repair projects. Concurrent enrollment in DIES 221 recommended. [GE] [PNP]

### **Course Outcomes:**

- identify and distinguish various electrical schematic symbols.
- Identify and distinguish series, parallel and series-parallel circuits and be able to analyze the cause and effect relationship of different types of circuits with respect to Ohm's law.
- Use the Multi-meter and make accurate observations, analysis and conclusions of troubleshooting activities.
- Identify and troubleshoot a variety of electrical components and accurately evaluate the problem using data collected from a variety of test equipment.

## **HYDRAULIC SYSTEMS**

DIES 223

5 Credits

55 hours of lecture

Theory and principles of operation of mobile hydraulic systems. Concurrent enrollment in DIES 224 recommended. [GE]

### **Course Outcomes:**

- Identify and distinguish various hydraulic schematic symbols.
- Identify and distinguish the differences between directional controls, pressure controls, and flow controls and be able to analyze the cause and effect relationship of different types of circuits with respect to the principles of fluid power.
- Describe, summarize, and paraphrase varied materials accurately.
- Develop and support ideas by analyzing and synthesizing material from several sources.

## **DIESEL PROCEDURES**

DIES 224

10 Credits

55 hours of lecture - 110 hours of lab

Repair and maintenance of diesel and heavy equipment. Students will participate in customer repair projects. Concurrent enrollment in DIES 223 recommended. Prerequisite: DIES 222 or consent of Instructional Unit. [GE] [PNP]

### **Course Outcomes:**

- Identify and distinguish various hydraulic schematic symbols.
- Identify and distinguish the differences between directional controls, pressure controls, and flow controls and be able to analyze the cause and effect relationship of different types of circuits with respect to the principles of fluid power.
- Select and design various hydraulic circuits.
- Troubleshoot and analyze data and evidence collected from competency exercises.
- Comprehend, identify and correct problems in controlled and complex contexts.
- Identify and troubleshoot various types of hydraulic pumps and actuators.

## **BRAKES, STEERING, AND SUSPENSION**

DIES 225

5 Credits

55 hours of lecture

Hydraulic and air brake systems, steering and suspension used on highway trucks, and heavy equipment. Concurrent enrollment in DIES 226 recommended. [GE]

### **Course Outcomes:**

- Identify and distinguish various steering and hydraulic schematic symbols.
- Identify and distinguish the differences between directional controls, pressure controls, and flow controls with respect to the principles of fluid power relative to on and off-highway steering and hydraulic brake systems.
- Describe, summarize, and paraphrase varied materials accurately.
- Develop and support ideas by analyzing and synthesizing material from several sources.
- Identify and distinguish between different pneumatic circuits and valves used in air brake systems.
- Identify and distinguish between different on and off-highway suspensions and tires.
- Describe and summarize maintenance procedures related to steering systems, power steering, wheels/tires, maintenance, adjustment and testing, hydraulic brake systems and air brake systems.

## **DIESEL PROCEDURES**

DIES 226

10 Credits

55 hours of lecture - 110 hours of lab

Repair and maintenance of diesel and heavy equipment. Students will participate in customer repair projects. Concurrent enrollment in DIES 225 recommended. Prerequisite: DIES 224 or consent of Instructional Unit. [GE] [PNP]

### **Course Outcomes:**

- Identify and use resources, service manuals, library and parts ordering literature.
- Understand and perform verbal and written instructions.
- Use electronic resources. The World Wide Web, multi-media devices such as the Caterpillar Basics Trainer, Cat SIS, CD ROM multimedia, word processor and job resume creation.
- Use the technical resources available to perform complex repair and troubleshooting procedures.
- Identify, analyze, evaluate, synthesize and implement problem-solving strategies.
- Identify, analyze, evaluate, synthesize and implement solutions to problems solved with correlational and cause/effect analysis.

## **SELECTED TOPICS**

DIES 280

1 - 5 Credits

55 hours of lecture

The course focuses on selected topics in Diesel. Topics vary, and course theme and content change to reflect new topics. Because the course varies in content, it is repeatable for credit for different topics. Individual topics are listed in the quarterly class schedule. [GE] [PNP]

### **Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this course.

## **SPECIAL PROJECTS**

DIES 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the department.  
Prerequisite: Consent of Instructional Unit required. [GE]

### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervisory instructor.

## **Drama**

### **INTRO TO THEATRE**

DRMA&101

3 Credits

33 hours of lecture

Overview of theatre. Roles of the actor, director, designers, and playwrights. Evolution of theatre through the ages. [HA, SE]

### **Course Outcomes:**

- Aid you in becoming a more informed, critical and frequent audience member and possible future theatre practitioner.
- Develop an understanding of theatre as a collaborative art form.
- Provide a critical framework with which you can evaluate the artistic quality of a script or performance through emphasis of how theatre is created on the page and on stage.
- Examine theatre as a reflection and product of culture(s) , how it relates to other arts and forms of entertainment, and how it is a reflection of the human condition.

### **ACTING I - DRAMA**

DRMA 140

4 Credits

33 hours of lecture - 22 hours of lab

Techniques and principles of acting. [HB, SE]

### **Course Outcomes:**

- Understand the historical development of the role of the actor and of acting training.
- Be able to create a biography/analysis for a character in a play.
- Improve your ability to self-critique performances through a better sense of self awareness.
- Understand the process of developing a character which involves analysis, identification of goals, analysis of relationships, the character's function in the play, the director's concept and the identification of subtext.
- Experience what it's like to take direction and cooperate with other actors during rehearsal and performance.
- Be exposed to constructive feedback by the instructor as you perform scenes.
- Improve your self-confidence, self-awareness and group dynamics as you explore other characters, take direction, rehearse and work with other actors.

### **ACTING II - THEATRE**

DRMA 141

4 Credits

33 hours of lecture - 22 hours of lab

Continuation of DRMA 140. Emphasis on scene study, characterization, and period styles of acting. Prerequisite: DRMA 140 (or THEA 140). [HB, SE]

**Course Outcomes:**

- Improve their ability to critique performances through a better understanding of the differences in theatrical organizations, genres of plays, and acting styles.
- Understand the process of developing a character through script analysis, identification of goals, obstacles, tactics and expectations.
- Understand to the process of preparing a role for performance. Act as a member of a production team.
- Experience working productively with a team, taking direction and developing ensemble with other actors through rehearsals and performances.

**ACTING III - TELEVISION**

DRMA 142

3 Credits

22 hours of lecture - 22 hours of lab

Techniques for television and film performance. Basic production realities relevant to actors. Students will perform before the cameras and, when possible, work behind them. Prerequisite: A grade of "C" or better in DRMA 140 (or THEA 140). [HB, SE]

**Course Outcomes:**

- Understand television and film acting techniques, the use of film equipment, and the functions of the various technicians who work on the production.

**BASIC STAGECRAFT**

DRMA 150

4 Credits

22 hours of lecture - 22 hours of lab

Principles and techniques of scenery construction and painting. Students will also learn the use of shop tools. [HB, SE]

**Course Outcomes:**

- Improve drafting ability through a better understanding of theatrical design, blue prints, and drafting practice.
- Understand the use of lumber, cover stock, stage hardware, and other theatrical construction materials through lecture, demonstration, and hands-on experience.
- Perform accepted construction techniques for scenic units through lecture, demonstration, and hands-on experience.

**STAGE MAKE-UP**

DRMA 152

3 Credits

33 hours of lecture

Design and application of stage make-up. Formerly THEA 152. [HB, SE]

**Course Outcomes:**

- Improve their ability to assess make-up needs for actors playing different characters.
- Research, design, practice, and apply stage make-up to themselves and others.
- Learn theatre ethics and how to work with actors.
- Become a more effective make-up artist through an understanding of character and the application of skills.

### **PLAY PRODUCTION AND PERFORMANCE I**

DRMA 171

2 Credits

44 hours of lab

Practical experience with varied aspects of actual theatrical production. Acting, directing, scene construction, lighting, makeup and publicity. Class will begin the third week of the quarter. [HB, SE]

#### **Course Outcomes:**

- Acquire skills to safely use power and air tools through demonstration and practical application while working on various lab projects.
- Learn to read blueprints of set/costume designs as they work in the lab and undertake construction projects.
- Acquire experience working with a shop foreman, set designer and director as they attend lab and work on production projects.

### **PLAY PRODUCTION AND PERFORMANCE II**

DRMA 172

2 Credits

44 hours of lab

Practical experience with varied aspects of actual theatrical production. Acting, directing, scene construction, lighting, makeup and publicity. Class will begin the third week of the quarter. Prerequisite: DRMA 171 (or THEA 171). [HB, SE]

#### **Course Outcomes:**

- Acquire skills to safely use power and air tools through demonstration and practical application while working on various lab projects.
- Learn to read blueprints of set/costume designs as they work in the lab and undertake construction projects.
- Acquire experience working with a shop foreman, set designer and director as they attend lab and work on production projects.

### **PLAY PRODUCTION AND PERFORMANCE III**

DRMA 173

2 Credits

44 hours of lab

Practical experience with varied aspects of actual theatrical production. Acting, directing, scene construction, lighting, makeup and publicity. Class will begin the third week of the quarter. Prerequisite: DRMA 172 (or THEA 172). [HB, SE]

#### **Course Outcomes:**

- Acquire skills to safely use power and air tools through demonstration and practical application while working on various lab projects.
- Learn to read blueprints of set/costume designs as they work in the lab and undertake



construction projects.

- Acquire experience working with a shop foreman, set designer and director as they attend lab and work on production projects.

### **COOPERATIVE WORK EXPERIENCE**

DRMA 199

1 - 5 Credits

165 hours of clinical

Supervised work experience in the community, completion of specific learning objectives and employer evaluation. Completion of, or concurrent enrollment in, HDEV 195, 198, or 200 required. Prerequisite: Consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Fulfill the job requirements of the internship provider.

### **STAGE LIGHTING DESIGN**

DRMA 250

3 Credits

33 hours of lecture

Techniques and principles of stage and TV lighting design. Use of instruments and light control systems with a special emphasis on computerized light control. [HB, SE]

#### **Course Outcomes:**

- Understand the contributions, as well as practical and artistic function of lighting, and the lighting designer in the stage performance.
- Employ electrical operating theories and rules of safety as they relate to the theatre lighting system.
- Display "hands on" knowledge of the tools of stage lighting as well as the breakdown of their parts and maintenance needs.

### **PLAY PRODUCTION AND PERFORMANCE IV**

DRMA 271

2 Credits

44 hours of lab

Practical experience with varied aspects of actual theatrical production. Acting, directing, scene construction, lighting, makeup and publicity. Class will begin the third week of the quarter. Prerequisite: DRMA 173 (or THEA 173). [HB, SE]

#### **Course Outcomes:**

- Acquire skills to safely use power and air tools through demonstration and practical application while working on various lab projects.
- Learn to read blueprints of set/costume designs as they work in the lab and undertake construction projects.
- Acquire experience working with a shop foreman, set designer and director as they attend lab and work on production projects.

### **PLAY PRODUCTION AND PERFORMANCE V**

DRMA 272

2 Credits

44 hours of lab

Practical experience with varied aspects of actual theatrical production. Acting, directing, scene construction, lighting, makeup and publicity. Class will begin the third week of the quarter.

Prerequisite: DRMA 271 ( or THEA 271). [HB, SE]

**Course Outcomes:**

- Acquire skills to safely use power and air tools through demonstration and practical application while working on various lab projects.
- Learn to read blueprints of set/costume designs as they work in the lab and undertake construction projects.
- Acquire experience working with a shop foreman, set designer and director as they attend lab and work on production projects.

**PLAY PRODUCTION AND PERFORMANCE VI**

DRMA 273

2 Credits

44 hours of lab

Practical experience with varied aspects of actual theatrical production. Acting, directing, scene construction, lighting, makeup and publicity. Class will begin the third week of the quarter.

Prerequisite: DRMA 272 (or THEA 272). [HB, SE]

**Course Outcomes:**

- Acquire skills to safely use power and air tools through demonstration and practical application while working on various lab projects.
- Learn to read blueprints of set/costume designs as they work in the lab and undertake construction projects.
- Acquire experience working with a shop foreman, set designer and director as they attend lab and work on production projects.

**SELECTED TOPICS**

DRMA 280

1 - 3 Credits

33 hours of lecture

Varying topics in theatre, as listed in the quarterly class schedule. May be repeated for credit.

[SE]

**Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principle of this course.

**SPECIAL PROJECTS**

DRMA 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the department in the areas of stage direction, scene lighting, costume design, make-up design, production or theatre history. Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate learning objectives as determined by the supervisory instructor.

## Early Childhood Education

### **CHILD DEVELOPMENT: BIRTH TO SIX**

ECE 100

3 Credits

33 hours of lecture

Online course in child growth and development from birth to age six years, including physical, emotional, cultural, cognitive, and creative age-related changes. Application to early childhood programs in centers and homes. [GE]

#### **Course Outcomes:**

- Explain major early childhood curriculum theories and current trends.
- Use a variety of resources to plan and implement curriculum.
- Support children's language/communication, cognitive, social/emotional, fine/gross motor and creative development.
- Observe, document and assess individual and group needs, interests and skills.
- Assess the effectiveness of promoting growth and development in children.

### **SCIENCE AND MATHEMATICS FOR YOUNG CHILDREN**

ECE 102

3 Credits

33 hours of lecture

Explores the theories, issues and applications of science and math concepts in activities and environments for preschool aged children. Investigates the strategies of teaching through the discovery and use of science and math curriculums in their surroundings. [GE]

#### **Course Outcomes:**

- Develop various strategies to incorporate mathematical and scientific concepts into an early childhood curriculum.
- Explore the specific developmental bridges related to math and science in young children.
- Acquire skills to communicate mathematical and scientific development of young children.
- Examine and execute developmental and age appropriate activities pertaining to math and science in an early childhood setting.

### **INDIVIDUALIZED INSTRUCTION I**

ECE 105

2 Credits

22 hours of lecture

Theories and practices for inclusive early childhood education programs. Explores personal perceptions of disabilities and commonly held biases and the impact of environmental influences on ability. Prerequisite: EDUC& 203 (or ECE 104). [GE]

#### **Course Outcomes:**

- Demonstrates the ability to interpret observations in an objective nonbiased manner.
- Practice a "Running Record " as tool to communicate understanding of a child's development.
- Observe, document, and assess individual and group needs, learning styles, interests, and skills.
- Identify and support individual learning styles.

- Practice evaluating and modifying curriculum plans for a specific child.
- Partner with parent or care giver to screen a specific child's development.
- Develop knowledge to refer a child for special services.
- Develop a broader perspective of how disabilities impact all people.
- Analyze how attitudes about disabilities are reflected in the larger society.

## **INDIVIDUALIZED INSTRUCTION II**

ECE 106

2 Credits

11 hours of lecture - 22 hours of lab

Theories and practices for inclusive early childhood programs. Documents a student's interests, strengths, and needs and develops an inclusion plan that supports those areas. Prerequisite: ECE 105. [GE]

### **Course Outcomes:**

- Demonstrates the ability to interpret observations in an objective nonbiased manner.
- Comprehend the individual learning needs of a specific child through the use of various tools.
- Combine information gained from a variety of sources to individualize the learning of a specific child.
- Design an inclusion plan which identifying a child's strengths, interests, and abilities.
- Synthesize the parent or care giver's contribution to what we know about a specific child.
- Comprehend the importance of families' culture when creating a supportive individualized learning environment.
- Study the effects of cultural misunderstanding with families not of the dominant culture.

## **EARLY CHILDHOOD EDUCATION WORKSHOPS**

ECE 111

1 - 3 Credits

33 hours of lecture

In-service and special topic seminars for those currently working with groups of young children. Each 3-week session is offered for one credit. Students may take any or all of the sessions. A maximum of six credits of ECE 111 may be applied to major area requirements for a degree in Early Childhood Education. [GE]

### **Course Outcomes:**

- Demonstrate components of developmentally appropriate practices in the implementation of curriculum.
- Implement emergent curriculum in various domains of learning.
- Adapt curriculum to meet the needs and interests of children with a range of abilities, learning styles, cultures and backgrounds.
- Inform families of curriculum engagement in multiple ways.
- Apply awareness of diversity in curriculum planning and implementation.

## **LITERATURE AND STORYTELLING FOR CHILDREN**

ECE 116

2 Credits

22 hours of lecture

Introduction to the value of storytelling and the use of literature as tools in the development of children. Literature and storytelling has the ability to speak to our "souls" and it is the intent of this class to reclaim for some and validate for others the value of literature as a tool with children

and for ourselves. Through small and large group discussions as well as diverse experiences, co-learners will have an opportunity to develop an understanding of book selection, delivery styles, bibliotherapy, and community resources for acquiring literature and networking with professionals in the field of Early Childhood Education. [GE]

**Course Outcomes:**

- Demonstrate components of developmentally appropriate practices in the implementation of curriculum using children's literature and storytelling techniques.
- Demonstrate ability to implement emergent curriculum in various domains of learning using children's literature and/storytelling techniques.
- Displays ability to adapt responses/curriculum to meet the needs and interests of children with a range of abilities, learning styles, cultures and backgrounds using children's literature and/or storytelling.
- Apply awareness of diversity in curriculum planning and implementation using children's literature and storytelling.

**REFLECTIVE PRACTICES IN EARLY LEARNING**

ECE 133

3 Credits

33 hours of lecture

A comprehensive overview and theoretical exploration of perspectives regarding multiple contexts including race, culture, ethnicity, language, class, gender, sexual orientation, atypical and typical abilities. Focus on biases that may impact learners' work as reflective practitioners working with children and families. Focus on effective anti-bias strategies. Meets General Education transfer requirements. [GE]

**Course Outcomes:**

- Define and use power, privilege and Inequality terminology applicable to the course.
- Recognize one's own multiple identities.
- Demonstrate an understanding of the social construction of identity and difference with regard to sex, gender, race, class, sexuality, age, ability and other ranks.

**PARTNERSHIPS WITH FAMILIES IN EARLY CARE & E**

ECE 135

3 Credits

33 hours of lecture

Developing effective partnerships with families in early care and education programs. Topics include family-centered theories and practices related to welcoming families and building relationships, communicating, working through conflicts, honoring diversity, family involvement and support, and parent education. [GE]

**Course Outcomes:**

- Examine and articulate the value of developing partnerships with families in early care and education programs.
- Practice the art of communication with families in early learning programs.
- Examine and apply tools and strategies for creating inclusive, family centered early learning environments.
- Recognize and demonstrate respect for the unique culture and diversity of families.

**COOPERATIVE WORK EXPERIENCE**

ECE 199

1 - 5 Credits

165 hours of clinical

Supervised work experience in an approved job. Completion of specific learning objectives and employer evaluations. Completion of, or concurrent in, HDEV 195, 198, or 200 required.

Prerequisite: ECE 121, 209 and 210, and consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate components of developmentally appropriate practices in the implementation of curriculum.
- Adapt curriculum to meet the needs and interests of children with a range of abilities, learning styles, cultures and backgrounds.
- Apply awareness of diversity in curriculum planning and implementation.
- Fulfill the job requirements of their internship provider. In addition, be creating a minimum of FIVE personal goals to achieve success in their student teaching/internship placement. The student and instructor will work together to determine a connectio

**LEARNING EXPERIENCES FOR YOUNG CHILDREN II**

ECE 211

3 Credits

33 hours of lecture

Further develop curriculum planning processes with a special emphasis on scheduling and project approach planning using observations of children's play and knowledge of child development.

Areas of study include science, math, group experiences, music/movement, and outdoors.

Conduct case studies and provide peer support and feedback. Concurrent enrollment in ECE 212 required. Prerequisite: ECED& 160, or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Select, plan, implement, and assess curriculum experiences related to science, math, group times and music and movement. (Curriculum Development Competency) Program Outcome #1/3.
- Use observation to assess and inform regarding children's learning in relation to NAEYC Developmentally Appropriate Practices and our current knowledge of child development. (Assessment Competency) Program Outcome #4.
- Be an active member of a teaching team responsible for planning environmental curriculum, implementing emergent curriculum, providing documentation and conducting project approach curriculum. (Curriculum Development Competency) Program Outcome #2/4.
- Develop a philosophy of the "Image of the Child" (Curriculum Development) Program Outcome #1.

**LEARNING EXP FOR YOUNG CHILDREN II LAB**

ECE 212

3 Credits

66 hours of lab

Lab experience in Early Childhood Education Laboratory School. Plan, implement and analyze plans in relation to relevant topics in ECE 211. Concurrent enrollment in ECE 211 required.

Prerequisite: ECE 210, or consent of Instructional Unit. [GE]

**Course Outcomes:**

- To select, plan, implement, and assess curriculum experiences related to science, math, group times and music and movement.

### **LEARNING EXPERIENCES FOR YOUNG CHILDREN III**

ECE 213

3 Credits

33 hours of lecture

Further develop curriculum planning processes with special emphasis on emergent and integrated thematic approaches while applying knowledge of multiple intelligences. Areas of study include parent/teacher relationships, teacher development stages, staff communication and relationships. In-depth study of individual and cultural diversity as related to knowledge of child development. Concurrent enrollment in ECE 214 required. Prerequisite: ECE 211, or consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Demonstrate -- through the completion of the activities associated with Learning Styles and Multiple Intelligences, AND planning, executing and analyzing a multi-cultural project, -- the ability to understand the role these dynamics play in terms of the
- Demonstrate the inclusion of a variety of beliefs and values as contributed by families in the development of curriculum and the environment.
- Observe, interpret and document assessment information for curriculum planning, designing the environment and referral decision making.
- Design and implement integrated curriculum using the knowledge of learning styles, culture, schedules, routines, transition and emerging interests.

### **LEARNING EXP FOR YOUNG CHILDREN III LAB**

ECE 214

3 Credits

66 hours of lab

Lab experiences in Early Childhood Education Laboratory School. Plan, implement and analyze plans in relation to relevant topics in ECE 213. Concurrent enrollment in ECE 213 required. Prerequisite: ECE 212, or consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Create and implement learning activities in the lab school that support multiple intelligences in developmentally appropriate ways.
- Contribute to two children's portfolio by completing case studies using the theory of multiple intelligences.

### **EARLY CHILDHOOD SEMINAR**

ECE 215

2 Credits

22 hours of lecture

Seminar on professionalism, ethics and issues in teaching and administration. Concurrent enrollment in ECE 199, 15 hours per week required as field placement for students in teaching degree program. Prerequisite: ECE 214, or consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Compile a personal resume and philosophy statement to be included in the portfolio.
- Using group processes, plan and implement a class community service project and class representation project.
- Represent one's personal philosophy, portfolio and learning representation to a professional panel and respond to pertinent questions.
- Write reactions to issues and trends in ECE from class readings.

- Create a portfolio with documentation of work that represents the program outcomes of the ECE department.

### **SELECTED TOPICS**

ECE 280

1 - 3 Credits

33 hours of lecture

Selected topics in Early Childhood Education as listed in the quarterly class schedule. May be repeated for credit. [GE]

#### **Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this course.

### **SPECIAL PROJECTS**

ECE 290

1 - 3 Credits

Opportunity to plan, organize and complete special projects approved by the department.

Prerequisite: Consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervisory instructor.

## **Early Childhood Education**

### **INTRO EARLY CHILD ED**

ECED&105

5 Credits

55 hours of lecture

Overview of the foundations of early childhood education. Examine theories defining the field, issues and trends, best practices, and program models. Observe children, professionals, and programs in action. Concurrent enrollment in ECED& 120. Prerequisite: Students must be cleared through the Washington State Department of Early Learning to volunteer with young children. Students must show evidence of a current TB test. [SE]

#### **Course Outcomes:**

- Explain current theories and ongoing research in early care and education as it applies to children, families, and early childhood programs.
- Describe how children learn and develop through play and the role of play in early childhood programs.
- Observe an early childhood environment and identify examples of best practice.
- Compare early learning program models.
- Explain the importance of building partnerships with children's families and techniques for working effectively with families from a variety of cultural, linguistic, ethnic, and socioeconomic backgrounds.
- Identify appropriate guidance and discipline techniques used in family and classroom settings.
- Describe the observation, assessment, and teaching cycle used to plan curriculum and activities for young children.
- Apply the professional code of ethics for early care and education to resolve a dilemma.



- Describe the major historical figures, advocates, and events shaping today's early childhood education.

## **HEALTH/NUTRITION/SAFETY**

ECED&107

5 Credits

55 hours of lecture

Develop knowledge and skills to ensure good health, nutrition, and safety of children in group care and education programs. Recognize the signs of abuse and neglect, responsibilities for mandated reporting, and available community resources. Students may not receive credit for both ECED& 107 and ECE 103 or FLFN 105. [GE]

### **Course Outcomes:**

- Describe appropriate policies to prevent illness in childcare settings, schools, and other programs.
- Describe appropriate safety policies that prevent and minimize accidents for both indoor and outdoor environments.
- Recognize skills in emergency first aid, food service, routine health and safety practices, and mandated reporting.
- Describe the role of nutrition as it relates to development, licensing regulations for childcare, and government food programs.
- Create developmentally appropriate health, safety, and nutrition education materials, activities and practices.
- Identify common indicators of illnesses & infectious diseases and recognize appropriate steps to be followed.

## **PRACTICUM-NURTURING REL**

ECED&120

2 Credits

11 hours of lecture

Apply theories of best practice in an early learning setting. Focus on developing supportive relationships while keeping children healthy and safe. Students must be cleared through the Washington State Department of Early Learning to volunteer with young children. Students must show evidence of a current TB test. Concurrent enrollment in ECED& 105. [SE]

### **Course Outcomes:**

- Demonstrate appropriate practices that ensure and maintain the health, safety, and nutrition of children.
- Establish supportive relationships with children; guide them as individuals and as part of a group.
- Serve children and families in a professional manner.
- Demonstrate cultural competence and responsiveness within and across cultures; support an inclusive, welcoming, and respectful environment where all children, youth, and families can take pride in their cultural identities, beliefs, and practices.

## **INFANTS/TODDLERS CARE**

ECED&132

3 Credits

33 hours of lecture

Examine the unique developmental needs of infants and toddlers. Study the role of the caregiver,

relationships with families, developmentally appropriate practices, nurturing environments for infants and toddlers, and culturally relevant care. [GE]

**Course Outcomes:**

- Describe developmental milestones from birth to 36 months articulating the influences of individual development, temperament and cultural norms.
- Develop a plan to create reciprocal, culturally sensitive relationships with families.
- Describe state and local infant/toddler child care regulations and procedures related to group size, health, nutrition, and safety.
- Describe guidance techniques that are appropriate and effective with infants and toddlers.
- Create and critique infant and toddler environments.
- Construct a plan for developmentally appropriate, culturally relevant curriculum that supports language, physical, cognitive, creative, social, and emotional development.
- Identify resources supporting infant/toddler programs and infant/toddler specialists.

**FAMILY CHILD CARE**

ECED&134

3 Credits

33 hours of lecture

Learn the basics of home/family child care program management. Topics include licensing requirements, business management, relationship building, health, safety, and nutrition, guiding behavior and promoting growth and development. [GE]

**Course Outcomes:**

1. Describe family child care licensing standards.
2. Evaluate specific practices, determining effectiveness in meeting children's needs for maintaining good health, safety and nutrition
3. Compare strategies for establishing developmentally appropriate, socially /culturally relevant, safe child care environments in the home setting.
4. Demonstrate developmentally/socially / culturally appropriate plans and activities meeting the needs of children in multi-age groups.
5. Describe and evaluate guidance methods fostering responsibility, independence, self-reliance, and positive social /emotional growth in children.
6. Identify strategies for family child care business management including marketing, risk management, staffing, tax planning, accounting, and record keeping.
7. Discuss strategies for family child care providers to balance the demands of operating their business with meeting the needs of their families.

**ADMIN EARLY LRNG PROG**

ECED&139

3 Credits

33 hours of lecture

An overview of components necessary for child care personnel (family child care providers and center directors) to open, operate, and manage early learning programs that meet licensing, accreditation and other quality standards with a focus on program and administration and operations. [GE]

**Course Outcomes:**

1. Articulate early learning program's philosophy, mission statement, and corresponding daily practice
2. Create program policies and practices in compliance with state child care licensing codes, food program guidelines, and accreditation standards.

- 3. Plan for appropriate staffing, meals, equipment and materials and programming for specific age groups and settings.
- 4. Use a variety of strategies to maintain regular communication with families and provide opportunities for parent engagement and education
- 5. Plan a balanced budget.
- 6. Identify methods for recruiting, hiring, evaluating, supervising, and supporting the professional development of program personnel.
- 7. Use tools to evaluate program effectiveness and identify areas for improvements.
- 8. Articulate effective application of the NAEYC Code of Ethics.

## **CURRICULUM DEVELOPMENT**

ECED&160

5 Credits

55 hours of lecture

An investigation of learning theory and its relationship to curriculum development for young children. Students will focus on methods for planning and evaluating developmentally appropriate curriculum to facilitate development in the areas of language, fine/gross motor, social-emotional, cognitive and creative expression based on the interests and cultures of families and children.

Prerequisite: ECED& 105, ECED& 120, EDUC& 130, ECE 133 and ECE 132. [GE]

### **Course Outcomes:**

- Explain major early childhood curriculum theories and current trends relevant to curriculum planning.
- Use a variety of resources to plan and implement curriculum.
- Create curriculum which supports children's language/communication, cognitive, social/emotional, fine/gross motor and creative development.
- Develop age-appropriate, play-based, open-ended, concrete, child-centered and culturally reflective activities on topics related to the lives, interests and cultures of a specific group of children.
- Observe, document and assess individual and group needs, interests and skills.
- Assess the effectiveness of children's curriculum in promoting growth and development.
- Recognize how the environmental set-up of the classroom supports curriculum.

## **ENVIRONMENTS-YOUNG CHILD**

ECED&170

3 Credits

33 hours of lecture

This course will offer a broad perspective and exploration of planning physical space appropriate to children's cognitive, physical, and socio-emotional development. Students will develop an understanding of the role of environments on children's learning and behavior including schedules, materials, room arrangement, and center-based learning. We will learn to incorporate aspects of diversity and inclusion through the environment. [GE]

### **Course Outcomes:**

- Design environments that protect the health and safety of children and adults, providing balance between activities that are indoor and outdoor, quiet and active, and allow for interaction with others as well as time alone.
- Develop environmental strategies for guiding children's behavior helping them develop pro-social skills and the ability to self-regulate.
- Plan an environment, schedule, routine, and activities that meet the needs of learners ages zero to 8, promoting growth across all domains and in all disciplines.
- Describe strategies to achieve compliance with Washington Administrative Code for licensed

- child care and/or other state/federal regulations pertinent to early learning environments.
- Compare policies and environments which recognize the importance of establishing space and programming that are welcoming to families and provide opportunities for all to participate.
- Evaluate the quality and effectiveness of early learning environments serving differing age groups (ex. infant, toddler, school age) .

## **LANG/LITERACY DEVELOP**

ECED&180

3 Credits

33 hours of lecture

Teaching strategies for language acquisition and literacy skill development examined at each developmental stage (birth-age 8) through the four interrelated areas of speaking, listening, writing, and reading. [GE]

### **Course Outcomes:**

- Define language acquisition and early literacy; describe developmentally appropriate literacy behaviors.
- Discuss the value of early literacy learning and the role of adults in promoting the “power and pleasure” of literacy.
- Analyze and select children’s literature and other learning materials for a population of diverse learners, reflective of many cultures.
- Recognize and create activities/resources that support (infant/toddler through eight years old) oral language development and early literacy learning.
- Describe a developmental continuum and assessment practices for tracking reading and writing acquisition.
- Identify strategies for recognizing and responding to academic, linguistic, and cultural differences in children.

## **OBSERVATION/ASSESSMENT**

ECED&190

3 Credits

33 hours of lecture

Practice collecting and presenting observation data of children, teaching practices and learning centers in an early childhood setting. [GE]

### **Course Outcomes:**

- List and describe reasons it is important and useful to collect observation data.
- Identify and examine your own biases and beliefs as they pertain to children.
- Develop the ability to see actions and behaviors from the child’s perspective.
- Describe and demonstrate professional ethics and etiquette that applies to the collection of observation data.
- Collect objective observation data using running records, anecdotal records, checklists time and event samples.
- Use data from observations to write interpretive reports.
- Explore recording keeping and assessment practices.

## **Economics**

## **INTRODUCTION TO ECONOMICS**

ECON 101

3 Credits

33 hours of lecture

Survey of economics. Key topics include current economic issues and processes related to ways individuals, groups, and whole societies produce, distribute, and utilize economic resources. This course is good preparation for the advanced Microeconomics and Macroeconomics courses. Credit not allowed for both Economics 101 and Economics 110. [SE, SS] [PNP]

### **Course Outcomes:**

- Determine the difference between normative and positive economics, the concepts of scarcity, choice and opportunity cost, and microeconomics and macroeconomics.
- Master key economic terminology
- Understand the theories of international trade, comparative and absolute advantage and why nations trade.
- Apply the macroeconomic theories and concepts of GDP, GDP growth, inflation, unemployment and trade theory.
- Understand the four microeconomic market structures.
- Master the essentials of microeconomics; Supply and Demand analysis, Price and non-Price factors, elasticity of demand, and accounting and economic profit.

## **INTRODUCTION TO THE GLOBAL ECONOMY**

ECON 110

5 Credits

55 hours of lecture

Introduction to economic concepts and their use in the global economy. Topics include basic microeconomics and macroeconomics, international trade, balance of payments, exchange rates, international institutions, energy, war, and terrorism. Intended for economics and non-economics majors. This course is an alternative for Economics 101, with additional topics including in-depth study of international economic issues. Credit not allowed for both Economics 101 and Economics 110. [SE, SS]

### **Course Outcomes:**

- Understand key issues of the global economy and the institutions dealing with these issues.
- Be familiar with the measurement of International Trade.
- Understand the terms and models of Macroeconomics, to include measurements of the aggregate economy, models of aggregate supply and aggregate demand, and analysis of monetary and fiscal policy.
- Understand the terms and models of Microeconomics, to include supply and demand, cost of production, and market structures.

## **INTERNATIONAL ECONOMICS**

ECON 120

3 Credits

33 hours of lecture

International economics, for both economics majors and non-economic majors, emphasizes the fundamental economic concepts for understanding today's global economy. Topics include the basic concepts and tools of international economic analysis, including trade, trade policy, trading blocs, protectionism, exchange rate determination, managing currencies, multi-national corporations, labor, developing countries, and the environment. Prerequisite: A grade of "C" or better in ECON 101. [SE, SS]

### **Course Outcomes:**

- Understand the theory of Comparative Advantage and the standard model of international trade.
- Use the standard model to analyze the impact of barriers to trade and the impact of economic integration.
- Understand the components of the balance of payments and the determination of currency exchange rates.
- Place the international monetary system in a historical perspective.

## **MICRO ECONOMICS**

ECON&201

5 Credits

55 hours of lecture

Essential market processes, structures, issues, and variables governing how individuals, firms and governmental entities allocate resources, produce and distribute goods and services, determine prices, evaluate trade-offs and effectively compete and grow. Prerequisite: ECON 101 or MATH 095 or consent of Instructional Unit. [SE, SS]

### **Course Outcomes:**

- Apply concepts of price, income, and cross-price elasticities.
- Calculate and apply the various production costs; fixed, variable, marginal, average costs, etc.
- Understand and apply supply and demand concepts, including identification of factors influencing them to determine market equilibrium and analyze changes in each.
- Understand and apply the concept of Factor Productivity, Diminishing Marginal Return, and Income Determination, Comparative Advantage and Gains from Trade.
- Understand and differentiate between the four major types of markets and apply their characteristics to pricing and output decisions.

## **MACRO ECONOMICS**

ECON&202

5 Credits

55 hours of lecture

Broad economic principles, issues, structures, processes, and variables governing the dynamics of the United States and global economies. Problems of economic organization, market processes, role of government in the economy and society, money and banking processes and issues, measurement and determination of economic aggregates, fiscal and monetary policies, economic growth and development and international trade. Prerequisite: ECON 101 or MATH 095 or consent of Instructional Unit. [SE, SS]

### **Course Outcomes:**

- Evaluate the essential differences that separate and distinguish various schools of economic thought, including Classical, Keynesian and Monetarist Schools.
- Apply the concept of Macroeconomic Equilibrium to determine equilibrium price and output using Aggregate Demand and Aggregate Supply.
- Understand, describe and analyze Measurements of the Macroeconomy.
- Understand, describe and evaluate Monetary and Fiscal Policy and the Multiplier concept.

## **SELECTED TOPICS**

ECON 280

1 - 5 Credits

55 hours of lecture

Focus on selected topics in Economics. Because the course varies in theme and content, it is repeatable for credit. [GE, SE]

**Course Outcomes:**

- Demonstrate an outcome(s), experience(s), or tangible product(s) as determined by the supervisory instructor.

**SPECIAL PROJECTS**

ECON 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the department.

Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate an experience or tangible product as determined by the supervisory instructor.

**Education**

**CHILD DEVELOPMENT**

EDUC&115

5 Credits

55 hours of lecture

Build a functional understanding of the foundation of child development, prenatal to early adolescence. Focus on the physical, social, emotional, and cognitive development of children, reflective of cross cultural and global perspectives. Develop skills in: observing and documenting child growth and development, identifying theory in practice, and critical reflection of assumptions. [SE]

**Course Outcomes:**

- Name prominent theorists in the field of child development, describe the main ideas of their theories, then compare and contrast these theories.
- Describe the sequence of development from conception through adolescence, using and applying vocabulary and concepts of child development used to describe physical, social, emotional, communication, and cognitive characteristics for each stage.
- Identify and describe individual and cultural affects, differences and commonalities in child development and nurturing practices.
- Recognize and articulate how family, caregivers, teachers, community, and culture influence development.
- Identify and implement professional techniques to carry out assigned observations of children and communicate evidence of developmental growth.

**GUIDING BEHAVIOR**

EDUC&130

3 Credits

33 hours of lecture

Developing observational and interpretive skills in the guidance of young children. Specific approaches and guidance techniques. Focus on communication and negotiation skills. Curriculum planning from a developmental multicultural perspective. [GE]

**Course Outcomes:**

- Identify and differentiate developmentally appropriate child behaviors, individually and in groups. servation, in-class discussion, and readings.
- List and describe positive guidance techniques for young children birth through age 8.
- Demonstrate or describe positive, respectful, culturally responsive interactions with and between children.
- Create a model daily schedule, routine, and environment that provide support for attachment, self-help, and relationship building.
- Develop strategies to assist the child in managing his/her behavior in a manner that supports the child's positive sense of self and maintains the integrity of childhood spirit.
- Identify and communicate strategies for professional interactions with families and other staff reflecting confidentiality, respect and a positive approach to guidance
- Compare and contrast at least three approaches to guiding young children's behavior.

**SCHOOL AGE CARE**

EDUC&amp;136

3 Credits

33 hours of lecture

Develop skills to provide developmentally appropriate and culturally relevant activities and care, specifically, preparing the environment, implementing curriculum, building relationships, guiding academic/social skill development, and community outreach. [GE]

**Course Outcomes:**

- Develop a plan to create reciprocal, culturally sensitive relationships with children and families. .
- 2. Analyze the effectiveness of the environment and recommend changes reflecting the following standards: Bias free, respectful of cultural and individual diversity; Developmentally appropriate; Promotes positive self-esteem and social interaction; and S
- 3. Discuss the dynamics impacting behavior of children in after school care environments and identify guidance strategies promoting academic and social growth.
- 4. Develop a plan for curriculum and program implementation that reflects responsive respect for the local community context
- 5. Describe state and local school age care regulations and procedures related to group size, health, nutrition, and safety.
- 6. Identify resources supporting school age care and school age care/youth development specialists.

**CHILD/FAMILY/COMMUNITY**

EDUC&amp;150

3 Credits

33 hours of lecture

An ecological perspective of the family and the socialization of children. Areas of focus include an examination of family structures, historical and economic perspectives, stressors, family dynamics and culture and the resulting impact on families participating in early childhood programs. Students may not receive credit for both ECE 202 and EDUC& 150. [GE, HR]

**Course Outcomes:**

- Discuss demographic trends of children and families today; identify influences on children's development and learning.
- Develop and evaluate approaches to communicating and creating relationships with families that are inclusive and reflect an understanding of cultural and community influences.



- Articulate the benefits of family-centered programs.
- Compare and contrast strategies for involving families in their children's learning and development.
- Identify and develop resources that support parents in their role as their children's first and most important teacher.
- Identify community resources and create strategies for connecting children and families to those resources.

### **COOPERATIVE WORK EXPERIENCE**

EDUC 199

1 - 5 Credits

165 hours of clinical

Supervised work experience in education. Completion of specific learning objectives and employer evaluation. Completion of, or concurrent enrollment in, HDEV 195, 198, or 200 required.

Prerequisite: Consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Fulfill job requirements of their internship provider.

### **INTRODUCTION TO EDUCATION**

EDUC&201

3 Credits

33 hours of lecture

Overview of education as a discipline, a philosophy, and a profession. Recommended for future teachers and paraeducators. Concurrent enrollment in EDUC 210 required. [SE]

#### **Course Outcomes:**

- Model teaching that demonstrates content and professional knowledge, skills, reflective research using best practices in teacher education.
- Apply cultural competence and promote social justice in teacher education.
- Engage in inquiry and contribute to scholarship that expands the knowledge base related to teacher education.
- Collaborate regularly to improve student learning.
- Contribute in creating visions for teaching, learning, that take into account such issues as technology, systemic thinking, and educational reform.

### **EXCEPTIONAL CHILD**

EDUC&203

3 Credits

33 hours of lecture

Introduction to various topics regarding children with special needs and exploration of concepts of inclusion and individualized instruction. [GE]

#### **Course Outcomes:**

- Demonstrate knowledge of the historical foundations of early childhood special education.
- Recognize the terms, language, and legislative issues used in the field of special education.
- Describe the key characteristics from a range of conditions and disorders associated with children with special needs.
- Demonstrate knowledge of the IEP/IFSP as a classroom tool and as a way of assessing and supporting a student's growth.

- Communicate to the class through representation or experience, the issues as they apply to a specific disability.
- Develop a list of resources including professional agencies, laws, etc. that the student can use in the workplace as well as other pertinent coursework.
- Recognize the advantages and disadvantages of inclusion as defined by the families of those working with the children who have special needs.
- Develop a broader perspective of various abilities.
- Analyze how attitudes about disabilities are reflected in the larger society.

### **INTRODUCTORY FIELD EXPERIENCE**

EDUC 210

3 Credits

11 hours of lecture - 44 hours of lab

Orientation to teaching and life in the American system of schooling. Supervised volunteer field experience with a weekly, one-hour seminar. Concurrent enrollment in EDUC& 201 required. [GE]

#### **Course Outcomes:**

- Complete outcomes as determined by the course instructor.

## **Emergency Medical Technician (EMT)**

### **EMERGENCY MEDICAL TECHNICIAN - BASIC**

EMT 103

10 Credits

66 hours of lecture - 66 hours of lab

120 hours of training in emergency procedures and 10 hours of in-hospital observation. Each lesson provides for supervised practice of skills taught in that lesson. As required by the DOT, this course is under the supervision of a physician and lay-coordinator. Meets the requirements of State EMT certification. Must be 18 years of age and have proof of current Healthcare Provider Level CPR (CPR 032) or acquire within the first week of the course. Immunizations must be up-to-date. Students must purchase text available at Clark College Bookstore. Bring text to class. [GE] [PNP]

#### **Course Outcomes:**

- Administer first aid treatment or life support care to sick or injured persons in prehospital settings.
- Perform emergency assessment and treatment procedures, observing, recording, and reporting to the receiving facility, the patient's condition or injury.
- Communicate effectively and professionally using verbal, nonverbal, and written language with patients, colleagues, the public, diverse populations, and other healthcare providers.
- Model professional behaviors and make appropriate decisions guided by ethical principles and core values.

## **English**

### **WRITING FUNDAMENTALS**

ENGL 097

5 Credits

55 hours of lecture

Emphasis on writing complete, correct sentences and unified, coherent paragraphs and short essays. Learn to build writing skills through pre-writing, drafting, revising, and editing, and develop analytical habits of mind, reading comprehension strategies, and digital literacy skills. Short essays and selected readings will be assigned. Concurrent enrollment in READ 087 if score on college reading skills placement test recommends it. Prerequisite: Recommending score on college writing skills placement test or recommendations of ABE instructor.

**Course Outcomes:**

- Compose thesis statements appropriate to short essays and maintain focus throughout.
- Support ideas through logical reasoning, source summary/response, and other appropriate evidence.
- Apply organizational strategies to give writing structure and focus.
- Employ signal phrasing to introduce sources ethically.
- Examine the writing situation and use vocabulary and sentence structure appropriate to a college-level audience.
- Use conventions of standard written English and page layout to facilitate reading.

**WRITING FUNDAMENTALS**

ENGL 098

5 Credits

55 hours of lecture

Emphasis on expository writing and increasing control of grammar and mechanics. Skills include summarizing and writing essays. Students develop skills through pre-writing, drafting, revising, and editing. In-class and out-of-class writing required. Prerequisite: A grade of "C" or better in ENGL 097, or recommending score on the College writing skills placement test for ENGL 098.

**Course Outcomes:**

- Compose thesis statements appropriate to short essays and maintain focus throughout.
- Support ideas through logical reasoning, source integration, and other appropriate evidence.
- Construct an easy-to-follow, logical progression of ideas and information.
- Employ signal phrasing and MLA citation methods to introduce and document sources ethically.
- Examine the writing situation and use vocabulary and sentence structure appropriate to a college-level audience.
- Use conventions of standard written English and page layout to facilitate reading.

**ENGLISH COMPOSITION I**

ENGL&101

5 Credits

55 hours of lecture

Exposition and argument, emphasizing critical thinking in response to electronic and print texts. Focus on exploring, developing, and communicating ideas in a voice appropriate to the audience. Students strengthen skills through pre-writing, drafting, revising, and editing. In-class and out-of-class writing required. Prerequisite: A grade of "C" or better in ENGL 098 taken at 5 credits or recommending score on the writing skills placement test for ENGL 101. [C, SE]

**Course Outcomes:**

- Compose thesis statements appropriate to essays and maintain focus throughout.
- Support ideas through logical reasoning, source integration and analysis, and other appropriate evidence.
- Construct an easy-to-follow, logical progression of ideas and information.
- Employ signal phrasing and MLA citation methods to introduce and document sources

ethically.

- Examine the writing situation and use vocabulary and sentence structure appropriate to a college-level audience.
- Use conventions of standard written English and page layout to facilitate reading.

## **ENGLISH COMPOSITION II**

ENGL&102

5 Credits

55 hours of lecture

Continued studies in exposition and argument emphasizing the research paper. Focus on analysis and synthesis of electronic and print texts in the context of supporting the writer's ideas with appropriate documentation. Students refine skills through pre-writing, drafting, revising, and editing. Prerequisite: A grade of "C" or better in ENGL 101. [C, SE]

### **Course Outcomes:**

- Compose thesis statements appropriate to a sustained line of inquiry in lengthy writing and research projects; maintain focus throughout.
- Support ideas through logical reasoning and by integrating, analyzing, and synthesizing material from numerous sources, including scholarly sources.
- Construct an easy-to-follow, logical progression of ideas and information to manage arguments and analysis in a lengthy project.
- Employ signal phrasing and MLA citation methods to introduce and document sources ethically.
- Examine the writing situation and use vocabulary and sentence structure appropriate to a college-level audience.
- Use conventions of standard written English and page layout to facilitate reading.

## **ADVANCED ENGLISH COMPOSITION**

ENGL 103

3 Credits

33 hours of lecture

Emphasis on composing essays on complex ideas of cultural importance. Assignments based on reading and research in art, science, philosophy, and politics. Prerequisite: ENGL& 102 (or ENGL 102). [C, SE]

### **Course Outcomes:**

- Analyze and synthesize multiple approaches to knowledge in various disciplines.
- Demonstrate effective use of voice in writing; experiment with different voices in academic pieces, noting rhetorical effects of each.
- Identify and model increased awareness of audience in academic writing.
- Evaluate the role of style in published works and demonstrate its use in your own revision process.
- Model awareness of genre and experimentation with genre.
- Increase skill with revision.
- Illustrate comprehensive knowledge of the conventions of academic writing.

## **ENGLISH GRAMMAR**

ENGL 105

5 Credits

55 hours of lecture

Description and analysis of the structure of English language, using traditional grammar and syntax. Designed to fulfill the grammar requirement for English majors seeking Washington State teacher certification in English. [SE]

**Course Outcomes:**

- Define and identify within sentence contexts the seven parts of speech— noun, verb, article, adjective, adverb, preposition, conjunction—expressed in both single word and phrase forms.
- Define and describe the functional elements of simple and complex sentence structures— subjects, verbs, complements, adjectival & adverbial modifiers, etc.—in both single word and phrase forms.
- Define and employ the vocabulary of technical terms used in traditional grammar to describe simple and complex sentence structures.

**WRITING ABOUT FILM**

ENGL 108

3 Credits

33 hours of lecture

Focus on writing effective research essays analyzing international films. Emphasis on the composition process and the development of writing skills and evaluation sources, including prewriting, drafting, revising, editing, and documenting. Introduction to film terminology and techniques and the major approaches used in writing essays about films, including film history, national cinemas, genres, auteurism, and formalism, and ideological studies. Prerequisite: A grade of "C" or better in ENGL& 101. [C, SE]

**Course Outcomes:**

- Describe the cultural contexts of films and explain how they influence and reflect cultures.
- Describe significant technological and creative developments in film from the early 1900s to the present.
- Apply critical methods of film analysis and the appropriate terminology of the elements of filmmaking to a thesis-focused research essay that interprets and evaluates a film.
- Summarize, paraphrase, and quote credible sources accurately with MLA documentation, and integrate them well to support an analysis of a film.
- Organize an essay around a thesis supported by topic sentences; include sufficient details and evidence, and anticipate and address opposing viewpoints.
- Write simple, compound, and complex sentences consistently without fragments or run-ons.

**WRITING ABOUT THE SCIENCES**

ENGL 109

5 Credits

55 hours of lecture

Continued studies in writing expository essays, focusing on topics in the life sciences and physical sciences. Emphasis on critical reading of published scientific research and appropriate use of peer-reviewed journals to support the writer's ideas. Expanding academic writing skills of pre-writing, drafting, revising, editing, and documenting. Prerequisite: A grade of "C" or better in ENGL& 101 (or ENGL 101). [C, SE]

**Course Outcomes:**

- Identify and choose from a variety of research tools and resources.
- Use library databases and internet to locate information and evaluate the credibility, reliability, and usefulness of sources during the search process.
- Develop note-taking systems to record searches, annotate sources, and cite sources accurately.

- Summarize and paraphrase a range of materials, including academic or professional articles, using a consistent voice.
- Select and fairly represent sources that present data or arguments that conflict with as well as support the student's argument.
- Apply consistent formal documentation standards (using a single style sheet from a scientific discipline, such as APA, CSE, ACS, IEEE, or JAMA) with precision and attention to detail for both in-text citations and reference pages.
- Use at least 10 sources in a single paper.
- Use a range of sources to generate topics, create questions to focus research, and ultimately develop a topic and claim for a researched argument.
- Narrow the scope of a topic to a specific scientific issue that can be addressed in depth in a 3000-3600 word paper.
- Consider varying opinions and experiences when reading and writing.
- Evaluate numerous sources, including scholarly sources, for credibility, bias, currency, logic, and rhetorical effectiveness, etc. and select most credible and relevant sources for the student's own essay(s).
- Identify or speculate on the implications and consequences of evidence in their own and others' writing.
- Develop and organize a 3000-3600 word essay unified by a focused central thesis requiring systematic, substantial research, addressing a scientific purpose, using 10 or more credible sources, including at least three scholarly sources.
- Support thesis/ideas with sufficient detail and evidence based on extensive research.
- Create a clearly articulated essay structure using a thesis statement, topic sentences, and transitions that emphasize a line of reasoning.
- Direct discourse diction, voice, tone, examples, and evidence to an academic audience, avoiding deceptive or inflammatory language.
- Anticipate objections and make concessions as necessary based on both the data and logic of the main ideas as well as the possible response of readers, acknowledging, where appropriate, the limits of their own claim, evidence, and expertise.
- Write complete simple, compound, and complex sentences consistently without fragments or run-ons.
- Maintain a consistent point of view and tense.
- Choose language that is accurate and appropriate to the discipline(s) or subject area(s) addressed in their research paper topics.
- Edit to remove all but occasional problems in syntax, grammar, and punctuation.
- Use a variety of grammatically correct sentence structures and vary their use to increase clarity and rhetorical effectiveness, even in sentences that combine borrowed language with their own.
- Work collaboratively by expressing opinions with tact, listening to others, and shouldering an appropriate share of the workload: Listen and contribute pertinent comments to class discussion without dominating the conversations; Prepare for peer response
- Assess their own work, set goals, seek and use feedback, revise and edit, practice self-discipline and persistence, and apply skills in new contexts: Consistently work to meet deadlines; Seek out instructor feedback and advice or seek out assistance at th

## **COMPOSITION FOR LITERATURE**

ENGL 110

5 Credits

55 hours of lecture

Continued studies in writing essays of exposition and argument emphasizing the interpretation of literature, with focus on critical reading of literary texts using theories and appropriate use of documented sources to support the writer's ideas. Expanding academic writing skills of pre-writing, drafting, revising, editing, and documenting. Prerequisite: ENGL& 101 (ENGL 101). [C, SE]

## Course Outcomes:

- Identify and choose from a variety of literary research tools and resources, evaluating the credibility of information from secondary sources.
- Summarize, paraphrase, and quote from assigned works and from critical sources to support an analysis of a literary work; incorporate and acknowledge ideas and information borrowed from sources according to MLA documentation standards.
- Use the conventions of academic literary research to create a thesis-focused research essay that defends an interpretation of a literary work.
- Use the methods of literary analysis to develop an interpretation of a literary work.
- Organize and develop writing with a focused central idea, using supporting evidence from research in order to emphasize a line of reasoning.
- Direct discourse, diction, voice, tone, examples and evidence to an academic audience.
- Illustrate comprehensive knowledge of the conventions of academic literary research writing.
- Work collaboratively by expressing opinions with tact, listening to others, and shouldering an appropriate share of the workload.
- Demonstrate college-level behaviors in self-assessment, meeting deadlines, being prepared for class sessions, and incorporating feedback from peers.

## CREATIVE WRITING

ENGL 121

3 Credits

33 hours of lecture

Students may restrict themselves to writing poetry, short stories, plays or may choose to work in several forms. Helps students determine what they will say and how they will say it. Prerequisite: A grade of "B" or better in ENGL 098, a grade of "C" or better in ENGL 099, or recommending score on the college writing skills placement test for ENGL& 101 (ENGL 101). [HB, SE]

### Course Outcomes:

- Write original creative texts (short fiction, creative nonfiction, drama, and/or poetry) that demonstrate knowledge of literary devices and forms.
- Provide written and/or verbal responses to creative texts (peers' texts and/or published texts) with constructive and substantive comments that demonstrate knowledge of literary devices and forms.
- Observe workshop etiquette and participate ethically in the workshop format as both a writer who receives feedback and a reader who offers feedback.
- Use reader feedback to determine revisionary choices and/or defend on literary grounds a text as originally written with little or no revision.

## FICTION WRITING

ENGL 125

3 Credits

33 hours of lecture

Fundamentals of writing fiction with an emphasis on short fiction. Develops skills for critiquing student fiction. Writing Workshop format. [HB, SE]

### Course Outcomes:

- Write original short fiction that demonstrates knowledge of literary devices and forms.
- Provide written and/or verbal responses to short fiction texts (peers' texts and/or published texts) with constructive and substantive comments that demonstrate knowledge of literary devices and forms.
- Observe workshop etiquette and participate ethically in the workshop format as both a writer

who receives feedback and a reader who offers feedback.

- Use reader feedback to determine revisionary choices and/or defend on literary grounds a text as originally written with little or no revision.

## **POETRY WRITING**

ENGL 126

3 Credits

33 hours of lecture

Class discussion of student work, development of tools for self-criticism, and strategies for getting poetry published. [HB, SE]

### **Course Outcomes:**

- Write original poetry that demonstrates knowledge of literary devices and forms.
- Provide written and/or verbal responses to poems (peers' poems and/or published poems) with constructive and substantive comments that demonstrate knowledge of literary devices and forms.
- Observe workshop etiquette and participate ethically in the workshop format as both a writer who receives feedback and a reader who offers feedback.
- Use reader feedback to determine revisionary choices and/or defend on literary grounds a poem as originally written with little or no revision.

## **INTRODUCTION TO CREATIVE NONFICTION WRITING**

ENGL 127

3 Credits

33 hours of lecture

An introduction to creative nonfiction writing, with an emphasis on writing from personal experience. Development of polished pieces of nonfiction; class discussion of student writing; reading and discussion of examples of the genre; writing exercises to develop key elements of craft; strategies for self-editing and revision. Forms of nonfiction covered include memoir, literary journalism, and personal essay. [HB] [PNP]

### **Course Outcomes:**

- Write original creative texts that demonstrate knowledge of literary devices and forms.
- Provide written and verbal responses to creative texts with constructive and substantive comments that demonstrate knowledge of literary devices and forms.
- Observe workshop etiquette and participate ethically in the workshop format as both a writer who receives feedback and a reader who offers feedback.
- Use reader feedback to determine revisionary choices and/or be able to defend on literary grounds a text as originally written with little or no revision.

## **INTRODUCTION TO LITERATURE**

ENGL 130

3 Credits

33 hours of lecture

An introduction to poetry, fiction, and dramatic literature, and to the language and principles of literary analysis. [HA, SE]

### **Course Outcomes:**

- Describe how types of literature influence or reflect cultures.
- Analyze, interpret, and critique works of literature using textual evidence and the vocabulary



and methods of literary analysis.

- Identify and explain the importance of major authors and types of literature.

### **INTRODUCTION TO POETRY**

ENGL 131

3 Credits

33 hours of lecture

Study of poetry, poetic forms, and the language and principles of literary analysis. [HA, SE] [PNP]

#### **Course Outcomes:**

- Describe how poetry influences or reflects cultures.
- Analyze, interpret, and critique works of literature using textual evidence and the vocabulary and methods of literary analysis.
- Identify and explain the importance of major authors and key elements of poetry.

### **INTRODUCTION TO DRAMATIC LITERATURE**

ENGL 132

3 Credits

33 hours of lecture

Study of drama as both literature and theater, from historical, philosophical and artistic perspectives. [HA, SE]

#### **Course Outcomes:**

- Describe how poetry influences or reflects cultures.
- Analyze, interpret, and critique works of literature using textual evidence and the vocabulary and methods of literary analysis.
- Identify and explain the importance of major authors and key elements of poetry.

### **INTRODUCTION TO FICTION**

ENGL 133

3 Credits

33 hours of lecture

Study of fiction in both short story and novel form, including classic and contemporary examples. Introduction to the language and principles of literary analysis. [HA, SE] [PNP]

#### **Course Outcomes:**

- Describe how plays influence or reflect cultures.
- Analyze, interpret, and critique works of literature using textual evidence and the vocabulary and methods of literary analysis.
- Identify and explain the importance of major authors and key elements of dramatic literature.

### **WOMEN IN LITERATURE**

ENGL 140

3 Credits

33 hours of lecture

Study of fiction, nonfiction, poetry, and drama written by women reflecting the female experience. [HA, SE]

**Course Outcomes:**

- Describe the contexts of power, privilege, and inequity in which women's literature is written and how this literature influences and reflects cultures.
- Analyze, interpret, and critique works of literature using textual evidence and the vocabulary and methods of literary analysis and social critique.
- Identify and explain the importance of major authors and themes in literature by women with particular attention to issues of race and racism, class and classism, social injustice, stereotype, internalized oppression, and individual, institutional, and id

**SCIENCE FICTION AND FANTASY**

ENGL 143

3 Credits

33 hours of lecture

Study of speculative fiction from fantasy to hard science with attempts to define its particular qualities and place in modern literature. [HA, SE]

**Course Outcomes:**

- Describe the context in which science fiction and fantasy are written and how this literature influences and reflects cultures.
- Analyze, interpret, and critique works of literature using textual evidence and the vocabulary and methods of literary analysis.
- Identify and explain the importance of major authors and themes in science fiction and fantasy.

**DETECTIVE FICTION**

ENGL 145

3 Credits

33 hours of lecture

Introduction to detective fiction, its typical styles and techniques, its interactive nature, and its capacity for social critique. Topics include early detective authors and the evolution of the popular image of the detective in American and British cultures. [HA, SE] [PNP]

**Course Outcomes:**

- Describe the context in which detective fiction is written and how this literature influences and reflects cultures.
- Analyze, interpret, and critique works of literature using textual evidence and the vocabulary and methods of literary analysis.
- Identify and explain the importance of major authors and themes in detective fiction.

**INTRODUCTION TO CLASSICAL MYTHOLOGY**

ENGL 150

3 Credits

33 hours of lecture

Study of significant world myths, including their sources and literary expressions. [HA, SE]

**Course Outcomes:**

- Describe the context in which mythology is written and how mythology influences and reflects cultures.
- Analyze, interpret, and critique works of literature using textual evidence and the vocabulary

and methods of literary analysis.

- Identify and explain the major elements, themes, and characters in mythology.

## **THE BIBLE AS LITERATURE**

ENGL 152

3 Credits

33 hours of lecture

Study of the varied genres of Biblical literature from literary, historical, and cultural perspectives. [HA, SE]

### **Course Outcomes:**

- Describe the context in which the Bible as Literature was written and how the Bible influences and reflects cultures.
- Analyze, interpret, and critique works of literature using textual evidence and the vocabulary and methods of literary analysis.
- Identify and explain the major elements, themes, and characters in the Bible.

## **INTRODUCTION TO THE NOVEL**

ENGL 156

3 Credits

33 hours of lecture

Study of the novel from historical, artistic, and thematic perspectives. Introduction to the language and principles of literary analysis. [HA, SE] [PNP]

### **Course Outcomes:**

- Describe the context in which the novel is written and how the novel influences and reflects cultures.
- Analyze, interpret, and critique works of literature using textual evidence and the vocabulary and methods of literary analysis.
- Identify and explain the importance of major authors and key elements of the novel.

## **WRITING FOR THE WEB**

ENGL 160

3 Credits

33 hours of lecture

A survey of best practices for creating reader-centered, purpose-driven web communications: problem solving through the writing process, designing for interactivity, collaborating with other creators and shareholders, measuring and analyzing web metrics, and practicing legal and ethical standards. Prerequisite: A grade of "C" or better in ENGL& 101. [PNP]

### **Course Outcomes:**

- Create reader-centered communications that utilize the appropriate technology or platform based on an understanding of how readers consume and interpret web-based material.
- Write web-deliverable content with appropriate style for setting and purpose to foster engagement and interactivity.
- Identify and solve content-related problems at conceptual and technical levels, emphasizing the characteristics present in web publishing, as well as standard rules of written communications.
- Communicate ethically with regard to contemporary laws, policies, and best practices pertaining to intellectual property, netiquette, defamation, libel, privacy, and accessibility.

- Understand, interpret, and implement systems and data designed to effectively measure statistics, analytics, A/B testing, search engine optimization, and other empirical evidence as it pertains to the goals of the project or site.

### **COOPERATIVE WORK EXPERIENCE**

ENGL 199

1 - 5 Credits

165 hours of clinical

For students interested in careers that emphasize writing, co-op work experience offers credit for supervised work in writing-related jobs. Completion of, or concurrent enrollment in, HDEV 195, 198, or 200 required. Prerequisite: Consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Fulfill the job requirements of their internship provider.

### **BUSINESS COMMUNICATIONS**

ENGL 212

3 Credits

33 hours of lecture

Developing proficiency in written and oral communications appropriate for business by composing, organizing, and editing letters, reports, memos, emails, and presentations from a variety of business cases and managerial interviews. Emphasis on team work, collaboration, diversity, intercultural communication, and the delivery of oral presentations, using specialized software. Same as BUS 211. Prerequisite: ENGL& 101 (ENGL 101) or consent of Instructional Unit. [C, GE, SE]

#### **Course Outcomes:**

- Identify and utilize at least five aspects of audience analysis for communication and demonstrate culture- and gender-awareness by using audience-tailored messages and inclusive language and delivery methods.
- Apply techniques for successful verbal communication on the job including conducting using interpersonal communication in business situations and working in teams. Students will also research, design and deliver oral presentations.
- Demonstrate techniques for successful written communication on the job. This includes writing well-organized and effective direct, goodwill, persuasive, and bad news letters, memos and e-mails and utilizing techniques of business communications (grabbing

### **TECHNICAL WRITING**

ENGL&235

5 Credits

55 hours of lecture

Study of advanced writing skills for typical work-world documents in a business/technical environment, with emphasis on document format, audience analysis, correspondence, formal and informal reports, research, and documentation. Prerequisite: A grade of "C" or better in ENGL& 101 or ENGL 135. [C, SE] [PNP]

#### **Course Outcomes:**

- Collect and organize empirical data for a specific purpose and work-world audience;.
- Locate, evaluate, and integrate credible research into a written document for a specific purpose and work-world audience;.

- Apply appropriate formatting and visual aids for a specific purpose and work-world audience;
- Edit for accuracy, brevity, clarity, to write an ethical document with a specific purpose and work-world audience; and.
- Contribute successfully to a group in the creation of work-world documents.

## **INTRODUCTION TO QUEER LITERATURE**

ENGL 254

3 Credits

33 hours of lecture

An introductory survey of literature relevant to the gay, lesbian, bisexual, and trans communities and their historical predecessors from pre-modern times to the present. Prerequisite: College level reading and writing recommended. [HA, SE] [PNP]

### **Course Outcomes:**

- Describe the contexts of power, privilege and inequity in which queer literature is written and how this literature influences and reflects cultures.
- Analyze, interpret, and critique works of literature using textual evidence and the vocabulary and methods of literary analysis and social critique.
- Identify and explain the importance of major authors and themes in queer literature, with particular attention to issues of race and racism, class and classism, social injustice, stereotype, agent and target status, internalized oppression, and individual

## **WORLD LITERATURE**

ENGL 260

3 Credits

33 hours of lecture

Masterpieces of the Ancient World through the fourteenth century. Literature is read within its historical and cultural setting. Eligibility for ENGL& 101 (or ENGL 101) recommended. [HA, SE]

### **Course Outcomes:**

- Describe the context of world literature from ancient times to 1400 and how this literature influences and reflects cultures.
- Analyze, interpret, and critique works of literature using textual evidence and the vocabulary and methods of literary analysis.
- Identify and explain the importance of major authors, themes, characters, or literary movements in world literature prior to 1400.

## **WORLD LITERATURE**

ENGL 261

3 Credits

33 hours of lecture

Masterpieces from the fifteenth century through the eighteenth century. Literature is read within its historical and cultural settings. Eligibility for ENGL& 101 (or ENGL 101) recommended. [HA, SE]

### **Course Outcomes:**

- Describe the context of world literature from 1400 to 1800 and how this literature influences and reflects cultures.
- Analyze, interpret, and critique works of literature using textual evidence and the vocabulary

and methods of literary analysis.

- Identify and explain the importance of major authors, themes, characters, or literary movements in world literature from 1400 to 1800.

## **WORLD LITERATURE**

ENGL 262

3 Credits

33 hours of lecture

Masterpieces of world literature from the nineteenth century through the contemporary period. Literature is read within its historical and cultural settings. Eligibility for ENGL& 101 (or ENGL 101) recommended. [HA, SE]

### **Course Outcomes:**

- Describe the context of world literature from 1800 to the present and how this literature influences and reflects cultures.
- Analyze, interpret, and critique works of literature using textual evidence and the vocabulary and methods of literary analysis.
- Identify and explain the importance of major authors, themes, characters, or literary movements in world literature from 1800 to the present.

## **BRITISH LITERATURE**

ENGL 264

3 Credits

33 hours of lecture

Classics of British literature from the eighth to the seventeenth century. Literature is read within its historical and cultural settings. Eligibility for ENGL& 101 (or ENGL 101) recommended. [HA, SE]

### **Course Outcomes:**

- Describe the context of British literature from the beginnings to 1600 and how this literature influences and reflects cultures.
- Analyze, interpret, and critique works of literature using textual evidence and the vocabulary and methods of literary analysis.
- Identify and explain the importance of major authors, themes, characters, or literary movements in British literature from 700 to 1600.

## **BRITISH LITERATURE**

ENGL 265

3 Credits

33 hours of lecture

Classics of British literature from the seventeenth to the nineteenth century. Literature is read within its historical and cultural setting. Eligibility for ENGL& 101 (or ENGL 101) recommended. [HA, SE]

### **Course Outcomes:**

- Describe the context of British literature from 1600 to 1800 and how this literature influences and reflects cultures.
- Analyze, interpret, and critique works of literature using textual evidence and the vocabulary and methods of literary analysis.
- Identify and explain the importance of major authors, themes, characters, or literary

movements in British literature from 1600 to 1800 .

## **BRITISH LITERATURE**

ENGL 266

3 Credits

33 hours of lecture

Classics of British literature from the nineteenth century to the present. Literature is read within its historical and cultural settings. Eligibility for ENGL& 101 (or ENGL 101) recommended. [HA, SE]

### **Course Outcomes:**

- Describe the context of British literature from 1800 to the present and how this literature influences and reflects cultures.
- Analyze, interpret, and critique works of literature using textual evidence and the vocabulary and methods of literary analysis.
- Identify and explain the importance of major authors, themes, characters, or literary movements in British literature from 1800 to present.

## **AMERICAN MULTIETHNIC LIT**

ENGL 267

3 Credits

33 hours of lecture

Survey of American multiethnic writing from Civil Rights era to the present. Emphasis on writings as a "window" to American ethnic experience, culture, and history within larger American historical contexts, encouraging students to develop understanding of political, social, and historic climate as it helps shape and is shaped by literature. [HA, SE] [PNP]

### **Course Outcomes:**

- Describe the context of power, privilege, and inequity in which the works of multiethnic American literature were written and how this literature influences and reflects culture.
- Closely read, analyze, interpret, and critique works of literature by authors of various ethnicities using textual evidence and the vocabulary and methods of literary analysis.
- Identify and explain the importance of authors, themes, characters, or literary movements in multiethnic American literature.

## **AMERICAN LITERATURE**

ENGL 268

3 Credits

33 hours of lecture

Survey of American writing from the colonial period to the Civil War. Literature is read within its historical and cultural setting. Eligibility for ENGL& 101 (or ENGL 101) recommended. [HA, SE]

### **Course Outcomes:**

- Describe the context in which American Literature from the beginnings to 1865 was written and how this literature influences and reflects cultures.
- Analyze, interpret, and critique works of literature using textual evidence and the vocabulary and methods of literary analysis.
- Identify and explain the importance of major authors, themes, characters, or literary movements in American literature from the beginnings to 1865.

## **AMERICAN LITERATURE**

ENGL 269

3 Credits

33 hours of lecture

Survey of American writing from the Civil War through World War I. Literature is read within its historical and cultural setting. Eligibility for ENGL& 101 (ENGL 101) recommended. [HA, SE]

### **Course Outcomes:**

- Describe the context in which American Literature from 1865-1920 was written and how this literature influences and reflects cultures
- Analyze, interpret, and critique works of literature using textual evidence and the vocabulary and methods of literary analysis.
- Identify and explain the importance of major authors, themes, characters, or literary movements in American literature from 1865 to 1920.

## **AMERICAN LITERATURE**

ENGL 270

3 Credits

33 hours of lecture

Survey of American writing from World War I to the present. Literature is read within its historical and cultural setting. Eligibility for ENGL& 101 (ENGL 101) recommended. [HA, SE]

### **Course Outcomes:**

- Describe the context in which American Literature from 1920 to the present was written and how this literature influences and reflects cultures.
- Analyze, interpret, and critique works of literature using textual evidence and the vocabulary and methods of literary analysis.
- Identify and explain the importance of major authors, themes, characters, or literary movements in American literature from 1920 to the present.

## **PACIFIC NORTHWEST LITERATURE**

ENGL 271

3 Credits

33 hours of lecture

Focus on writing from and about the Pacific Northwest to explore how the region is defined, imagined, and represented in literature, and the development of regionalism, national and regional histories and other identity-producing media. Eligibility for ENGL& 101 recommended. [HA, SE]

### **Course Outcomes:**

- Describe the context of Pacific Northwest literature and how this literature influences and reflects cultures.
- Analyze, interpret, and critique works of literature using textual evidence and the vocabulary and methods of literary analysis. Analyze sources to identify areas for investigation.
- Identify and explain the importance of major authors, themes, characters, or literary movements in Pacific Northwest literature.



## **INTRODUCTION TO SHAKESPEARE**

ENGL 272

3 Credits

33 hours of lecture

Readings of selected tragedy, comedy and historical plays of Shakespeare. Eligibility for ENGL& 101 (ENGL 101) recommended. [HA, SE]

### **Course Outcomes:**

- Describe the context in which the literature of Shakespeare was written and how his work influences and reflects cultures.
- Analyze, interpret, and critique works of literature using textual evidence and the vocabulary and methods of literary analysis.
- Identify and explain the major elements, themes, and characters in the work of Shakespeare.

## **ADVANCED FICTION WRITING**

ENGL 275

3 Credits

33 hours of lecture

Continuation of introductory creative writing courses. Advancement of the fundamentals of writing fiction with an emphasis on short fiction. Further development of skills for critiquing student fiction and participation in the larger literary world through publication, presentation, or other mediums. Writing workshop format. Prerequisite: A grade of "C" or better in ENGL 121, 122, 125, 126, or 127 or consent of Instructional Unit. [HB, SE]

### **Course Outcomes:**

- Write original short fiction that demonstrates knowledge of literary devices and forms.
- Provide written and/or verbal responses to short fiction texts (peers' texts and/or published texts) with constructive and substantive comments that demonstrate knowledge of literary devices and forms.
- Observe workshop etiquette and participate ethically in the workshop format as both a writer who receives feedback and a reader who offers feedback.
- Use reader feedback to determine revisionary choices and/or defend on literary grounds a text as originally written with little or no revision.
- Demonstrate progress toward publishing work by researching appropriate publications for submitting work and/or submitting one or two short stories for publication.

## **ADVANCED POETRY WRITING**

ENGL 276

3 Credits

33 hours of lecture

Continuation of ENGL 126. Further development of the principles of writing and marketing poetry. Prerequisite: A grade of "C" or better in on of the following: ENGL 121, 122, 123, or 126. [HB, SE]

### **Course Outcomes:**

- Write original poetry that demonstrates knowledge of literary devices and forms.
- Provide written and/or verbal responses to poems (peers' poems and/or published poems) with constructive and substantive comments that demonstrate knowledge of literary devices and forms.
- Observe workshop etiquette and participate ethically in the workshop format as both a writer who receives feedback and a reader who offers feedback.

- Use reader feedback to determine revisionary choices and/or defend on literary grounds a poem as originally written with little or no revision.
- Demonstrate progress toward publishing work by researching appropriate publications for submitting work and/or submitting one or two poems for publication.

## **INTRODUCTION TO LITERARY PUBLICATION**

ENGL 277

3 Credits

33 hours of lecture

Introduction to publication strategies and editing of short fiction, poetry, and creative non-fiction. Topics include study of current literary journals to aid in building a vision for Clark's art and literary journal, Phoenix, and work on production tasks related to Phoenix. Intended for Phoenix literary staff, creative writing students, and others interested in the literary publication and editing. Prerequisite: Eligibility for ENGL& 101. [HB] [PNP]

### **Course Outcomes:**

- Analyze literary journals and contemporary fiction and poetry for content and approach.
- Create a literary vision and complete literary production tasks for the Phoenix.
- Engage in promotion and marketing strategies for the Phoenix.
- Work effectively as a member of a team.

## **SELECTED TOPICS**

ENGL 280

1 - 3 Credits

33 hours of lecture

Course focuses on selected topics in English. Topics vary, and course theme and content change to reflect new topics. Because the course varies in content, it is repeatable for credit for different topics. [SE]

### **Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this course.

## **SPECIAL PROJECTS**

ENGL 290

1 - 5 Credits

Opportunity to plan, organize, and complete special projects approved by the department. Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## **Engineering**

### **HP GRAPHING CALCULATOR**

ENGR 080

1 Credits

11 hours of lecture

Basic and advanced calculator function. Graphing matrices, statistics, conversions, programming and directories are included. Additional topics are covered as required. Developed to help students become more proficient using their HP calculators. Prerequisite: "C" or better in MATH 030. [SE]

**Course Outcomes:**

- Course is in suspension, pending curricular review.

**ENGINEERING AND COMPUTER SCIENCE ORIENTATION**

ENGR 101

1 Credits

22 hours of lab

Orientation for students interested in Engineering and Computer Science. Topics include effective planning, communication, teamwork, and exposure to Engineering and Computer Science educational/career opportunities and challenges. Credit not allowed for both ENGR 101 and CSE 101. [SE] [PNP]

**Course Outcomes:**

- Explore Engineering careers and education field.
- Recognize the importance and key elements of educational planning.
- Practice using available resources and effectiveness tools relevant to area of interest.

**INTRODUCTION TO DESIGN**

ENGR&104

5 Credits

44 hours of lecture - 33 hours of lab

Introduction to the engineering method of problem solving through guided Engineering design projects. Focus on developing group skills, understanding the effects of different learning styles, producing strategies for innovation, and fostering creativity in problem solving. Cannot receive credit for both ENGR& 104 and PHSC 104. [NS, SE]

**Course Outcomes:**

- Demonstrate creative thinking. Understand how to develop their creative abilities.
- Demonstrate the ability to work effectively in a team. Realize personal learning styles.
- Communicate clear, concise Engineering problem solving. Begin to create clear, concise technical reports.
- Understand Professionalism and Ethics. Develop a respect and commitment for the engineering profession.
- Begin the process of learning how to keep informed of changing technology.

**INTRO TO AEROSPACE ENGINEERING**

ENGR 107

2 Credits

11 hours of lecture - 22 hours of lab

Introduction to general aerospace industry topics: lift, drag, propulsion, performance, stability and control, design, and testing. Includes a team approach to design activities such as paper aircraft design and high powered rocket construction. Prerequisite: ENGR& 104 (or ENGR 110) or consent of Instructor. [SE]

**Course Outcomes:**

- Discuss elements of educational requirements for a degree in aerospace engineering, or a degree related to the aerospace industry.
- Discuss elements of aerospace engineering with regard to aircraft flight.
- Discuss the basic aerodynamics of airplane flight.
- Demonstrate the ability to work in a design team.
- Discuss the concepts of lift from, and flow about an airfoil and a wing,
- Discuss the concepts of aerodynamic drag.
- Analyze, solve, and document elementary problems involving aerodynamic coefficients.
- Discuss the basics of aircraft propulsion.
- Discuss the basics of aircraft performance.
- Analyze, solve, and document elementary problems of aircraft performance.
- Discuss the concepts of aircraft stability and control.
- Discuss the concepts of high speed aerodynamics.
- Discuss the concepts of wind tunnel testing.
- Discuss the process of aircraft design.
- Analyze, solve, and document elementary problems in aircraft design, print drawings.

## **INTRODUCTION TO ENGINEERING**

ENGR 109

5 Credits

55 hours of lecture

Introduction to the engineering profession: its branches, principles, and practices. Engineering problem-solving, methods of analysis and design, and an introduction to engineering fundamentals. Prerequisite: MATH 103 or equivalent, and completion of, or concurrent enrollment in MATH 111 or equivalent. [SE]

### **Course Outcomes:**

- Formulate solutions to engineering problems.
- Document and analyze engineering data.
- Work effectively in teams. Realize personal learning styles.
- Communicate problem solutions, create technical reports.
- Evaluate problem validity, determine assumptions, postulate solutions.
- Learn to keep informed on changing technology.

## **ENGINEERING SKETCHING AND VISUALIZATION**

ENGR 113

2 Credits

11 hours of lecture - 22 hours of lab

Engineering communication and graphics through freehand sketching. Visualization and development of orthographic theory, scales, and lettering. Prerequisite: A grade of "C" or better in MATH 095. [SE]

### **Course Outcomes:**

- Produce reasonable free hand sketches of concepts, ideas, and designs.
- Sketch three-dimensional representations of components and assemblies.
- Demonstrate the ability to develop a mental picture of a multiview projection.
- Communicate effectively through lettering and proper use of Scale and Proportion.
- Understand and able to apply the basics of drafting standards, ANSI Y14.5.
- Continue the process of learning how to keep informed of changing technology.

## **GEOMETRIC DIMENSIONING AND TOLERANCING**

ENGR 115

2 Credits

11 hours of lecture - 22 hours of lab

Basics of geometric dimensioning and tolerancing: what it is and why use it, GDT symbols and their use, maximum and least material conditions, datums, and geometric characteristics. AutoCAD will be used to dimension drawings using GDT. Prerequisite: A grade of "C" or better in ENGR 113 and either ENGR 140 or ENGR 150. [SE]

### **Course Outcomes:**

- Discuss the use of GDT in engineering design and manufacturing, (gm,ct) .
- Discuss the relationship of GDT with ISO and ANSI/ASME Y14.5M standards, (co,ct).
- Identify GDT symbols and their respective geometric characteristics, (co,ct) .
- Successfully read and interpret engineering drawings that contain GDT symbology, and (co,ct) .
- Construct drawings using GDT to define parameters for the eventual manufacture of the part(s) . (co, ct, it) .

## **INTRO TO ELECTRICAL/COMPUTER SCI & ENGINEERING**

ENGR 120

5 Credits

44 hours of lecture - 33 hours of lab

Introduction to electrical engineering, computer science and engineering processes, principles, problem-solving techniques, and contemporary tools. Application of in-class learning to hands-on projects and exploration of current industry trends and implications. Prerequisite: A grade of "C" or better in MATH 103. [SE]

### **Course Outcomes:**

- Explore Engineering careers and education field.
- Recognize the importance and key elements of educational planning.
- Practice using available resources and effectiveness tools relevant to area of interest.

## **FIELD SURVEY I**

ENGR 121

5 Credits

33 hours of lecture - 44 hours of lab

Basic theory of surveying, measurement and calculation. Topics include: measurement and determination of boundaries, areas, and shapes; location through traversing techniques; error theory; compass adjustments; public land system; use of programmable calculators; and principles of measurements of distances, elevation and angles. Concurrent enrollment in ENGR 121 lab required. Prerequisite: A grade of "C" or better in MATH& 151 (or MATH 113). [SE]

### **Course Outcomes:**

- Accurately generate field notes using proper format.
- Set up and use a surveying instruments and equipment.
- Understand and explain the errors/uncertainty associated surveying equipment.
- Measure distances using pacing, tape, stadia, and EDM.
- Understand and use proper mathematical theories to solve survey related problems.
- Understand Surveying Professionalism and Ethics. Develop a respect and commitment for the Surveying profession.
- Begin the process of learning how to keep informed of changing technology.

## **BASIC SOLIDWORKS**

ENGR 150

4 Credits

16 hours of lecture - 55 hours of lab

Parametric solids modeling with SolidWorks, covering the breadth of the software at a basic level. Create part, assembly, and drawing files, including design tables and multiple configurations. Recommended for anyone with good computer skills. [SE]

### **Course Outcomes:**

- Discuss the different parametric modeling software and the variety of ways in which and by whom it is used, and how it differs fundamentally from the older "drafting" software.
- Identify features and their function on the SolidWorks screen.
- Create, open, and save part, assembly, drawing, and template files.
- Sketch and perform basic editing of moderately complex sketch objects.
- Use constraints and relations in moderately complex sketches.
- Create and edit moderately complex features.
- Create assemblies and add mates at an introductory level.
- Create and use design tables and multiple configurations at an introductory level.
- Create, annotate, and print 2D engineering drawings at an introductory level.
- Use mold design tools at an introductory level.
- Use engineering analysis software such as SolidWorks Simulation at an introductory level.
- Create surface models at an introductory level.
- Create sheetmetal parts at an introductory level.

## **COOPERATIVE WORK EXPERIENCE**

ENGR 199

1 - 5 Credits

165 hours of clinical

Supervised work experience in an approved job. Completion of specific learning objectives and employer evaluation. Completion of, or concurrent enrollment in, HDEV 195, 198, or 200. Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Fulfill the job requirements of their internship provider.

## **ELECTRICAL CIRCUITS**

ENGR&204

5 Credits

44 hours of lecture - 33 hours of lab

Basic concepts of AC and DC electrical circuits. Analyze and design voltage and current relationships for series and parallel RLC circuit. Use of Kirchhoff's laws, Thevenin/Norton theorems, Operational Amplifier circuits, and Step/Natural/Steady-State circuit response. Use of test and measurement equipment in a laboratory setting. Prerequisite: MATH& 152 (or MATH 211). [SE]

### **Course Outcomes:**

- Analyze and design circuits using series and parallel configurations of R, L and C.
- Analyze electrical circuits using Kirchhoff's Laws, and Thevenin / Norton models.
- Design DC electrical Circuits using Operational Amplifiers.
- Calculate RL, RC and RLC circuit's Step response, Natural response and Sinusoidal Steady-

State response.

- Build, test and troubleshoot Electrical circuits using analog components and electronic test equipments.
- Demonstrate the ability to communicate and work effectively in a team.

## **STATICS**

ENGR&214

5 Credits

55 hours of lecture

Solution of two and three dimensional vector systems using vector algebra notation and free-body diagrams. Friction, centroids, moment of inertia, radius of gyration, and loads involved in structures, machines, and trusses. Prerequisite: MATH& 152 (or MATH 211). [SE]

### **Course Outcomes:**

- Formulate solutions to engineering problems involving combinations of forces into a resultant, and separating a force into components.
- Apply the principles of equilibrium to solving problems involving two and three dimensional trusses and frames and machines.
- Determine the centroids of areas by integration, and use standard data to determine the centroid of composite shapes.
- Create and communicate clear, concise engineering solutions and technical reports.
- Analyze frictional forces for common machine components.
- Apply the principle of virtual work to determine equilibrium and stability.

## **DYNAMICS**

ENGR&215

5 Credits

55 hours of lecture

Kinematics and kinetics of particles, systems of particles and rigid bodies. Force/acceleration, work/energy and impulse/momentum problem solving techniques will be applied to two and three dimensional systems. Prerequisite: ENGR& 214 and MATH 152 or (ENGR 211 and MATH 211). [SE]

### **Course Outcomes:**

- Solve engineering problems involving kinematics of particles in a fixed frame of reference involving constant and variable acceleration.
- Use Newton's Second Principle to solve problems involving; linear kinetics of particles, systems of particles, rigid bodies; rotational kinetics of systems of particles and rigid bodies.
- Use the impulse-momentum principle to solve problems involving; linear motion of particles, systems of particles, and rigid bodies; rotational motion of systems of particles and rigid bodies.
- Use the work-energy principle to solve problems involving the motion of particles and rigid bodies.
- Formulate engineering solutions to plane kinematics problems using x-t, n-t, and r-? coordinate systems.
- Exhibit elementary analysis of vibrational motion.
- Create and communicate clear, concise engineering solutions and technical reports.
- Continue the process of learning how to keep informed of changing technology, continuously appraising the global and societal impact of engineering solutions.

## **MATERIALS SCIENCE**

ENGR 221

5 Credits

55 hours of lecture

Basic structure and properties of materials. Phase equilibrium and transformations. Mechanical properties, electronic structure, thermal, electrical, and magnetic properties. Prerequisite: CHEM& 142 (or CHEM 132). [SE]

### **Course Outcomes:**

- Demonstrate and use phase diagrams for an alloy system.
- Compare and select proper engineering materials.
- Demonstrate the crystalline Structures concepts.
- Analyze polymers and alloys by chemical composition.
- Identify and understand polymers, ceramics, metals, and composites and combinations of these systems.
- Understand the structure and use of composites.

## **THERMODYNAMICS**

ENGR&224

5 Credits

55 hours of lecture

Explores the fundamentals of thermodynamics. Investigates the thermodynamic properties of matter with emphasis on ideal and real gases and introduces the concepts of heat and work. Defines the first and second laws of thermodynamics and explores their impact with examples. Uses thermodynamic cycles to apply the concepts of learned and relates the principles to applications. Prerequisite: MATH 211 and PHYS 201. [SE]

### **Course Outcomes:**

- Apply the principles of macroscopic thermodynamics.
- Apply the 1st and 2nd laws of thermodynamics and irreversibility.
- Communicate clear, concise engineering problem solving.
- Evaluate problems for validity, determine assumptions, postulate solutions.
- Evaluate thermodynamic power cycles.
- Write technical report on emerging technologies.

## **MECHANICS OF MATERIALS**

ENGR&225

5 Credits

55 hours of lecture

Concepts of stress and strain for deformable objects. Axial, torsional and bending loading, combined loadings. Column loading and stability with other applied topics. Prerequisite: ENGR 211 or ENGR& 214, and MATH 211 or MATH& 152. [SE]

### **Course Outcomes:**

- Solve engineering problems involving normal and shear stresses and strains of structural and machine members
- Construct shear and bending moment diagrams, determine stresses and deflections, and use beam design software for statically determinate beams with continuous and point loads.
- Determine the principle stresses in a material subjected to combined loading.
- Communicate clear, concise Engineering problem solving. Continue to create clear, concise technical reports.
- Analyze the distribution of shear force and bending moment in statically indeterminate



beams.

- Calculate the buckling load in columns for various end mounting conditions.
- Continue the process of learning how to keep informed of changing technology, continuously appraising the global and societal impacts of engineering solutions.

## **MANUFACTURING PROCESSES**

ENGR 239

5 Credits

33 hours of lecture - 44 hours of lab

Introduction to manufacturing processes, emphasizing methods and practices used when machining, welding, and fabricating metals and related materials. [SE]

### **Course Outcomes:**

- Course is in suspension, pending curricular review.

## **APPLIED NUMERICAL METHODS FOR ENGINEERS**

ENGR 240

4 Credits

33 hours of lecture - 33 hours of lab

Numerical solutions to problems in engineering and science using modern scientific computing tools. Application of mathematical judgment in selecting computational algorithms and communicating results. Use of MATLAB programming for numerical computation. Completion or concurrent enrollment in MATH 215. Prerequisites: A grade of "C" or better in MATH& 153, ENGR 109, or ENGR 120, or consent of Instructional Unit.

### **Course Outcomes:**

- Write and document effective Matlab scripts involving logical and iterative flow and file input and output.
- Utilize the vector/matrix paradigm underlying Matlab to write efficient commands to manipulate data and implement numerical solution algorithms.
- Produce effective plots of numerical data using Matlab's various data visualization functions.
- Explain the consequences of finite precision and the inherent limits of the numerical methods considered.
- Select appropriate numerical methods to apply to various types of problems in engineering and science.
- Demonstrate the understanding of mathematics concepts underlying the numerical methods considered.
- Demonstrate understanding and implementation of numerical solution algorithms applied to the following classes of problems: Root finding, solving systems of equations, curve fitting, interpolation, numerical differentiation and integration. Solutions of O

## **DIGITAL LOGIC DESIGN**

ENGR 250

5 Credits

44 hours of lecture - 66 hours of lab

Digital logic design, testing and implementation, including Boolean Algebra, Karnaugh map and design of logic circuits to solve practical problems using sequential/combinational/synchronous/asynchronous circuits, application of standard SSI/MSI/LSI logic systems, design/test/implement development cycle and Hardware Description Language (HDL). Cannot receive credit for both ENGR 237 and ENGR 250. Prerequisite: A grade of "C" or

better in ENGR 120 (or CSE 120). [SE]

**Course Outcomes:**

- Formulate solutions to engineering problems using systematic design methodology.
- Demonstrate understanding of logic families and digital design.
- Understand how to document and analyze design data through EDA software tools.
- Build, test and troubleshoot digital circuits with logic devices and electronics test equipment.
- Implement and optimize logic functions using Boolean Algebra and Karnaugh Maps.
- Design and implement logic circuits to solve practical problems (Sequential/Combinational and Synchronous/Asynchronous) .
- Understand SSI/MSI/LSI logic systems and their applications.
- Recognize timing/triggering faults and utilize latches/flip-flops to minimize them.
- Practice effective report writing, presentation skills, teamwork and project development skills.

**ELECTRICAL CIRCUITS AND SIGNALS**

ENGR 252

5 Credits

44 hours of lecture - 66 hours of lab

Continuation of Electrical Circuits. Analysis and design of RLC circuits in sinusoidal steady state, complex-frequency domain of linear and lumped parameter circuits, active/passive filter circuits, poly phase and two-port circuits. Application of Fourier series, Fourier transforms and computer tools in circuit analysis. Prerequisite: ENGR& 204 (or ENGR 251). [SE]

**Course Outcomes:**

- Calculate sinusoidal steady-state power for RLC circuits.
- Analyze complex-frequency domain of linear and lumped parameter circuits.
- Design active and passive filter circuits.
- Ability to analyze Two-port circuits.
- Identify and describe signal types and system properties.
- Analyze electrical circuits using PSpice.
- Work effectively in a team to complete lab assignments.

**SIGNALS AND SYSTEMS**

ENGR 253

5 Credits

44 hours of lecture - 66 hours of lab

Concepts and applications in signal processing and linear system theory. Utilization of Fourier Analysis in both continuous and discrete time signals and systems. Role of sampling and the process of reconstructing a continuous-time signal from its samples and basics of communication systems. Application of Laplace transform and Z-transform. Prerequisite: ENGR 252. [SE]

**Course Outcomes:**

- Apply Convolution to calculate system output in a Linear Time Invariant (LTI) system.
- Use Fourier series and transform to model and analyze LTI systems in both continuous-time and discrete-time.
- Covert from continuous-time to discrete-time signals using sampling theorem.
- Analyze modulation and demodulating systems for information-bearing signals.
- Ability to select the appropriate transform (Fourier, Laplace and Z) for analysis of a given system.
- Use MATLAB to solve Signal and Systems problems
- Demonstrate the ability to work effectively in a team.

## **DIGITAL SYSTEMS AND MICROPROCESSORS**

ENGR 270

5 Credits

44 hours of lecture - 33 hours of lab

Continuation of the Digital Design sequence. Covering synchronous/asynchronous state machines, shift registers, arithmetic circuits and devices, microprocessor internal and system architecture, design and subsystem interfacing, assembly language, and programmable logic devices, design for test, documentation standards, and use of computer-based tools. Prerequisite: A grade of "C" or better in ENGR 250 and CSE 121, or consent of Instructional Unit. [SE]

### **Course Outcomes:**

- Analyze computer major subsystems and associated architecture.
- Write assembly code using microprocessor instruction sets and interfacing.
- Convert C programming code to assembly code and Machine code.
- Demonstrate the ability to design and analyze digital and computer systems.
- Design performance benchmarks and analyze the results.

## **SELECTED TOPICS**

ENGR 280

1 - 5 Credits

55 hours of lecture

The course focuses on selected topics in Engineering. Topics vary, and course theme and content change to reflect new topics. Because the course varies in content, it is repeatable for credit for different topics. [SE]

### **Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of Selected topic in Engineering.

## **SPECIAL PROJECTS**

ENGR 290

1 - 6 Credits

Opportunity to plan, organize and complete special projects approved by the department. Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## **English as a Non-Native Language**

There are no course descriptions for this department at this time.

## **Environmental Science**

### **INTEGRATED ENVIRONMENTAL SCIENCE**

ENVS 109

5 Credits

33 hours of lecture - 44 hours of lab

Introduction to scientific inquiry using the foundations of physical, earth and life sciences. Focus on developing the skills to answer basic questions about scientific phenomena through scientific investigations and the ability to assist and guide others through this process. Designed for non-science majors and addressing the curriculum needs of early childhood educators. Prerequisite: A grade of "C" or better in MATH 030. [NS]

**Course Outcomes:**

- Communicate a working knowledge of the foundations of physical, earth and life science.
- Synthesize the concepts from the course to develop methods for instructing others in the scientific inquiry process.
- Apply foundations of physical, earth, and life sciences to the scientific inquiry process by 1) researching current valid scientific evidence relating to the questions posed and 2) developing and implementing basic experiments to address the question pose

**INTRO TO ENVIRONMENTAL SYSTEMS**

ENVS 211

5 Credits

33 hours of lecture - 44 hours of lab

First of a three-course sequence in Environmental Science. Introduction to environmental topics including environmental modeling and problem solving, sustainability, the scientific method, biodiversity, ecosystem organization, energy flow, material cycling, population growth, natural selection, island biogeography, ecological succession, and resource management. [NS, SE]

**Course Outcomes:**

- Demonstrate knowledge of ecosystem services, the role they play in the environment and current threats to them.
- Identify techniques environmental scientists employ to determine ecosystem health and successfully apply those methodologies in the field.
- Demonstrate an understanding of how human activities impact ecological processes and be able to predict potential outcomes.
- Describe the main reasons for and identify potential solutions to key environmental issues such as climate change, loss of biodiversity, water pollution and soil degradation.

**FIELD STUDIES IN ENVIRONMENTAL SCIENCE**

ENVS 218

1 - 7 Credits

22 hours of lecture - 110 hours of lab

Learning field techniques for research in environmental science, interacting with scientists and others working in the field, and participating in the collection of research data. Topics include the interactions between scientists and other land managers in our natural environments. Projects vary depending on student interest and current work in the field area visited. Prerequisite: 5 credits in any Environmental Science, Geology or BIOL 101, 140, 141, 142, 143, 145, 150, 208, 221, 222, 223, 224 or BIOL& 100 with a grade of "C" or better, or consent of Instructional Unit. [NS, SE]

**Course Outcomes:**

- Engage collaboratively with team members in the creation, execution, and interpretation of field based projects in environmental science.
- Formulate a scientific hypothesis and design a project to test it.
- Identify the type of data needed determine what changes are taking place in the

environment.

- Utilize a variety of field techniques to collect data on a particular environmental issue.
- Collect, organize and analyze scientific data.
- Understand the roles that different agencies and land users play in managing the land base and how science is used to guide management decisions.

## **ENVIRONMENTAL SCIENCE: PROBLEM SOLVING**

ENVS 221

5 Credits

33 hours of lecture - 44 hours of lab

Second of a three-course sequence in Environmental Science. Introduction to applied techniques in environmental science including: environmental sampling design and measurement, environmental assessment and mitigation, and environmental modeling and problem solving.

Prerequisite: A grade of "C" or better in ENVS 211. [SE]

### **Course Outcomes:**

- Use models of systems to answer questions.
- Recognize common relationships in models, such as feedback, delays and oscillations and use these in constructing their own models.
- Understand the value and limitations of models in solving environmental problems.
- Understand sampling design and measurement and its importance in evaluating the reliability of the results.

## **ENVIRONMENTAL POLITICS**

ENVS 231

5 Credits

55 hours of lecture

Examines the relationship between industrial civilization and the natural environment by exploring underlying ecological philosophies and the economic and political processes by which environmental decisions are made. Emphasis on critical thinking and evaluating alternative points of view. [NS, SE]

### **Course Outcomes:**

- Develop factual knowledge and analytic skills relating to the history of environmental thought and consciousness.
- Develop factual knowledge and analytic skills relating to the recognition and development of the environment as a public policy issue.
- Develop factual knowledge and analytic skills relating to the role of citizens and interest groups in shaping this process.
- Develop factual knowledge and analytic skills relating to the role of the major institutions of government in environmental policy making.
- Develop factual knowledge and analytic skills relating to the major environmental problems and issues facing the US and the planet.
- Develop factual knowledge and analytic skills relating to alternative approaches and solutions to these problems.

## **SPECIAL PROJECTS**

ENVS 290

1 - 5 Credits

Opportunity to plan, organize, and complete special projects approved by the department.

Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

**English as a Second Language**

**ESL SPECIAL TOPICS**

ESL 005

1 - 10 Credits

88 hours of lecture - 44 hours of lab

Variable topics in ESL and content to reflect the selected topics. Because the course varies in content, it is repeatable for credit for different topics. Individual topics are listed in the quarterly class schedule.

**Course Outcomes:**

- Demonstrate an understanding of the core concepts of the selected topic.
- Apply the core concepts of the selected topic to the foundational principles of this course.

**ESL FOUNDATIONS: PROBLEM-SOLVING AND TECHNOLOGY**

ESL 007

7 Credits

77 hours of lecture

Learn to use basic problem-solving and technology to listen actively, read with understanding, and convey ideas in writing. Upon successful completion of both ESL 007 and ESL 009, students will have gained the skills to transition into Fast Track 1. Concurrent enrollment in ESL 009 ESL Foundations: Spoken/Written Communication. Prerequisite: Current CASAS scores in listening from below 162 to 199.

**Course Outcomes:**

- Apply instructions for very basic problem-solving strategies and computer steps; locate discrete items of numerical and other types of information in texts.
- Demonstrate familiarity with basic numerical vocabulary; recall and use vocabulary and basic grammar in problem-solving tasks using simple strategies to select and relay information.
- Follow a highly structured plan to organize information in very simple grammatical structures.
- Locate appropriate computer keys and/or commands to access computerized information; use computer keyboard to make simple edits of grammar, spelling, and language usage to accomplish very basic technology tasks.
- Recall and use a somewhat limited vocabulary including words related to common, everyday topics, personal experience; know and use basic grammar and sentence structure in problem-solving tasks.
- Use simple strategies (such as recombining short known words or phrases) to select and relay information.

**ESL FOUNDATIONS: SPOKEN/WRITTEN COMMUNICATION**

ESL 009

9 Credits

99 hours of lecture

Learn to listen actively, speak so others can understand, read with understanding, and convey

ideas in writing. Upon successful completion of ESL 007 and ESL 009, students will have gained the skills to transition into Fast Track 1. Concurrent enrollment in ESL 007 ESL Foundations: Problem-solving and Technology. Prerequisite: Current CASAS scores in reading from below 180 to 200 and CASAS scores in listening up to 199.

**Course Outcomes:**

- Understand and respond to explanations, conversations, instructions, and narratives made up of sentence length utterances and some connected discourse on familiar topics related to personal background and needs, social conventions, and everyday tasks.
- Apply several strategies, including formulas for asking for repetition and clarification, and strategies for indicating understanding, for giving feedback, for gathering missing information and/or for repairing problems in comprehension, such as by rephra
- Apply linguistic, socio-cultural, and other background knowledge and strategies (such as collecting relevant information) to understand the intent of the speaker and what is required to respond appropriately and to meet the listening purpose.
- Recall and use a somewhat limited vocabulary including words related to common, everyday topics, personal experience; know and use basic grammar and sentence structure (in immediate environment); know and use basic awareness of appropriate register in fam
- Decode and recognize everyday words and word groups in short, simple texts by breaking words into parts, tapping out/sounding out syllables, applying pronunciation rules, using picture aids, and recalling oral vocabulary and sight words.
- Demonstrate familiarity with simple, everyday content knowledge and vocabulary in simple sentences.
- Monitor accuracy of decoding and word recognition and enhance comprehension using various strategies, such as rereading, restating, copying and rephrasing text; making a list of new words, or using a simplified dictionary.
- Recall prior knowledge to assist in selecting texts and in understanding the information they contain.
- Determine the purpose and audience for communicating in writing and/or speaking.
- Follow a highly structured, externally developed plan (or text model) to organize information about a single familiar topic in very simple structures such as responses to prompts for everyday information in several related sentences.
- Appropriately use every day, familiar vocabulary (such as words with personal significance and common adjectives, pronouns and prepositions) and simple sentence structures to produce several sentences on a topic with minimal attention to audience.
- Make a few simple content changes based on review and feedback from others.
- Make a few simple edits of handwriting, spelling, grammar, punctuation and capitalization.

**ESL LISTENING AND SPEAKING, LEVEL I**

ESL 011

6 Credits

66 hours of lecture

ESL level 1 students will learn to comprehend the gist of short, face-to-face oral communications spoken at slower rates on familiar topics concerning family, community and work with a low level of ease through frequent use of repetition or rephrasing. Students completing this course will be able to speak well-rehearsed words and phrases in familiar, highly structured settings, with limited comprehensibility. Prerequisite: CASAS Listening placement test score of 162 to 180.

**Course Outcomes:**

- S 1.1 Recall and use a limited set of learned words and phrases related to basic personal information, basic objects, and a limited number of activities and immediate needs in familiar, predictable, and straightforward communication tasks.
- S 1.2 Use simple strategies (such as learned words and phrases and responding to simple, direct questions) to select and relay information.

- S 1.3 Apply simple strategies (such as gestures, eye contact, and very simple requests for understanding from the listener) to monitor effectiveness of the communication and to meet the speaking purpose.
- L 1.1 Understand and respond to learned words and phrases in simple questions, statements, and high frequency commands as part of short conversations, explanations, instructions, and narratives where the linguistic complexity is considerably simplified.
- L 1.2 Use a few simple formulas to convey understanding and ask for repetition or clarification.
- L 1.3 Use non-verbal and visual clues to understand the basic intent of the speaker and to meet the purpose of the communication.

## **ESL READING AND WRITING, LEVEL I**

ESL 012

6 Credits

66 hours of lecture

ESL level 1 students will learn to slowly and with some effort comprehend words in short, simple texts to accomplish simple, well-defined, structured reading activities. Students completing this course will be able to write individual words, simple phrases and very simple sentences slowly, but with some effort and errors, to accomplish highly structured writing activities in familiar, comfortable settings. Prerequisite: CASAS placement test score of 180 or below.

### **Course Outcomes:**

- R 1.1 Recognize everyday words or word groups by decoding letter-sound correspondence, isolating and saying first and last sounds, naming pictures to isolate and say initial sounds, sounding out words by segmenting words into separate sounds and syllables
- R 1.2 Demonstrate familiarity with concepts of print, letter shapes, letter names and sounds (individual consonants and vowels, digraphs and blends) , and common vocabulary.
- R 1.3 Locate familiar words in a list.
- R 1.4 Monitor accuracy of decoding and word recognition using various strategies, such as rereading or making word lists.
- R 1.5 Recall prior knowledge to assist in understanding information in simple phrases.
- W 1.1 Determine the purpose and audience for communicating in writing.
- W 1.2 Follow a highly structured plan (or text model) to organize information about self and/or related to immediate needs in very simple structures such as lists or responses to prompts for everyday information.
- W 1.3 Write all letters of the alphabet and numbers and appropriately use simple, everyday, highly familiar words (personal names, signatures, addresses), numbers (dates, phone #s, addresses, prices, etc.) and simple phrases to convey information with min
- W 1.4 Recognize the need for revision with support from others to make appropriate changes.
- W 1.5 Make a few simple edits of handwriting, spelling, punctuation and capitalization based on review and feedback from others.

## **ESL LISTENING AND SPEAKING, LEVEL II**

ESL 021

6 Credits

66 hours of lecture

ESL level 2 students will learn to comprehend the gist of simple, face-to-face oral communications completing highly structured tasks with pre-taught vocabulary, slow speech, and visual aids on familiar topics concerning family, community and work with some level of ease through frequent use of repetition or rephrasing. Students completing this course will be able to speak well-rehearsed phrases and simple sentences in familiar, highly structured settings, with occasional



hesitation and inaccuracy. Prerequisite: ESL 011 and 012 or CASAS Listening placement score of 181 to 189.

**Course Outcomes:**

- S 2.1 Recall and use a limited set of learned words, phrases, and short sentences related to basic personal information, basic objects, and a limited number of activities and immediate needs in familiar, predictable, and straightforward communication task
- S 2.2 Use simple strategies (such as familiar phrases and questions; responding to simple, direct questions; and combining or re-combining learned or heard words and phrases) to select and relay information.
- S 2.3 Apply simple strategies (such as gestures, eye contact, and simple, repeated requests for feedback from listener) to monitor effectiveness of the communication and to meet the speaking purpose.
- L 2.1 Understand and respond to learned words and phrases in simple questions, statements, and high frequency commands as part of short conversations, explanations, instructions, and narratives where the linguistic complexity is simplified.
- L 2.2 Use a few simple formulas to convey understanding, and ask for repetition or clarification, and one or two simple strategies for gathering missing information and/or repairing problems in communication.
- L 2.3 Use non-verbal and visual clues, as well as socio-cultural, linguistic, and other background knowledge to understand the basic intent of the speaker and to meet the purpose of the communication.

**ESL READING AND WRITING, LEVEL II**

ESL 022

6 Credits

66 hours of lecture

ESL level 2 students will learn to slowly comprehend words in small blocks of simple texts with some repetition and errors to independently accomplish simple, well-defined, structured reading activities. Students completing this course will be able to write simple sentences to independently accomplish highly structured writing activities in a few familiar, comfortable settings. Prerequisite: ESL 011 and 012 or CASAS placement score of 181 to 190.

**Course Outcomes:**

- R 2.1 Decode and recognize familiar everyday words in short, simple sentences by breaking words into parts, tapping out/sounding out syllables, applying pronunciation rules, using picture aids, and recalling oral vocabulary and sight words.
- R 2.2 Demonstrate familiarity with words, phrases, and simple sentences.
- R 2.3 Locate important items of information in simplified text.
- R 2.4 Monitor accuracy of decoding simple sentences using various strategies such as rereading, copying, or making word lists.
- R 2.5 Recall prior knowledge to understand information in simple texts.
- W 2.1 Determine the purpose and audience for communicating in writing.
- W 2.2 Follow a highly structured plan to organize ideas around self and/or related to immediate needs in several sentences.
- W 2.3 Appropriately use everyday, familiar vocabulary (such as words with personal significance and commonly-used adjectives, pronouns and prepositions) and simple sentence structures to produce a few sentences on a topic with minimal attention to audience
- W 2.4 Make a few simple content changes with intensive support from others.
- W 2.5 Make simple edits of grammar, capitalization, spelling, and punctuation based on review and feedback from others.

## **READING SPEAKING AND US CITIZENSHIP**

ESL 030

3 Credits

33 hours of lecture

Development of appropriate standards-based reading, writing and oral communication strategies. Emphasizes critical thinking to actively participate in various aspects of civics including basic knowledge of US history and government, and incorporation of on-line resources for effective interview preparation and engaged citizenship.

## **ESL LISTENING AND SPEAKING, LEVEL III**

ESL 031

6 Credits

66 hours of lecture

ESL level 3 students will learn to listen for structured, well-defined purposes to maintain personal conversations, acquire information or complete basic transactions in-person or in short telephone conversations with simplified language through frequent use of clarification strategies, using short, sometimes inaccurate utterances and a high level of visual or verbal support. Students completing this course will be able to speak with relative ease with some inaccuracies or non-standard speech in familiar one-on-one settings. Prerequisite: ESL 021 and 022 or CASAS Listening placement test score of 190 to 199.

### **Course Outcomes:**

- S 3.1 Recall and use a somewhat limited vocabulary including words related to common, everyday topics, personal experience; know and use basic grammar and sentence structure (heard in the immediate environment); know and use basic awareness of appropriate
- S 3.2 Use simple strategies (such as reacting to questions or combining and recombining short known words or phrases) to select and relay information.
- S 3.3 Apply simple strategies (such as making and responding to requests for feedback repetition, and rephrasing) to monitor and enhance the effectiveness of the communication and to meet the speaking purpose.
- L 3.1 Understand and respond to explanations, conversations, instructions, and narratives made up of sentence length utterances and some connected discourse on familiar topics related to personal background and needs, social conventions, and everyday task
- L 3.2 Use several strategies, including formulas for asking for repetition and clarification, and strategies for indicating understanding, for giving feedback, for gathering missing information and/or for repairing problems in comprehension, such as by re
- L 3.3 Apply linguistic, socio-cultural, and other background knowledge and strategies (such as expressing an opinion or collecting relevant information) to understand the intent of the speaker and what is required to respond appropriately and to meet the

## **ESL READING AND WRITING, LEVEL III**

ESL 032

6 Credits

66 hours of lecture

ESL level 3 students will learn to comprehend small blocks of simple texts slowly but easily with few errors to independently accomplish simple, well-defined, structured reading activities. Students completing this course will be able to write several simple sentences on familiar topics, with some effort but with few errors, to independently accomplish simple, well-defined, structured writing activities in a few familiar, comfortable settings. Prerequisite: ESL 021 and 022 or CASAS placement test score of 191 to 200.

### **Course Outcomes:**

- R 3.1 Decode and recognize everyday words and word groups in short, simple texts by

breaking words into parts, tapping out/sounding out syllables, applying pronunciation rules, using picture aids, and recalling oral vocabulary and sight words.

- R 3.2 Demonstrate familiarity with simple, everyday content knowledge and vocabulary in simple sentences.
- R 3.3 Locate discrete items of information in texts.
- R 3.4 Monitor accuracy of decoding and word recognition and enhance comprehension using various strategies, such as rereading, restating, copying and rephrasing text; making a list of new words, or using a simplified dictionary.
- R 3.5 Recall prior knowledge to assist in selecting texts and in understanding the information they contain.
- W 3.1 Determine the purpose and audience for communicating in writing.
- W 3.2 Follow a highly structured, externally developed plan (or text model) to organize information about a single familiar topic in very simple structures such as responses to prompts for everyday information in several related sentences.
- W 3.3 Appropriately use everyday, familiar vocabulary (such as words with personal significance and commonly-used adjectives, pronouns and prepositions) and simple sentence structures to produce several sentences on a topic with minimal attention to audience.
- W 3.4 Make a few simple content changes based on review and feedback from others.
- W 3.5 Make a few simple edits of handwriting, spelling, grammar, punctuation and capitalization.

## **ESL LISTENING AND SPEAKING, LEVEL IV**

ESL 041

6 Credits

66 hours of lecture

ESL level 4 students will learn to comprehend and respond to most basic background information, everyday transaction and simple routine tasks, but have difficulty understanding full details on less familiar topics. Students completing this course will be able to speak fluently and relatively accurately in familiar contexts with a moderately high level of support. Their speaking will usually be understood by a skilled, supportive listener. Prerequisite: ESL 031 and 032 or CASAS Listening placement test score of 200 to 209.

### **Course Outcomes:**

- S 4.1 Recall and use high-frequency vocabulary including words related to common, everyday topics and personal experience, use knowledge of basic grammar, discourse forms, and sentence structure in familiar communicative tasks.
- S 4.2 Select from a limited range of strategies (such as combining and recombining known or heard words, phrases, and sentences reformulation, or self-correction) to select and relay information.
- S 4.3 Apply some strategies (such as checking pace and register, repeating/clarifying/correcting errors as necessary, self-rating/evaluation) to monitor and enhance effectiveness of the communication and to meet the speaking purpose.
- L 3.1 Understand and respond to explanations, conversations, instructions, and narratives made up of sentence length utterances and some connected discourse on familiar topics related to personal background and needs, social conventions, and everyday task
- L 3.2 Use several strategies, including formulas for asking for repetition and clarification, and strategies for indicating understanding, for giving feedback, for gathering missing information and/or for repairing problems in comprehension, such as by re
- L 3.3 Apply linguistic, socio-cultural, and other background knowledge and strategies (such as expressing an opinion or collecting relevant information) to understand the intent of the speaker and what is required to respond appropriately and to meet the

## **ESL READING AND WRITING, LEVEL IV**

ESL 042

6 Credits

66 hours of lecture

ESL level 4 students will learn to quickly and accurately read and comprehend words and word groups in multiple pages of simple text in familiar contexts to independently accomplish simple well-defined, structured reading and writing activities in a few familiar settings. Students completing this course will be able to write short, structured paragraphs on familiar topics with some effort but with few errors. Prerequisite: ESL 031 and 032 or CASAS placement test score of 201 to 210.

### **Course Outcomes:**

- R 4.1 Decode and recognize most everyday and some unfamiliar words in short to medium-length text by drawing on content knowledge, oral vocabulary and sight words, breaking words into parts for the purpose of aiding decoding and comprehension, applying pr
- R 4.2 Demonstrate familiarity with common, every day content knowledge and related vocabulary.
- R 4.3 Locate important information in simple text using some simple strategies.
- R 4.4 Monitor and enhance comprehension by using a range of simple strategies, such as recalling, restating, rephrasing, copying, or using a simplified dictionary.
- R 4.5 Apply prior knowledge to assist in selecting texts and in understanding information in texts.
- W 4.1 Determine the purpose and audience for communicating in writing.
- W 4.2 Follow a highly structured plan to identify and organize a limited number of ideas to support a single purpose and produce a legible and comprehensible draft paragraph.
- W 4.3 Appropriately use familiar vocabulary (based on personal experience and learning) and basic text structure of simple steps/instructions/commands or a single paragraph to convey an idea with supporting details and examples reflecting some attention t
- W 4.4 Demonstrate beginning attention to revision strategies including rereading and revising based on review and feedback from others.
- W 4.5 Make basic edits of grammar (verb tenses, subject/verb agreement) , simple and compound sentences, capitalization, spelling and punctuation (end periods, some commas) .

## **ESL FOUNDATIONS+: STUDY SKILLS**

ESL 045

2 Credits

22 hours of lecture

Introduction and development of study skills plus reflection on various strategies of successful college students. Upon successful completion of Foundations Plus, students will gain the study skills as well as the academic skills to transition into Fast Track 1. Concurrent enrollment in ESL 047 and ESL 049. Prerequisite: Current CASAS test scores in all skills. CASAS Listening test score between 200 and 209. CASAS Reading test score between 201 and 210.

### **Course Outcomes:**

- Take effective notes and use them to enhance learning and to prepare effectively for assessments.
- Maintain and use a well-organized binder and materials (including syllabus/schedule/calendar).
- Access campus and community resources (including on-line).
- Effectively use time management and study techniques.
- Use goal-setting to develop and maintain progress on an educational plan.

## **ESL FOUNDATIONS+: ORAL COMMUNICATION/TECH**

ESL 047

7 Credits

77 hours of lecture

Introduction and development of technology (especially computer) skills to support oral communication. Development and practice of speaking and listening communication skills appropriate to ESL L4 (Intermediate ESL), and sufficient to prepare students for Fast Track 1. Upon successful completion of Foundations Plus, students will gain the technology (especially computer) and study skills as well as the oral and written communication skills to transition into Fast Track 1. Concurrent enrollment in ESL 045 and ESL 049. Prerequisite: Current CASAS test scores in all skills. CASAS Listening test score between 200 and 209.

### **Course Outcomes:**

- Respond to somewhat complex explanations, conversations, instructions, and narratives on familiar topics; apply strategies for asking for clarification; apply knowledge to understand the speaker and respond appropriately.
- Use high-frequency vocabulary related to common topics and personal experience; use basic grammar and sentence structure in familiar communication tasks on the telephone and in person.
- Use various forms of computer technology (Canvas, PowerPoint, the web) to support and enhance learning and communication in English.
- Understand and use basic technology concepts and vocabulary to apply instructions and follow steps on the computer.

## **ESL FOUNDATIONS+: WRITTEN COMMUNICATION/TECH**

ESL 049

7 Credits

77 hours of lecture

Introduction and development of technology (especially computer) skills to support oral communication. Development and practice of reading and written communication skills appropriate to ESL L4 (Intermediate ESL), and sufficient to prepare students for Fast Track 1. Upon successful completion of Foundations Plus, students will gain the technology (especially computer) and study skills as well as the oral and written communication skills to transition into Fast Track 1. Concurrent enrollment in ESL 045 and ESL 047. Prerequisite: Current CASAS test scores in all skills. CASAS Listening test score between 200 and 209. CASAS Reading test score between 201 and 210.

### **Course Outcomes:**

- Decode & recognize words in short to medium-length texts by drawing on content knowledge and oral vocabulary, breaking words into parts, applying pronunciation rules, and adjusting reading pace; monitor accuracy.
- Determine writing purpose and audience for short, structured paragraphs on familiar topics for simple, well-defined, & structured writing activities in familiar settings.
- Make simple content changes based on review and feedback from others; make edits in spelling, grammar, punctuation, and capitalization.
- Use various forms of computer technology (email, Canvas, PowerPoint, the web) to support and enhance learning and communication in English.
- Apply instructions for basic computer steps using basic technology concepts and vocabulary.

## **ESL LISTENING AND SPEAKING, LEVEL V**

ESL 051

6 Credits

66 hours of lecture

ESL level 5 students will learn to comprehend relatively unstructured, moderate-length conversations and presentations in somewhat complex, unfamiliar situations with non-adjusted language understanding some main ideas, and details. Students completing this course will be able to speak fluently and accurately in some unfamiliar contexts with some support. Their speaking will generally be understood by a skilled, supportive listener. Prerequisite: ESL 041 and 042 or CASAS Listening placement score of 210 to 218.

**Course Outcomes:**

- S 5.1 Recall and use sufficient oral vocabulary (range of common vocabulary related to personal experience and everyday activities, some idioms) as well as control of basic grammar and a variety of sentence types and registers in a range of familiar to so
- S 5.2 Select from a range of strategies (such as elaborating with some detail and examples; determining most important/right amount of information and content to convey) to select, organize, and relay information.
- S 5.3 Apply a range of strategies (including attention to appropriate register, repetition of information, adjustments in pace, tone, volume, eye contact, body language based on listener's response and needs) to monitor and enhance effectiveness of commun
- L 5.1 Understand and respond appropriately to extended explanations and narratives, detailed instructions, and complex conversations requiring adapting one's response to varied speakers and contexts when language is not adjusted for English language learn
- L 5.2 Effectively use a wide range of strategies to repair gaps in understanding and give feedback, tailoring the response to the purpose of the communication, the audience, the level of formality of the situation and other socio-cultural factors.
- L 5.3 Apply linguistic, socio-cultural, and other background knowledge and strategies (such as comparing, integrating, and categorizing information for others) to understand fully the literal and implied intent of the speaker, to respond appropriately, an

**ESL READING AND WRITING, LEVEL V**

ESL 052

6 Credits

66 hours of lecture

ESL level 5 students will learn to read and comprehend a variety of texts at an appropriate pace and with good comprehension to independently accomplish structured reading activities in a variety of familiar settings. Students completing this course will be able to write simple narrative, informative, or expressive texts of a few short paragraphs and steps with some effort, but with few errors to independently accomplish well-defined, structured writing activities for varied audiences in familiar settings. Prerequisite: ESL 041 and 042 or CASAS placement test score of 211 to 220.

**Course Outcomes:**

- R 5.1 Decode and recognize most everyday and some unfamiliar and specialized words and abbreviations in short to medium-length text by drawing on content knowledge and oral vocabulary, breaking words into parts, applying pronunciation rules, and adjusting
- R 5.2 Demonstrate familiarity with common, high-interest content knowledge and related vocabulary.
- R 5.3 Locate important information in short to medium-length text using a variety of strategies.
- R 5.4 Monitor and enhance comprehension by using a range of simple strategies, such as posing and answering questions, recalling, restating, rephrasing, explaining the content of the text or using simple examples.
- R 5.5 Actively apply prior knowledge to assist in understanding information in texts.
- W 5.1 Determine the purpose and audience for communicating in writing.
- W 5.2 Use simple planning strategies to identify and organize a limited number of ideas to

support a single purpose (to convey personal experience, meet a specific need, or respond to recent learning) , and produce a legible and comprehensible draft.

- W 5.3 Appropriately use familiar vocabulary (based on personal experience and learning) and basic text structure of simple steps/instructions/commands or a few short, well-linked paragraphs to convey ideas with several supporting details/examples reflecti
- W 5.4 Use simple revision strategies to monitor effectiveness by re-reading and revising during the writing process and making revisions to a first and final draft based on review and feedback from others. Demonstrate beginning attention to clarity, descr
- W 5.5 Make several simple edits of grammar (such as simple tense agreement) , spelling and punctuation (such as periods, capital letters, and some commas) , sentence structure (such as compound and some complex sentences) , and text structure using tools

## **ESL LEVEL 6A LISTENING AND SPEAKING**

ESL 061

6 Credits

66 hours of lecture

ESL 6 listening/speaking students will learn to function independently in most social and work situations and comprehend relatively complex and unstructured oral input integrating and summarizing several data sources with limited need for guidance and few errors. Students will be able to speak fluently and accurately in most contexts with minimal support. Their speaking will generally be understood by an unsupportive, unskilled listener. Prerequisite: ESL 051 and 052 or CASAS Listening placement test score of 219 to 227.

### **Course Outcomes:**

- S 6.1 Recall and use a limited range of vocabulary including words related to most everyday, school, work, and social situations; know and use a limited variety of complex sentence structures and grammatical forms; know and use appropriate register in a r
- S 6.2 Select from a limited range of strategies (such as taking into account the interests of others; predicting outcomes, interests, or likely questions and responses; organizing information based on determination of relevance and audience needs; elabora
- S 6.3 Apply a limited range of strategies (including body language, pause fillers, stalling devices, and different rates of speech as needed) to monitor and enhance effectiveness of communication and to meet the speaking purpose.
- L 6.1 Understand main ideas and some details in conversations, short lectures, news reports, extended explanations and other connected discourse on a limited range of topics, including topics beyond everyday contexts and immediate experiences but limited
- L 6.2 Use some advanced strategies to repair gaps in understanding, to ask questions to deepen understanding and to give feedback appropriate to the situation, the audience and the purpose of the communication. Growing ability to use strategies appropriat
- L 6.3 Apply linguistic, socio-cultural, and other background knowledge and strategies (such as integrating information from more than one source; evaluating the relevance, validity, and adequacy of information; or adapting responses to the age, gender, st

## **ESL LEVEL 6A READING AND WRITING**

ESL 062

6 Credits

66 hours of lecture

ESL level 6 students will learn to read and comprehend multipart texts at an appropriate pace with enough comprehension to independently accomplish structured, fairly complex reading activities in a variety of familiar and a few novel settings. Students completing this course will be able to write a variety of texts including some complex sentence structures and multiple paragraphs with few errors for a variety of purposes independently accomplishing structured

writing in familiar and a few novel settings. Prerequisite: ESL 051 and 052 or CASAS Reading placement score of 221 to 235.

**Course Outcomes:**

- R 6.1 Recognize and interpret limited abbreviations and specialized vocabulary using word analysis or inference.
- R 6.2 Demonstrate familiarity with everyday and some specialized content knowledge and vocabulary.
- R 6.3 Locate important information, read for detail and determine missing information using a limited range of strategies.
- R 6.4 Monitor and enhance comprehension using a limited range of strategies, such as posing and answering questions, trial and error, and adjusting reading pace.
- R 6.5 Actively apply prior knowledge to assist in understanding information in texts.
- R 6.6 Organize and analyze information and reflect upon its meaning using a range of strategies such as classification, categorization, and comparison/contrast.
- W 6.1 Determine the purpose and audience for communicating in writing.
- W 6.2 Use some planning and pre-writing strategies to identify and organize a very limited number of ideas to support a single purpose (such as writing to inform, to get things done, to express feelings and ideas or to persuade others) and produce a legible
- W 6.3 Appropriately use both everyday and some specialized vocabulary and a very limited variety of simple and complex sentence structures in multiple coherent steps or a few well-constructed and linked paragraphs to convey ideas, with several supporting
- W 6.4 Use some simple revision strategies to monitor one's own writing, make revisions based on review and feedback from others, and produce rough and final drafts. Demonstrate very limited attention to clarity, descriptiveness, personal voice and appropriate
- W 6.5 Make some edits of grammar (verb tense forms) , spelling, sentence structure (simple/compound/complex with appropriate capitalization and punctuation) , language usage and text structure, with the help of tools such as simplified dictionaries, grammar

**I-BEST SUPPORT**

ESL 071

1 - 10 Credits

110 hours of lecture

Provides Basic Skills students extra instruction and support for success in their I-BEST designated classes. Reviews important concepts and vocabulary introduced during I-BEST classes. Provide opportunities to develop culturally unfamiliar customer service and interaction skills needed to be successful in I-BEST occupations. Prerequisite: Admission into an I-BEST program.

**Course Outcomes:**

- Demonstrate an understanding of the core concepts of the IBEST selected topic.

**ESL SELECTED TOPICS**

ESL 080

1 - 10 Credits

110 hours of lecture

Course will focus on selected ESL topics. Course theme and content will change to reflect the new topic. Because of the variations, this course is repeatable for credit for different topics.

**Course Outcomes:**

- Special topics--outcomes are specific to the course being created and need to be defined.



## First Aid and CPR

### FIRST AID AND HEALTH CARE PROVIDER CPR

FACPR032

1 Credits

5 hours of lecture

First aid and cardiopulmonary resuscitation, for health care providers as required by the Washington Occupation and Health Act. Designed specifically for health care providers. Students are required to purchase the required text and workbook (available at Clark College Bookstore) and bring to class.

#### Course Outcomes:

- Perform the basics of first aid.
- Demonstrate first aid for medical emergencies.
- Demonstrate first aid for injury emergencies.
- Demonstrate first aid for environmental emergencies.
- Initiate the Chain of Survival.
- Perform prompt, high-quality chest compressions for adult, child, and infant victims.
- Initiate early use of and AED.
- Provide appropriate rescue breaths.
- Practice 2-rescuer team CPR.
- Relieve choking.

## Fire Prevention

### FUNDAMENTALS OF FIRE PREVENTION

FIRE 105

3 Credits

33 hours of lecture

Introduces fundamental knowledge relating to the field of fire prevention. Topics include: history and philosophy of fire prevention; organization and operation of a fire prevention bureau; use and application of codes and standards; plans review; fire inspections; fire and life safety education; and fire investigation.

#### Course Outcomes:

- Demonstrate fundamental knowledge relating to the field of fire prevention, such as history and philosophy of fire prevention; organization and operation of a fire prevention bureau; use and application of codes and standards; plans review; fire inspectio

## Family Life - Parent & Child

### PARENT COOPERATIVE PRESCHOOL

FLPC 135

1 - 3 Credits

11 hours of lecture - 44 hours of lab

Preschool experiences for children. Practice in parenting skills. Parents serve as aides to the teacher in the classroom 4-5 times a quarter, work on committees, and attend monthly meetings. Children 2 1/2 - 6 participate in 2 1/2 hour classes. Contact department before enrolling, 992-2393. Credit varies with amount of parent participation.

#### Course Outcomes:

- Students will examine their current method of guiding behavior within parenting practices and demonstrate an awareness of the origin of those methods.
- Identify positive parenting strategies through observation.
- Evaluate guidance interactions between adult and child.
- Recognize and demonstrate positive guidance of children as defined by the materials, readings, and discussions presented in class.

### **PARENT COOPERATIVE PRESCHOOL**

FLPC 136

1 - 3 Credits

11 hours of lecture - 44 hours of lab

Preschool experiences for children. Practice in parenting skills. Parents serve as aides to the teacher in the classroom 4-5 times a quarter, work on committees, and attend monthly meetings. Children 2 1/2 - 6 participate in 2 1/2 hour classes. Contact department before enrolling, 992-2393. Credit varies with amount of parent participation.

#### **Course Outcomes:**

- Students will understand and recognize the patterns of development that children follow in early childhood.
- Students will initiate and apply positive guidance strategies during times of disequilibrium with their child(ren) in the lab environment.
- Students will examine disequilibrium or challenging behavior from a developmental perspective.

### **PARENT COOPERATIVE PRESCHOOL**

FLPC 137

1 - 3 Credits

11 hours of lecture - 44 hours of lab

Preschool experiences for children. Practice in parenting skills. Parents serve as aides to the teacher in the classroom 4-5 times a quarter, work on committees, and attend monthly meetings. Children 2 1/2 - 6 participate in 2 1/2 hour classes. Contact department before enrolling, 992-2393. Credit varies with amount of parent participation.

#### **Course Outcomes:**

- Students will demonstrate an understanding of the role that play has in development of their child.
- Students will observe and demonstrate an understanding of how a literature rich environment can augment dramatic play.
- Students will examine differences between open and closed play.

### **EARLY INTERVENTION PARENT/CHILD PARTICIPATION**

FLPC 141

1 Credits

6 hours of lecture - 11 hours of lab

A participation class for parents/caregivers of children with developmental delays, ages birth to 36 months. This is a class designed to support parents/caregivers to meet the needs of their child through play and caretaking activities in the child's natural environment. Parents participate in the evaluation of their child's abilities and challenges and have learning opportunities through group meetings with other families receiving early intervention services as well as the activities in the overall Child and Family Studies program. This course is designed to provide learning

opportunities in areas including child and family development, guidance techniques, developing appropriate expectations, health as well as specific information related to their child's needs.

**Course Outcomes:**

- Students will identify goals that meet their child's individual learning styles and needs.
- Students will incorporate their child's learning goals into their family's daily routines.
- Students will understand their child's developmental levels and special needs.
- Students will develop specialized support strategies specific to their child's identified special needs.
- Students will apply strategies to support their child's special needs that have been developed with an interdisciplinary team that may include occupational, physical, and/or speech therapists.
- Students will engage in activities in the community that support the development of their child's developmental and identified special needs.

**EARLY INTERVENTION PARENT/CHILD PARTICIPATION**

FLPC 142

1 Credits

6 hours of lecture - 11 hours of lab

A participation class for parents/caregivers of children with developmental delays, ages birth to 36 months. This is a class designed to support parents/caregivers to meet the needs of their child through play and caretaking activities in the child's natural environment. Parents participate in the evaluation of their child's abilities and challenges and have learning opportunities through group meetings with other families receiving early intervention services as well as the activities in the overall Child and Family Studies program. This course is designed to provide learning opportunities in areas including child and family development, guidance techniques, developing appropriate expectations, health as well as specific information related to their child's needs.

**EARLY INTERVENTION PARENT/CHILD PARTICIPATION**

FLPC 143

1 Credits

6 hours of lecture - 11 hours of lab

A participation class for parents/caregivers of children with developmental delays, ages birth to 36 months. This is a class designed to support parents/caregivers to meet the needs of their child through play and caretaking activities in the child's natural environment. Parents participate in the evaluation of their child's abilities and challenges and have learning opportunities through group meetings with other families receiving early intervention services as well as the activities in the overall Child and Family Studies program. This course is designed to provide learning opportunities in areas including child and family development, guidance techniques, developing appropriate expectations, health as well as specific information related to their child's needs.

**EARLY INTERVENTION PARENT/CHILD PARTICIPATION**

FLPC 144

1 Credits

6 hours of lecture - 11 hours of lab

A participation class for parents/caregivers of children with developmental delays, ages birth to 36 months. This is a class designed to support parents/caregivers to meet the needs of their child through play and caretaking activities in the child's natural environment. Parents participate in the evaluation of their child's abilities and challenges and have learning opportunities through group meetings with other families receiving early intervention services as well as the activities in the overall Child and Family Studies program. This course is designed to provide learning opportunities in areas including child and family development, guidance techniques, developing appropriate expectations, health as well as specific information related to their child's needs.

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**PRINCIPLES OF CHILD GUIDANCE**

FLPC 268

2 Credits

22 hours of lecture

Effecting family relationships through principles of child management. Theory and practical applications, lecture-demonstrations of family counseling techniques. Parent and child groups.

**Food - Culinary Arts****FOOD SERVICE**

FOOD 102

4 Credits

88 hours of lab

Line and line backup, serving methods, portion control, and cash register training. [GE]

**FOOD SERVICE**

FOOD 103

4 Credits

88 hours of lab

Continuation of FOOD 102, with greater emphasis on particular line positions and their interactions with the whole line's purpose. [GE]

**FOOD SERVICE**

FOOD 104

4 Credits

88 hours of lab

Continuation of FOOD 103 with further emphasis on line positions and an analysis of customer relations. [GE]

**FOOD SERVICE**

FOOD 105

4 Credits

88 hours of lab

Serving under banquet, catering, fast food and take-out conditions. Preparation and clean up. [GE]

**COOKING THEORY**

FOOD 111

5 Credits

55 hours of lecture

Theory including equipment safety, kitchen methods, soups, stocks, and salads. Concurrent enrollment in FOOD 112 required. [GE]

**FOOD PRODUCTION**

FOOD 112

4 Credits

88 hours of lab

Sanitation, safety, entrees, casseroles, fruit, and quick breads. Careers in the food industry. Concurrent enrollment in FOOD 111 required. [GE]

**COOKING THEORY**

FOOD 113

5 Credits

55 hours of lecture

Theory including sanitation, safety, entrees, casseroles, fruit, quick breads, and careers in the food industry. Also includes garde manger (food decoration). Concurrent enrollment in FOOD 114 required. [GE]

**FOOD PRODUCTION**

FOOD 114

4 Credits

88 hours of lab

Continuation of FOOD 112. Production cooking and management related to topics covered in FOOD 113. Concurrent enrollment in FOOD 113 required. [GE]

**COOKING THEORY**

FOOD 115

5 Credits

55 hours of lecture

Theory including safety, sanitation, vegetable preparation, desserts, and job interviewing. Concurrent enrollment in FOOD 116 required. [GE]

**FOOD PRODUCTION**

FOOD 116

4 Credits

88 hours of lab

Continuation of FOOD 114. Production cooking and management related to topics covered in FOOD 115. Concurrent enrollment in FOOD 115 required. [GE]

**COOKING THEORY**

FOOD 117

5 Credits

55 hours of lecture

Problems involved in preparation for banquets, catering, fast food and take-out food services. Concurrent enrollment in FOOD 118 required. [GE]

**FOOD PRODUCTION**

FOOD 118

4 Credits

88 hours of lab

Banquet, catering, deli and fast food. Concurrent enrollment in FOOD 117 required. [GE]

**KITCHEN SET-UP**

FOOD 120

2 Credits

44 hours of lab

Opening up a kitchen, inventorying food, setting-up food stations, turning on all equipment, pre-planning the day's activities, and breakfast cooking. [GE]

**KITCHEN SET-UP**

FOOD 121

2 Credits

44 hours of lab

Continuation of FOOD 120 with further emphasis on efficient kitchen operations. Prerequisite: FOOD 120. [GE]

### **KITCHEN SET-UP**

FOOD 122

2 Credits

44 hours of lab

Learning kitchen equipment set-up. Getting kitchen stations ready for the day's food preparation. [GE]

### **KITCHEN SET-UP**

FOOD 123

2 Credits

44 hours of lab

Setting-up a dining room and working with problems of pre-opening operations. [GE]

### **FOOD DECORATION**

FOOD 125

3 Credits

22 hours of lecture - 22 hours of lab

Garnishing techniques with fruits and vegetables. Dessert garnishes and basic use of pastry bag and tips. [GE]

### **ADVANCED GARDE MANGER**

FOOD 126

3 Credits

22 hours of lecture - 22 hours of lab

Garnishing techniques with fruits and vegetables. Advanced melon and flower carving. Use of these and other items to create presentation pieces or centerpieces. [GE]

### **HORS D'OEUVRES - PATES**

FOOD 127

3 Credits

22 hours of lecture - 22 hours of lab

Basic preparation of pates and terrines and other related forcemeat preparation -- quenelles, galantines, ballotines, etc. Discussion of French terminology, especially pertaining to garde manger - selection, preparation, and presentation of hors d'oeuvres for entertaining. [GE]

### **GUMPASTE FLOWERS**

FOOD 128

3 Credits

22 hours of lecture - 22 hours of lab

Basics of preparing, handling, molding, and drying gumpaste (pastillage) flowers. [GE]

### **ICE CARVING**

FOOD 130

3 Credits

22 hours of lecture - 22 hours of lab

Basic ice carving and display techniques. Use of tools and templates. [GE]

**DINING ROOM THEORY**

FOOD 131

4 Credits

44 hours of lecture

Theory and practice of restaurant table service including customer psychology, taking and filling orders, table setting, and styles of service. [GE]

**DINING ROOM PRODUCTION**

FOOD 132

5 Credits

110 hours of lab

Organization and set-up of dining room prior to operation, stocking of "service" stations, and dining table set-up. [GE] [PNP]

**DINING ROOM SERVICE**

FOOD 133

5 Credits

110 hours of lab

Restaurant table service and practice including taking, writing and placing orders, customer seating and service, cash control, and special problems. [GE]

**SOUPS AND SAUCES**

FOOD 134

3 Credits

22 hours of lecture - 22 hours of lab

Methods of making basic and advanced soups and sauces. [GE]

**WINE APPRECIATION**

FOOD 140

3 Credits

33 hours of lecture

History of wines: how they are made, aged, and stored, along with actual tasting sessions to educate the palate. [GE] [PNP]

**MENU PLANNING**

FOOD 141

3 Credits

33 hours of lecture

Basic principles of nutrition and menu planning. [GE]

**COOPERATIVE WORK EXPERIENCE**

FOOD 199

1 - 5 Credits

165 hours of clinical

Supervised work experience in a hospitality-related job. Completion of specific learning objectives and employer evaluation. Completion of, or concurrent enrollment in, HDEV 195, 198, or 200 required. Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Fulfill the job requirements for internship provider.

## **MANAGEMENT THEORY**

FOOD 223

5 Credits

55 hours of lecture

Purchasing, receiving, and inventorying of food supplies. Calculating labor-cost percentages. Concurrent enrollment in FOOD 240 required. Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Receive, store, and issue food items to various cooking stations.
- Successfully complete a cost analysis package, processing and posting invoices to a receiving journal.
- Cost out recipes, recipe conversion: increasing and decreasing recipes, proficiency when using weights and measures.

## **MANAGEMENT THEORY**

FOOD 225

5 Credits

55 hours of lecture

Decorating with food, buffet set-ups, hors d'oeuvres, canapes, basic and gourmet food preparation including ice carving and tallow showpieces. Concurrent enrollment in FOOD 241 required. Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Make fruit and vegetable decorations and carvings.
- Make a galantine and two types of sausage.
- Identify basic Garde Manger specialty tools and their proper use.
- Work in a team to create an ice-carving template and a complete carving.

## **MANAGEMENT THEORY**

FOOD 227

5 Credits

55 hours of lecture

Menu analysis, restaurant security, job applications, resumes and interviews. Concurrent enrollment in FOOD 242 required. Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Create and maintain a food costing analysis package including completed worksheets and accounting forms.
- Be prepared for a job interview.
- Awareness and prevention of potential restaurant security problems.

## **MANAGEMENT THEORY**

FOOD 229

5 Credits

55 hours of lecture

Advanced food preparation techniques and classical cooking information. Scheduling and layout for banquets and buffets. Concurrent enrollment in FOOD 243 required. Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**



- Use advanced cutting techniques skills for classical recipes.
- Use correct cooking techniques and terminology when preparing classical cooking and food preparations.
- Select a recipe, write a food requisition, and display completed project within timelines.

### **BEGINNING MEAT CUTTING**

FOOD 235

3 Credits

11 hours of lecture - 44 hours of lab

Individualized study of meat-cutting techniques related to retail sales and commercial use. [GE]

### **INTERMEDIATE MEAT CUTTING**

FOOD 236

3 Credits

11 hours of lecture - 44 hours of lab

Study of meat-cutting techniques for beef, pork, poultry, and lamb. Brief overview of cooking techniques for the various cuts of meat. Prerequisite: FOOD 235. [GE]

### **ADVANCED MEAT CUTTING**

FOOD 237

3 Credits

11 hours of lecture - 44 hours of lab

To supply the students with the knowledge, technical skills and information necessary to manage all phases of meat and poultry cutting in a food service operation. Prerequisite: FOOD 235 and 236. [GE]

### **RESTAURANT MANAGEMENT**

FOOD 240

8 Credits

176 hours of lab

Practical instruction in restaurant management by working at various management stations. Prerequisite: Consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Create and maintain a food costing analysis package including completed worksheets and accounting forms.
- Be prepared for a job interview.
- Awareness and prevention of potential restaurant security problems.

### **RESTAURANT MANAGEMENT**

FOOD 241

8 Credits

176 hours of lab

Practical instruction in restaurant management by working at various management stations. Prerequisite: FOOD 240 or consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Manage lab stations 3 and 4 within the kitchen.
- Create a station menu, locate recipes, write a food requisition, and complete the menu.
- Work with assigned cooking students to complete the menu at your station.

**RESTAURANT MANAGEMENT**

FOOD 242

8 Credits

176 hours of lab

Practical instruction in restaurant management by working at various management stations.  
Prerequisite: FOOD 241 or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Manage lab stations 5 and 6 within the kitchen.
- Create a station menu, locate recipes, write a food requisition, and complete the menu.
- Work with assigned cooking students to complete the menu at your station.

**RESTAURANT MANAGEMENT**

FOOD 243

8 Credits

176 hours of lab

Practical instruction in restaurant management by working at various management stations.  
Prerequisite: FOOD 242 or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Manage lab stations 7 and 8 within the kitchen.
- Create a station menu, locate recipes, write a food requisition, and complete the menu.
- Work with assigned cooking students to complete the menu at your station.

**ADVANCED KITCHEN SET-UP**

FOOD 250

2 Credits

44 hours of lab

Staff management and early morning kitchen set-up. [GE]

**Course Outcomes:**

- Organize all ingredients, tools, and equipment to accomplish the daily station menu.
- Train first-year cooking students in proper procedures for using kitchen equipment in stations 1 and 2.
- Evaluate first-year cooking students on proper sanitation and safety procedures of station equipment.

**ADVANCED KITCHEN SET-UP**

FOOD 251

2 Credits

44 hours of lab

Organization and set-up of management stations. [GE]

**ADVANCED KITCHEN SET-UP**

FOOD 252

2 Credits

44 hours of lab

Organization and set-up of management stations. [GE]

**Course Outcomes:**

- Organize all ingredients, tools, and equipment to accomplish the daily station menu.
- Train first-year cooking students in proper procedures for using kitchen equipment in stations 5 and 6.
- Evaluate first-year cooking students on proper sanitation and safety procedures of station equipment.

**ADVANCED KITCHEN SET-UP**

FOOD 253

2 Credits

44 hours of lab

Organization and set-up of management stations. [GE]

**Course Outcomes:**

- Organize all ingredients, tools, and equipment to accomplish the daily station menu.
- Train first-year cooking students in proper procedures for using kitchen equipment in stations 7 and 8.
- Evaluate first-year cooking students on proper sanitation and safety procedures of station equipment.

**SPECIAL PROJECTS**

FOOD 290

1 - 12 Credits

Opportunity to plan, organize and complete special projects approved by the department.

Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

**French**

**FRENCH I**

FRCH&121

5 Credits

55 hours of lecture

Communicating in French with practice in listening, speaking, writing, and reading. [HA, SE]

**Course Outcomes:**

- Demonstrate knowledge of cultural components of course, be able to read, understand and write at an elementary level including the following concepts: greet and make health statements, identify objects and people, use numbers, use the verb "être" and desc
- Speak at an elementary level making idiomatic use of the above concepts.

**FRENCH II**

FRCH&122

5 Credits

55 hours of lecture

Continuation of FRCH& 121. [HA, SE]

**Course Outcomes:**

- Demonstrate knowledge of cultural components of course, be able to read, understand and write at an elementary level including the following concepts: talking about professions, counting to 100, getting around town using aller and prepositions of location
- Speak at an elementary level making idiomatic use of the above concepts.

**FRENCH III**

FRCH&123

5 Credits

55 hours of lecture

Continuation of FRCH& 122. Completion of FRCH& 122 or equivalent, or F-Cape placement test recommended. Formerly FREN 103. Credit not allowed for both FREN 103 and FRCH& 123. [HA, SE]

**Course Outcomes:**

- Demonstrate knowledge of cultural components of course, be able to read, understand and write at an elementary level including the following concepts: economize words by using object pronouns, give commands, use verbs from –ir and –re pattern groups, speak
- Speak at an elementary level making idiomatic use of the above concepts.

**CONVERSATIONAL FRENCH**

FRCH 141

3 Credits

33 hours of lecture

Intensive practice in French conversation. Discussion in pairs or small groups on topics of interest to those studying French-speaking societies. Prerequisite: Consent of Instructional Unit. Formerly FREN 141. Credit not allowed for both FREN 141 or FRCH 141. [HB, SE]

**STUDY ABROAD ORIENTATION**

FRCH 150

1 Credits

11 hours of lecture

Preparing students to travel with the Clark College study abroad program to a French-speaking country. Successful completion of the course required for students to participate in the travel abroad program. Application and acceptance into the study abroad program also required. Prerequisite: A grade of "C" or better or concurrent enrollment in FRCH& 121 or above; or consent of Instructional Unit. [SE]

**Course Outcomes:**

- Demonstrate readiness to travel, awareness of what to expect in terms of "culture shock", knowledge of basic Quebec history, ability to use information technology to report on some aspect of Quebec culture, and ability to recognize unique Quebec language

**FRENCH IV**

FRCH&221

5 Credits

55 hours of lecture

Review of basic structures, expansion of conversation, and reading skills. [HA, SE]

**Course Outcomes:**

- Interact with a degree of fluency and spontaneity that makes regular interaction with native speakers possible.
- Participate in discussion in familiar contexts, accounting for and sustaining my views.
- Present clear, limited description on a range of subjects related to my field of interest.
- Explain a viewpoint on a topical issue giving the advantages and disadvantages of various opinions.
- Understand simple speech and lectures and follow complex lines of argument provided the topic is reasonably familiar.
- Understand some TV news and current affairs programs.
- Understand the gist of a film in standard dialect.
- Read articles and reports concerned with contemporary problems in which the writers adopt particular attitudes or viewpoints.
- Understand contemporary literary prose.
- Write clear, detailed text on a range of subjects related to my interests.
- Write a paragraph or short report, passing on information or giving reasons in support of or against a particular point of view.
- Write notes and email messages pertaining to personal events and experiences.
- Identify elements of the target culture and explain some important differences and similarities between the target culture(s) and US culture.

**FRENCH V**

FRCH&222

5 Credits

55 hours of lecture

Review of basic structures, expansion of conversation, and reading skills. Prerequisite: FRCH& 221 or equivalent. [HA, SE]

**Course Outcomes:**

- Interact with a degree of fluency and spontaneity that makes regular interaction with native speakers possible.
- Participate in discussion in familiar contexts, accounting for and sustaining my views.
- Present clear, limited description on a range of subjects related to my field of interest.
- Explain a viewpoint on a topical issue giving the advantages and disadvantages of various opinions.
- Understand simple speech and lectures and follow complex lines of argument provided the topic is reasonably familiar.
- Understand some TV news and current affairs programs.
- Understand the gist of a film in standard dialect.
- Read articles and reports concerned with contemporary problems in which the writers adopt particular attitudes or viewpoints.
- Understand contemporary literary prose.
- Write clear, detailed text on a range of subjects related to my interests.
- Write a paragraph or short report, passing on information or giving reasons in support of or against a particular point of view.
- Write notes and email messages pertaining to personal events and experiences.
- Identify elements of the target culture and explain some important differences and similarities between the target culture(s) and US culture.

## **FRENCH VI**

FRCH&223

5 Credits

55 hours of lecture

Review of basic structures, expansion of conversation, and reading skills. Prerequisite: FRCH&222 or equivalent. [HA, SE]

### **Course Outcomes:**

- Interact with a degree of fluency and spontaneity that makes regular interaction with native speakers possible.
- Participate in discussion in familiar contexts, accounting for and sustaining my views.
- Present clear, limited description on a range of subjects related to my field of interest.
- Explain a viewpoint on a topical issue giving the advantages and disadvantages of various opinions.
- Understand simple speech and lectures and follow complex lines of argument provided the topic is reasonably familiar.
- Understand some TV news and current affairs programs.
- Understand the gist of a film in standard dialect.
- Read articles and reports concerned with contemporary problems in which the writers adopt particular attitudes or viewpoints.
- Understand contemporary literary prose.
- Write clear, detailed text on a range of subjects related to my interests.
- Write a paragraph or short report, passing on information or giving reasons in support of or against a particular point of view.
- Write notes and email messages pertaining to personal events and experiences.
- Identify elements of the target culture and explain some important differences and similarities between the target culture(s) and US culture.

## **SELECTED TOPICS**

FRCH 280

1 - 5 Credits

55 hours of lecture

The course focuses on selected topics in French. Topics vary, and course theme and content change to reflect new topics. Because the course varies in content, it is repeatable for credit for different topics. Individual topics are listed in the quarterly class schedule. [SE]

### **Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of French.

## **SPECIAL PROJECTS**

FRCH 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the department. Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## **SURVEY OF FORENSIC SCIENCE**

FSCI 101

3 Credits

33 hours of lecture

An introduction to the Forensic Sciences: crime scene analysis and recording, the crime laboratory, Forensic Medicine, Dentistry, Anthropology, Psychology, and other topics. [SE] [PNP]

### **Course Outcomes:**

- Apply quantitative tools and qualitative assessments for analyzing human remains.
- Demonstrate an understanding of human musculoskeletal anatomy including the material properties of basic biological tissues.
- Apply the principles of the scientific method to explain the underpinnings of modern human biological variation in age, sex and ethnicity.
- Describe the role that scientists play in the analysis of human remains, especially as it pertains to modern law enforcement practices and human remains recovery operations.

## **SELECTED TOPICS: FORENSIC SCIENCE**

FSCI 280

3 Credits

33 hours of lecture

Selected topics in the Forensic Sciences as listed in the quarterly schedule. May be repeated for credit. Prerequisite: None/or Law enforcement officers only for some topics. [SE] [PNP]

### **Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this course.

## **SPECIAL PROJECTS**

FSCI 290

1 - 5 Credits

Varying topics in the forensic sciences as listed in the quarterly class schedule. May be repeated for credit. Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## **Fitness Trainer**

### **FITNESS TRAINER SEMINAR**

FT 101

1 Credits

11 hours of lecture

Career exploration course focusing on gaining insight into the roles, professional duties, and responsibilities of fitness/health professionals across the fitness industry. [GE]

### **Course Outcomes:**

- Investigate career opportunities in the fitness industry and pathways leading to those careers.
- Summarize desirable job-skills related to fitness.

- Develop a functional resume and professional development strategies.

### **FUNDAMENTALS OF FITNESS**

FT 150

3 Credits

22 hours of lecture - 22 hours of lab

Basic principles of exercise science, exercise prescription, and muscle/bone anatomy. [GE] [PNP]

#### **Course Outcomes:**

- Demonstrate a basic understanding of fitness-related concepts, including exercise science, nutrition, exercise prescription, and scope of practice.
- Identify basic kinesiological terms, concepts and landmarks.

### **FITNESS CENTER SKILLS**

FT 151

2 Credits

44 hours of lab

Develop skills related to exercise techniques and instruction focusing on cardio machines, weight machines and basic free weights. [GE]

#### **Course Outcomes:**

- Demonstrate correct exercise technique.
- Communicate appropriately during client interactions.
- Demonstrate the use of appropriate teaching progressions.
- Identify and correct improper exercise technique using appropriate cueing.
- Practice good risk management skills (enforce rules, know how and when to spot, correct body positioning, know and avoid contraindicated exercises) .

### **FLEXIBILITY, POSTURE AND CORE**

FT 152

2 Credits

44 hours of lab

Develop skills related to exercise assessment, technique and instruction focusing on flexibility, posture and core. Prerequisite: Concurrent enrollment or a grade of "C" or better in FT 150 or 250. [GE]

#### **Course Outcomes:**

- Appropriately demonstrate corrective exercise techniques.
- Identify and correct movement deficiencies and muscle imbalances utilizing qualitative assessments.
- Create individualized training programs by identifying dysfunctions, developing a plan of action, and implementing corrective exercise solutions.
- Interpret terms, concepts, and principles related to flexibility, posture, and core assessment with additional consideration to working with general populations.

### **EXERCISE TECHNIQUES**

FT 153

2 Credits



44 hours of lab

Develop skills related to exercise techniques and instruction focusing on running/sprinting form, introduction to plyometrics, and the use of body weight, dumbbells, elastic tubing, and stability balls for resistance training. Prerequisite: A grade of "C" or better in FT 151. [GE]

**Course Outcomes:**

- Perform correct technique for a variety of body weight, dumbbells, bosu balls, kettlebells, bands, stability balls (ability to demonstrate correctly) .
- Demonstrate the use of appropriate teaching progressions.
- Identify and correct improper exercise technique using appropriate cueing.
- Practice good risk management skills (enforce rules, know how and when to spot, correct body positioning, know and avoid contraindicated exercises) .
- Communicate appropriately during client interactions.

**POWER DEVELOPMENT**

FT 154

2 Credits

44 hours of lab

Develop skills related to exercise technique and instruction focusing on power, speed, agility and quickness. Prerequisite: A grade of "C" or better in FT 151. [GE]

**Course Outcomes:**

- Conduct proper warm-up, stimulus, and cool down phases of a performance workout.
- Demonstrate technical skill in performing a variety of speed, agility, quickness and power development exercises.
- Create an individual workout plan that targets specific muscle groups for improved performance.
- Design pre and post testing criteria that effectively measures performance.
- Coordinate a training sequence considering available equipment and group size.
- Teach sequential skill development.

**GROUP FITNESS INSTRUCTOR**

FT 155

2 Credits

44 hours of lab

Develop skills related to exercise technique and instruction focusing on group exercise training to music. Prerequisite: Completion of or concurrent enrollment in FT 150 with a grade of "C" or better. [GE]

**Course Outcomes:**

- Demonstrate the skills necessary to safely and effectively lead a group of participants through a group exercise class that is formatted to music.
- Apply the principles and methods of training for cardiorespiratory fitness, muscular strength and endurance, and flexibility.
- Recognize the role of the group fitness instructor as it related to legal issues and professional responsibility.

**YOGA TEACHING**

FT 156

2 Credits

44 hours of lab

Introduction to the Yogafit method of teaching yoga. Students will learn physical execution, transitions, and modifications to traditional yoga poses with an emphasis on effectiveness and safety, as well as modifications for common special populations. [GE] [PNP]

**Course Outcomes:**

- Prepare for entry into the field as a yoga teacher.
- Teach yoga poses appropriate for healthy populations, seniors, pre/post-natal women, and for promoting back health.
- Communicate safety principles and exercise modifications while teaching yoga to a variety of populations.

**FLEXIBILITY, POSTURE & CORE II**

FT 162

2 Credits

44 hours of lab

Builds on skills developed in FT 152, with an emphasis on preparing students to specialize in the area of corrective exercise. Prerequisite: A grade of "C" or better in FT 152. [GE] [PNP]

**Course Outcomes:**

- Appropriately demonstrate corrective exercise techniques.
- Identify and correct movement deficiencies and muscle imbalances utilizing qualitative and quantitative assessments.
- Create individualized training programs by identifying dysfunctions, developing a plan of action, and implementing corrective exercise solutions.
- Interpret terms, concepts, and principles related to flexibility, posture, and core assessment with additional consideration to working with special populations.

**NUTRITION FOR FITNESS**

FT 200

3 Credits

33 hours of lecture

Develop strategies for encouraging nutritious eating and weight management. Discuss eating disorders. Explore performance nutrition and supplementation. Acquire a variety of diet and analysis tools to use with clients within the scope of practice for the personal trainer. Prerequisite: A grade of "C" or better in HLTH 100 and MATH 090 or 091 and FT 210. [GE]

**Course Outcomes:**

- Become familiar with a variety of diet analysis tools to use with clients within a fitness trainer's scope of practice.
- Demonstrate a competent level of nutritional knowledge as it relates to exercise and good health when communicating with clients.
- Evaluate a variety of diets using reliable resources.
- Investigate information about nutritional supplements, ergogenic aids, age-related nutritional needs, or eating disorders.
- Develop a comprehensive nutrition resource notebook.
- Practice making healthy meals.

**WELLNESS COACHING**

FT 210

3 Credits

22 hours of lecture - 22 hours of lab

Develop collaborative communication style and motivational skills to help clients adopt healthier lifestyles. Prerequisite: A grade of "C" or better in CMST& 210 and FT 101. [GE]

**Course Outcomes:**

- Assess client successes, strengths, interests, and motivators related to healthy behavior change.
- Apply principles of SMART goal setting.
- Apply behavior change theory.
- Demonstrate client-centered communication skills.
- Elicit, recognize, and respond to change talk effectively.
- Demonstrate relationship building skills.
- Develop coaching resource "tool-kit."

**FACILITY MANAGEMENT**

FT 220

3 Credits

33 hours of lecture

Risk management in a fitness facility setting. Topics include liability, personnel, safety, facility layout, repair, and maintenance of fitness equipment. Students will receive First Aid/CPR/AED certification upon successful completion of the class. Prerequisite: A grade of "C" or better in FT 101. [GE]

**Course Outcomes:**

- Demonstrate knowledge and skills to receive Adult, and Child CPR/AED and First Aid certification.
- Care for exercise related injuries and illnesses in a fitness center setting.
- Understand legal and liability issues related to the fitness trainer, including informed consent, standard of care, negligence, documentation, scope of practice, confidentiality, qualifications, sexual harassment, emergency response and liability insurance
- Identify principles of facility layout, including equipment organization, placement and spacing requirement.
- Identify facility and equipment maintenance and cleaning duties that promote a safe exercise environment.
- Develop and Emergency Action Plan (EAP) for a health club setting, skills in documenting safety procedures, the use of incident document, and ongoing safety training.

**FITNESS TESTING**

FT 230

3 Credits

11 hours of lecture - 44 hours of lab

Methods of assessment of client health, fitness, nutrition, and exercise behavior. Developing skills for assessing blood pressure, body composition, cardio-respiratory fitness, flexibility, and muscular strength/endurance. Completion of or concurrent enrollment in FT 251. Prerequisite: A grade of "C" or better in HPE 258 and MATH 090 or 091. [GE]

**Course Outcomes:**

- Conduct a pre-exercise health screening.
- Demonstrate skills necessary to administer fitness tests using the appropriate protocols.
- Interpret and discuss results of fitness tests with clients.

- Communicate Exercise Science related principles at levels appropriate to both clients and professional peers.

## **STRUCTURAL KINESIOLOGY**

FT 250

3 Credits

22 hours of lecture - 22 hours of lab

Overview of anatomical and mechanical bases of human movement. Prerequisite: A grade of "C" or better in FT 150. [GE]

### **Course Outcomes:**

- Identify bones, joints, actions, major muscle groups, planes of movement, and types of muscle contractions involved in performing common exercises.
- Apply knowledge of basic neuromuscular and biomechanical principles as they relate to exercise technique and human performance.
- Analyze exercise movement.

## **EXERCISE PHYSIOLOGY**

FT 251

4 Credits

44 hours of lecture

Study of physiological responses and adaptations of the body to exercise: topics include principles related to disease prevention, the cardio-respiratory system, neuromuscular system, environmental stress, supplementation, nutrition, metabolism, body composition, and weight management. Prerequisite: A grade of "C" or better in BIOL 164/165 or BIOL& 253 (or BIOL 160/161 or BIOL 233). [GE]

### **Course Outcomes:**

- Communicate exercise science related principles at levels appropriate to both clients and to professional peers.
- Examine exercise physiology concepts and how they relate to health, fitness and human performance.
- Investigate an exercise related topic by writing a well-balanced research paper. (CM, CT) .
- Effectively research and evaluate information related to exercise physiology. (IT) .

## **EXERCISE PRESCRIPTION I-HEALTHY POPULATIONS**

FT 260

5 Credits

44 hours of lecture - 22 hours of lab

Designing client-centered fitness plans intended to help apparently healthy clients achieve their health and fitness goals in a safe and effective manner. Prerequisite: A grade of "C" or better in ENGL& 101 or ENGL 135 (or ENGL 101 or 111), FT 210 and FT 251. [GE]

### **Course Outcomes:**

- Use appropriate strategies to motivate clients to adopt healthier behaviors.
- Perform health and fitness-related assessments on clients.
- Interpret and discuss results of fitness tests with clients.
- Design fitness plans for healthy adults by applying appropriate exercise prescription principles.
- Effectively instruct clients how to perform safe and effective exercise technique.

- Research, develop and collect reference materials and sample workout plans.
- Explain exercise prescription, testing principles and health information for healthy populations.
- Develop charting skills for good record keeping on individual clients.

## **EXERCISE PRESCRIPTION II-SPECIAL POPULATIONS**

FT 261

5 Credits

55 hours of lecture

Designing individualized fitness plans to help clients with special needs achieve their health and fitness goals in a safe and effective manner. Prerequisite: A grade of "C" or better in FT 260. [GE]

### **Course Outcomes:**

- Communicate etiology and prevention strategies for a variety of special conditions to both clients and to professional peers.
- Use appropriate strategies to motivate clients to adopt healthier behaviors.
- Perform health and fitness-related assessments on clients.
- Design fitness plans for special populations (e.g., pregnant women, elderly, those with chronic diseases, etc.) utilizing appropriate principles of safe and effective exercise prescription.
- Effectively instruct clients how to modify and perform safe and effective exercise technique for special populations.
- Develop charting skills for good record keeping on individual clients.
- Recognize principle actions and effects on exercise of common prescription and over the counter drugs and substances, including antianginals; antihypertensives; antiarrhythmics; anticoagulants, bronchodilators; hypoglycemics; psychotropics; vasodilators.
- Access information, develop resources, and create client handouts related to special populations.

## **EXERCISE PRESCRIPTION III-PERFORMANCE TRAINING**

FT 262

4 Credits

22 hours of lecture - 44 hours of lab

Emphasizes the process for developing long term training plans (periodization) for performances oriented clients. Sports conditioning and endurance training methods are covered. Laboratory experiences focus on endurance training for swimming, bicycling, and running. Prerequisite: A grade of "C" or better in FT 260 and a "Satisfactory" grade in either PE 175, 176, 177, 274, 179 or 279. [GE]

### **Course Outcomes:**

- Implement appropriate fitness tests for performance clients.
- Create long-term training plans for performance clients utilizing appropriate principles of safe and effective exercise prescription, including endurance athletes, sports conditioning, and aquatics.
- Apply strength and endurance training principles.
- Effectively instruct clients how to perform safe and effective exercise for running, biking and swimming.
- Experience different training methods for strength & endurance activities.

## **PROFESSIONAL ASPECTS OF FITNESS TRAINING**

FT 270

3 Credits

33 hours of lecture

Focuses on personal training as a business: business planning, marketing, customer service, work ethic, management systems, resume development and interviewing skills. [GE]

**Course Outcomes:**

- Develop effective job-search skills and interviewing techniques.
- Identify and practice professional workplace behaviors.
- Create an effective marketing plan.
- Practice customer service strategies for the personal trainer.
- Develop sales skills.
- Identify business licensing, legal structures and personal liability issues associated with personal training.

**FITNESS TRAINING INTERNSHIP**

FT 275

4 Credits

132 hours of clinical

Experience hands-on fitness training at one or more approved worksites. Prerequisite: A grade of "C" or better in FT 220. [GE]

**Course Outcomes:**

- Experience a wide variety of fitness training skills and concepts in a work environment.

**SPECIAL TOPICS**

FT 280

1 - 5 Credits

55 hours of lecture

Varying topics in the Fitness Training Industry, as listed in the quarterly class schedule. May be repeated for credit. [GE]

**Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of Fitness Training.

**SPECIAL PROJECTS**

FT 290

1 - 5 Credits

Opportunity to plan, organize, and complete special projects approved by the department. Prerequisite: Consent of Instructor. [GE]

**Course Outcomes:**

- Provide entry level job skills in a fitness setting.

**FINAL SKILL ASSESSMENT**

FT 299

2 Credits

11 hours of lecture - 22 hours of lab

Comprehensive assessment of Fitness Trainer AAS degree student learning outcomes. Students must pass this course at 70% or better to earn their AA-Fitness Trainer from Clark College.

Prerequisite: A grade of "C" or higher for FT 260. [GE]

**Course Outcomes:**

- Communicate exercise science related principles at levels appropriate to both clients and to professional peers.
- Apply appropriate strategies to motivate clients to adopt healthier behaviors.
- Perform health and fitness-related assessments on clients.
- Design and implement fitness plans to effectively train a variety of clients using a systematic approach to exercise prescription.
- Instruct clients to perform safe and effective exercise technique.
- Exhibit a foundation of professional and business-related skills necessary for becoming a personal trainer.
- Prepare for a nationally accredited Fitness Trainer certification exam.

**General Education**

**SPECIAL TOPICS**

GED 005

1 - 10 Credits

110 hours of lecture

Special interest topics at the GED level for students who qualify based upon CASAS Test scores. Topics vary and course may be repeated for credit for different topics.

**Course Outcomes:**

- Special interest topics at the GED level for students who qualify based upon CASAS Test scores. Topics vary and course may be repeated for credit for different topics.

**GED WRITING FUNDAMENTALS**

GED 011

1 - 6 Credits

66 hours of lecture

Students performing at GED level will learn to write understandable and well-constructed multiple paragraphs easily and with few errors to independently accomplish well defined and structured writing activities for varied reasons (such as for personal expression, to inform, to persuade or to complete a task) and for audiences in a range of comfortable and familiar settings. Organization, transitions, punctuation and sentence structure skills are emphasized. This course can serve as preparation for the GED Writing Test or as refresher course for basic skills improvement.

Prerequisite: Appropriate CASAS score.

**Course Outcomes:**

- W 5.1 Determine the purpose and audience for communicating in writing.
- W 5.2 Select from and use a good store of tools and strategies for overall planning and organization; outline, restate, summarize and categorize ideas and produce a legible and comprehensible draft.
- W 5.3 Appropriately use both everyday and specialized vocabulary including abstract nouns and idioms, and a variety of sentence structures, in medium-length, coherently-linked, and detailed text with appropriate tone, language, and level of formality and

- W 5.4 Use a variety of strategies to analyze and make simple revisions (such as for clarity, organization, and descriptiveness) and to solve a few more global problems posed by the writing text (such as changes in voice or tone to take into account the ne
- W 5.5 Undertake multiple re-readings of text in order to edit for grammar, spelling, sentence structure, language usage, and text structure and use appropriate tools such as dictionaries and grammar guides.

## **GED MATH I**

GED 021

1 - 6 Credits

66 hours of lecture

Students will learn to read, write, interpret, and apply a wide variety of mathematical information such as the following: money/expenses/prices, percentages, decimals, fractions, patterns and formulas, units of measurement including fractional units, geometrical shapes including shapes containing a combination of common shapes, concept of volume, and ways to interpret, represent and draw implications from data (graphs, tables, and simple forms of statistical analysis).

Prerequisite: ABE MATH 024 or appropriate CASAS placement score.

### **Course Outcomes:**

- M 5.1 Read, write, and interpret a wide variety of mathematical information such as Numbers and number sense: money/expenses/prices, percentages, decimals and fractions. volume. Patterns/Functions/Relationships: patterns and formulas (such as  $A=pr^2$ ) . Dat
- M 5.2 Recall and use multi-step mathematical procedures (such as keeping accounts) that involve whole numbers as well as fractions, decimals, and/or percents, and measure volume using tools with different calibrations.
- M 5.3 Evaluate the degree of precision needed for the solution.
- M 5.4 Define, select, organize, and integrate mathematical information of different types in carrying out procedures, describing patterns, and/or measuring with appropriate tools to solve the problem and to verify that the solution is reasonable.
- M 5.5 Create appropriate visual or graphic representations such as charts, tables, graphs, etc. and clearly communicate the solution process and results orally or in writing to a variety of audiences.

## **GED READING II**

GED 032

1 - 2 Credits

22 hours of lecture

Analysis of literature, science and social studies readings. Skills include distinguishing between fact and opinion, understanding elements of style and structure, interpreting charts and graphs, and increasing comprehension. Test taking skills taught and practiced. Last in a series of courses for improvement of basic skills in reading. This course serves as preparation for the GED Reading Tests in Literature, Science and Social Studies, or as a refresher course for basic skills improvement. Prerequisite: ABE 034 or recommending score on placement test.

### **Course Outcomes:**

- R 6.1 Recognize and interpret terms, signs, symbols, acronyms, and abbreviations.
- R 6.2 Demonstrate familiarity with extensive specialized content knowledge and vocabulary and with the organization of long, complex prose and complex documents.
- R 6.3 Locate both directly stated and implied important information, using a wide range of strategies to guide reading of long texts.
- R 6.4 Monitor and enhance comprehension using a wide range of strategies, such as brainstorming and question formulation techniques.



- R 6.5 Integrate prior knowledge with new information in texts to develop deep understanding of the information.
- R 6.6 Organize and analyze information and reflect upon its meaning using a wide range of strategies, such as applying relevant information to multiple scenarios, summarizing, and drawing “big picture” conclusions and generalizations from detailed reading

### **I-BEST SUPPORT**

GED 071

1 - 10 Credits

110 hours of lecture

Provides Basic Skills students extra instruction and support for success in their I-BEST designated classes. Reviews important concepts and vocabulary introduced during I-BEST classes. Provide opportunities to develop culturally unfamiliar customer service and interaction skills needed to be successful in I-BEST occupations. Prerequisite: Admission into an I-BEST program.

#### **Course Outcomes:**

- Demonstrate an understanding of the core concepts of the IBEST selected topic.

## **Geography**

### **INTRODUCTION TO GEOGRAPHY**

GEOG&100

5 Credits

55 hours of lecture

Survey of our natural environment, earth-sun-moon relationships, cartography, weather and climate, landforms, soils, oceans, and water and biotic resources. Survey of the countries and major features of the world as well as geographic aspects of culture, including the past and present social, political and economic factors that are related to human perception, organization and use of the environment. [SE, SS]

#### **Course Outcomes:**

- Explain Earth air, land, and water systems and their interconnectedness.
- Identify and apply “The 5 Themes of Geography” to local, national and global phenomena.
- Identify, characterize, and explain spatial patterns and structures, the interrelationship between people and places, and the interactions between nature and society.
- Explain the relationship between the physical environment and the cultural environment.
- Utilize map skills to locate and identify specific geographic features on a variety of reference, topographic and general maps.
- Recognize applications of geography in everyday life.

### **WORLD REGIONAL GEOGRAPHY**

GEOG&102

5 Credits

55 hours of lecture

Fundamental geographic concepts and examination of different world regions and the various physical, social, cultural, and political processes that create, shape, and affect them. Survey of several different world regions, such as Sub-Saharan Africa, Europe, the Middle East, Latin American and Southeast Asia, by examination of the environmental, cultural, historical, and economic processes that make each region unique, as well as its connections and commonalities with other world regions. [SE, SS]

**Course Outcomes:**

- Identify major landforms and climate for the world's regions and discuss their impacts on population distribution, culture and sustainability.
- Articulate knowledge of current national and global issues for the world's regions.
- Describe, analyze, and explain the patterns, processes, and interactions of human and physical phenomena within the world's regions.
- Utilize map skills to locate and identify specific geographic features at the regional level.

**HUMAN GEOGRAPHY**

GEOG&amp;200

5 Credits

55 hours of lecture

The course provides a foundation for the understanding of fundamental concepts and current ideas in Human Geography. The purpose of the course is to introduce students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students will gain a broad understanding of the development of cultural, social, political and economic spaces at a variety of scales and the interaction of human societies with the biophysical environment. The significance of spatial and temporal scales will be introduced, and a consideration of ethics and values developed. [SE, SS]

**Course Outcomes:**

- Identify, characterize and explain spatial patterns and structures, the interrelationship between people and places, and the interactions between nature and society.
- Illustrate how "The 5 Themes of Geography" can be applied to the relationship between the natural environment and the creation of different aspects of culture.
- Explain patterns and processes in globalization and cultural diffusion and analyze the factors that influence its rate and extent.
- Identify human settlement and migration patterns and the consequences of migration.
- Identify and compare the human characteristics of various world places while distinguishing between race, ethnicity and nationality.
- Demonstrate an ability to present geographic concepts, approaches, methodologies, and applications in oral, written, and cartographic and other visual forms.

**PHYSICAL GEOGRAPHY**

GEOG 205

5 Credits

55 hours of lecture

Foundation for the understanding of fundamental concepts and current ideas in physical geography. The systematic study of patterns and processes that have shaped the Earth's surface by understanding our natural environment, earth-sun-moon relationships, cartography, weather and climate, landforms, soils, oceans, and water and biotic resources. Survey continents, countries, natural resources as well as major physical features of our current global landscape. [SE, SS]

**Course Outcomes:**

- Articulate the interconnectedness of our natural environment, Earth-Sun-Moon relationships, weather and climate, landforms, oceans, water and biotic resources.
- Analyze and evaluate primary and secondary sources as they pertain to the human impact on landforms, plants and animals.
- Appraise your place within the biosphere with respect to human-environment interaction, natural resources, sustainability and quality of life concerns.

- Identify the world's diverse bioregions and explain their differences.
- Utilize topographic and other map technologies.

## **ECONOMIC GEOGRAPHY**

GEOG&207

5 Credits

55 hours of lecture

Broad patterns, courses, and consequences of interrelationships between economic and geographic forces, processes, and resources. Location of economic activity, population dynamics, strategic resources, global economic flashpoints, patterns/consequences of regional integration. Previously GEOG 107. Credit not allowed for GEOG& 207, ECON 107 and GEOG 107. [SE, SS] [PNP]

## **THE GEOPOLITICS OF THE MIDDLE EAST**

GEOG 220

5 Credits

55 hours of lecture

Geo-political survey of the Middle East, including interrelationships between the physical, economic and political geography of this region, the impact of geography on politics and political issues within the nations of this region, the corresponding impact of politics and political issues on geography and on the lives of the people living in this region, as well as the resulting diversity of cultures, beliefs, perceptions, challenges and issues among the people of this region. This course will also examine the importance and impact of the Middle East on the rest of the world, as well as the impact and influence of the rest of the world on the Middle East. Credit not allowed for both GEOG 220 and POLS 220. [SE]

### **Course Outcomes:**

- Identify the Middle East's physical environment, regional demography, and prevailing cultural patterns.
- Analyze and evaluate primary and secondary sources as they pertain to comprehending the interconnectedness of contemporary Middle Eastern issues and global affairs.
- Explain reasons for the great variety of cultural, socio-economic and political activities in the region.
- Summarize the importance and impact of the Middle East on the rest of the world, as well as the impact and influence of the rest of the world on the region.

## **THE GEOPOLITICS OF AFRICA**

GEOG 221

5 Credits

55 hours of lecture

Geo-political survey of Africa, including interrelationships between the physical, economic and political geography of this region, the impact of geography on politics and political issues within the nations of this region, the corresponding impact of politics and political issues on geography and on the lives of the people living in this region, as well as the resulting diversity of cultures, beliefs, perceptions, challenges and issues among the people of this region. This course will also examine the importance and impact of Africa on the rest of the world, as well as examine the impact and influence of the rest of the world on Africa. Credit not allowed for both GEOG 221 and POLS 221. [SE]

### **Course Outcomes:**

- Identify Africa's physical environment, regional demography, and prevailing cultural patterns.

- Analyze and evaluate primary and secondary sources as they pertain to comprehending the interconnectedness of contemporary African geopolitical issues and global affairs.
- Explain reasons for the great variety of cultural, socio-economic and political activities in the region.
- Summarize the importance and impact of African countries on the rest of the world, as well as the impact and influence of the rest of the world on the continent.

## **THE GEOPOLITICS OF CHINA, JAPAN & EAST ASIA**

GEOG 222

5 Credits

55 hours of lecture

Geo-political survey of China, Japan and East Asia, including interrelationships between the physical, economic and political geography of this region, the impact of geography on politics and political issues within the nations of this region, the corresponding impact of politics and political issues on geography and on the lives of the people living in this region, as well as the resulting diversity of cultures, beliefs, perceptions, challenges and issues among the people of this region. This course will also examine the importance and impact of China, Japan and East Asia on the rest of the world, as well as examine the impact and influence of the rest of the world on China, Japan and East Asia. Credit not allowed for both GEOG 222 and POLS 222. [SE]

### **Course Outcomes:**

- Identify the physical environment, regional demography, and prevailing cultural patterns of China, Japan and East Asia.
- Analyze and evaluate primary and secondary sources as they pertain to comprehending the interconnectedness of contemporary China, Japan and East Asian geopolitical issues and global affairs.
- Explain reasons for the great variety of cultural, socio-economic and political activities in the region.
- Summarize the importance and impact of China, Japan and East Asia on the rest of the world, as well as the impact and influence of the rest of the world on the region.

## **THE GEOPOLITICS OF SOUTH AND CENTRAL ASIA**

GEOG 223

5 Credits

55 hours of lecture

Geo-political survey of South and Central Asia, including interrelationships between the physical, economic and political geography of this region, the impact of geography on politics and political issues within the nations of this region, the corresponding impact of politics and political issues on geography and on the lives of the people living in this region, as well as the resulting diversity of cultures, beliefs, perceptions, challenges and issues among the people of this region. This course will also examine the importance and impact of South and Central Asia on the rest of the world, as well as examine the impact and influence of the rest of the world on South and Central Asia. Credit not allowed for both GEOG 223 and POLS 223. [SE]

### **Course Outcomes:**

- Identify the physical environment, regional demography, and prevailing cultural patterns of South and Central Asia.
- Analyze and evaluate primary and secondary sources as they pertain to comprehending the interconnectedness of contemporary South and Central Asian geopolitical issues and global affairs.
- Explain reasons for the great variety of cultural, socio-economic and political activities in the region.

- Summarize the importance and impact of South and Central Asia on the rest of the world, as well as the impact and influence of the rest of the world on the region.

### **SELECTED TOPICS**

GEOG 280

1 - 5 Credits

55 hours of lecture

Course focuses on selected topics in Geography. Topics vary, and course theme and content change to reflect new topics. Because the course varies in content, it is repeatable for credit for different topics. [SE]

#### **Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this course.

### **SPECIAL PROJECTS**

GEOG 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the department.

Prerequisite: Consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## **Geology**

### **INTRO PHYSICAL GEOLOGY**

GEOL&101

5 Credits

33 hours of lecture - 88 hours of lab

A dynamic earth, geologic time, origin and identification of minerals and rocks. Volcanoes, earthquakes and the structure of earth in light of plate tectonic theory. One day field trip required. [NS, SE]

#### **Course Outcomes:**

- Discuss the fundamental principles that govern scientific investigation in general and geologic investigation in particular.
- Identify common minerals and rocks and communicate understanding of their origins and significance.
- Identify and discuss the origins, functions, characteristics and components of some of the major internal and external physical features of the Earth.
- Apply classroom principles in discussing local and regional geology in the Pacific Northwest, either virtually or in the field.
- Apply classroom principles in understanding and discussing local and regional geology throughout the Earth.

### **INTRO TO GEOL II: EARTH'S SURFACE PROCESSES**

GEOL 102

5 Credits

33 hours of lecture - 88 hours of lab

Plate tectonics and the origin of ocean basins and continents. Mass wasting, glaciation, streams, groundwater, deserts, shorelines and deep sea sediments. One day field trip required. [NS, SE]

**Course Outcomes:**

- Discuss the fundamental principles that govern scientific investigation in general and geologic investigation in particular.
- Discuss the basis whereby geologic time is determined and distinguish between relative and absolute time keeping methods.
- Distinguish sediments that result from different environments of deposition, and explain the reasons for their differences.
- Distinguish between the morphological features that result from various surface processes and explain the reasons for their differences.
- Apply classroom principles in understanding the geomorphologic evolution of local field areas.

**COOPERATIVE WORK EXPERIENCE**

GEOL 199

1 - 3 Credits

99 hours of clinical

Supervised work experience in an approved job. Completion of specific learning objectives and employer evaluation. Completion of, or concurrent enrollment in, HDEV 195, 198, or 200 required. Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Fulfill the job requirements of the internship provider.

**FIELD STUDIES IN GEOLOGY**

GEOL 218

1 - 6 Credits

22 hours of lecture - 88 hours of lab

Field trip program to study the geologic evolution of an area. Emphasis on interpretation of rocks and their structure. Duration, scope and field trip localities will vary. Food and personal gear provided by student. Maxi-vans provided for travel. Day hikes may be required. Prerequisite: Minimum of 10 credits in geology or consent of Instructional Unit. [NS, SE]

**Course Outcomes:**

- Identify common minerals and rocks in the field and understand their origins and significance.
- Understand and explain the geologic evolution of the various geologic provinces that we will visit on our trip.
- Identify geologic structures in the field.
- Relate geologic structures to the geologic history and evolution of a region.
- Apply theoretical classroom concepts such as plate tectonics, magmatic processes, chemical weathering, and metamorphism to the natural physical world around you.

**SPECIAL PROJECTS**

GEOL 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the department.  
Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## German

### GERMAN I

GERM&121

5 Credits

55 hours of lecture

Oral and written communication in German. Use of basic vocabulary and structures to acquire information and to express personal interests, needs and opinions on familiar topics. Contemporary German culture. [HA, SE]

**Course Outcomes:**

- Use simple phrases and sentences to describe self, family and friends, where we live and some of our pastimes. Interact in a simple way, provided that the other person is prepared to repeat or rephrase things at a slower rate of speech and help the student
- Demonstrate understanding of familiar words and very basic phrases concerning self, family and immediate concrete surroundings when people speak slowly and clearly.
- Understand short texts that consist of simple sentences, high frequency words, assigned vocabulary, and familiar names or words such as cognates.
- Write simple connected text on topics which are familiar or of personal interest. Write personal letters describing experiences and impressions.
- Identify and explain some differences and similarities between the target culture(s) and US culture.

### GERMAN II

GERM&122

5 Credits

55 hours of lecture

Continuation of GERM& 121 with emphasis on developing the students' ability to express themselves freely on familiar topics. [HA, SE]

**Course Outcomes:**

- Use a series of phrases and sentences to describe in simple terms family and other people, living conditions, educational background and present or most recent job. Communicate in simple and routine tasks requiring a simple and direct exchange of information
- Understand phrases and the highest frequency vocabulary related to areas of most immediate personal relevance (e.g. very basic personal and family information, shopping, local area, employment). Catch the main point in short, clear, simple messages and an
- Understand texts that consist mainly of high frequency everyday or job-related language. Understand the description of events, feelings and wishes in personal letters.
- Write simple connected text on topics which are familiar or of personal interest. Write personal letters describing experiences and impressions.
- Identify and explain some differences and similarities between the target culture(s) and US culture.

## **GERMAN III**

GERM&123

5 Credits

55 hours of lecture

Continuation of GERM& 122 with emphasis on developing students' ability to express themselves freely on familiar topics. [HA, SE]

### **Course Outcomes:**

- Deal with most situations likely to arise while traveling in an area where the language is spoken. Enter unprepared into conversations on topics that are familiar, of personal interest or pertinent to everyday life (ex. Family, hobbies, work, travel). C
- Understand the main points of clear standard speech on familiar matters regularly encountered in work, school, leisure, etc. Understand the main points of many radio or TV programs on current affairs or topics of personal or professional interest when they are
- Understand texts that consist mainly of high frequency everyday or job-related language. Understand the description of events, feelings and wishes in personal letters.
- Write simple connected text on topics which are familiar or of personal interest. Write personal letters describing experiences and impressions.
- Identify and explain some differences and similarities between the target culture(s) and US culture.

## **BERLIN IN FILM AND LITERATURE**

GERM 150

3 Credits

33 hours of lecture

Survey of Berlin during two centuries of recent history, using a critical exploration of literary, filmic, and artistic works on and of Berlin. Conducted in English, this course is open to all students and is mandatory before departure for students participating in the German Studies in Berlin Program. While open to the campus, this course is required for those students accepted into the German Studies in Berlin Program and will be offered in the summer prior to departure for Germany. Course will be conducted in English. There are no language prerequisites. [SE]

### **Course Outcomes:**

- Understand the host cities, schools, historical landmarks we will visit.
- Learn norms, customs, and how to behave appropriately in Germany in various situations and places.

## **GERMAN IV**

GERM&221

5 Credits

55 hours of lecture

Thematic approach to contemporary German culture and literature. Discussions and papers in German. Grammar review. [HA, SE]

### **Course Outcomes:**

- Interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible. Take an active part in discussion in familiar contexts, accounting for and sustaining my views. Present clear, detailed descriptions on
- Understand extended speech and lectures and follow even complex lines of argument provided the topic is reasonably familiar. Understand most TV news and current affairs programs. Understand the majority of films in standard dialect.
- Read articles and reports concerned with contemporary problems in which the writers adopt



- particular attitudes or viewpoints. Understand contemporary literary prose.
- Write clear, detailed text on a wide range of subjects related to my interests. write an essay or report, passing on information or giving reasons in support of or against a particular point of view. Write letters highlighting the personal significance
- Identify and explain complex differences and similarities between the target culture(s) and US culture. Identify and discuss significant people and moments in German Cultural History.

## **GERMAN V**

GERM&222

5 Credits

55 hours of lecture

Thematic approach to contemporary German culture and literature. Discussions and papers in German. Grammar review. Prerequisite: GERM& 221 or equivalent. [HA, SE]

### **Course Outcomes:**

- Interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible. Take an active part in discussion in familiar contexts, accounting for and sustaining my views. Present clear, detailed descriptions on
- Understand extended speech and lectures and follow even complex lines of argument provided the topic is reasonably familiar. Understand most TV news and current affairs programs. Understand the majority of films in standard dialect.
- Read articles and reports concerned with contemporary problems in which the writers adopt particular attitudes or viewpoints. Understand contemporary literary prose.
- Write clear, detailed text on a wide range of subjects related to my interests. write an essay or report, passing on information or giving reasons in support of or against a particular point of view. Write letters highlighting the personal significance
- Identify and explain complex differences and similarities between the target culture(s) and US culture. Identify and discuss significant people and moments in German Cultural History.

## **GERMAN VI**

GERM&223

5 Credits

55 hours of lecture

Thematic approach to contemporary German culture and literature. Discussions and papers in German. Grammar review. Prerequisite: GERM& 222 or equivalent. [HA, SE]

### **Course Outcomes:**

- Interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible. Take an active part in discussion in familiar contexts, accounting for and sustaining my views. Present clear, detailed descriptions on
- Understand extended speech and lectures and follow even complex lines of argument provided the topic is reasonably familiar. Understand most TV news and current affairs programs. Understand the majority of films in standard dialect.
- Read articles and reports concerned with contemporary problems in which the writers adopt particular attitudes or viewpoints. Understand contemporary literary prose.
- Write clear, detailed text on a wide range of subjects related to my interests. write an essay or report, passing on information or giving reasons in support of or against a particular point of view. Write letters highlighting the personal significance
- Identify and explain complex differences and similarities between the target culture(s) and US culture. Identify and discuss significant people and moments in German Cultural History.

## **SELECTED TOPICS**

GERM 280

1 - 5 Credits

55 hours of lecture

Course focuses on selected topics in German. Topics vary and course theme and content change to reflect new topics. Because the course varies in content, it is repeatable for credit for different topics. [SE]

### **Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of German.

## **SPECIAL PROJECTS**

GERM 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the department.  
Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## **Human Development**

### **EFFECTIVE STUDY**

HDEV 098

2 Credits

22 hours of lecture

Learn effective study skills including goal setting, resource management, listening, note-taking, reading and test-taking skills. Appropriate for any student, particularly those working to improve basic skills and abilities necessary to move ahead to college level courses.

### **CAREER AND LIFE PLANNING**

HDEV 100

3 Credits

33 hours of lecture

Examination of personal values, interests, personality preferences, skills and abilities for the purpose of determining career, educational and leisure activities. Introduction to career development theory, occupational information resources and decision-making strategies. Credit not allowed for both HDEV 100 and 101. [GE]

### **Course Outcomes:**

- Explore current career development theories and apply these to own career and life planning process.
- Identify own interests, personality preferences, skills and values, and relate these to personally appropriate choices in work, education, and leisure activities.
- Identify and utilize the occupational information available in the Clark College Career Center in order to make informed educational and career decisions.
- Identify any self-defeating behavior or barriers that may prevent you from progressing in your career development.
- Draw enough conclusions to develop a career path to reach your goals for personal and professional development.

## **CAREER EXPLORATION**

HDEV 101

2 Credits

22 hours of lecture

Strategies for career choice and change: utilizing career assessment tools, personal preferences, and occupational resources to make informed career and educational decisions. Credit not allowed for both HDEV 100 and 101. [GE]

### **Course Outcomes:**

- Identify interests, personality preferences, skills and values, and relate these to personally appropriate choices in work, education, and leisure activities.
- Utilize the occupational information available in the Clark College Career Center in order to research educational and career choices.
- Draw enough conclusions to develop a career path to reach your goals for personal and professional development.

## **ANGER AND CONFLICT MANAGEMENT**

HDEV 103

2 Credits

22 hours of lecture

Develop self-control and positive personal power. Learn about personal anger triggers, appropriate versus inappropriate anger, family dynamics, communication, assertiveness, and conflict management strategies. Learn to use anger instead of letting it use you! Does not fulfill any court-mandated anger management course requirement. [GE]

### **Course Outcomes:**

- Distinguish correctly between appropriate and inappropriate anger and explain (a) what causes them, (b) how best to understand and evaluate both kinds of anger within themselves, and (c) how each can affect behavior.
- Recognize how personal anger triggers are formed in themselves and others and utilize self-talk to control the impulses and behaviors that can result.
- Identify one's own unhelpful impulses and behaviors and identify healthy, alternative actions.
- Apply anger and conflict management strategies in provoking life situations

## **SELF-ESTEEM**

HDEV 105

2 Credits

22 hours of lecture

Guided experience in self-motivation, values clarification, and empathetic regard for others. Structured small groups. [GE]

### **Course Outcomes:**

- Understand the nature of self-esteem and the factors that influence self-esteem development.
- Accurately self-assess strengths and weaknesses and reframe self-defeating beliefs and behaviors.
- Identify ways to enhance self-esteem and develop a plan of action to reach and maintain your goals for personal growth and development.

## **MOTIVATION AND STUDY SKILLS**

HDEV 116

2 Credits

22 hours of lecture

Strategies for developing student behaviors and attitudes consistent with achieving success in college. Topics include campus resources to support student success; building effective study skills; developing skills for academic planning; time management and stress management. Appropriate for any student, particularly those working to improve basic skills and abilities necessary for higher level college courses. Credit not allowed for both HDEV 116 and 117. [GE]

### **Course Outcomes:**

- Increase and demonstrate knowledge of note taking, test taking, and study skills.
- Demonstrate knowledge of strategies that facilitate motivation and promote academic success, including: taking personal responsibility, increasing self-motivation, improving personal self-management, developing interdependence, increasing self-awareness,

## **COLLEGE SUCCESS**

HDEV 117

3 Credits

33 hours of lecture

Strategies for successful student performance, including goal setting, academic planning, critical thinking and stress management. Focus on building effective academic skills of planning, memorizing, reading, note taking and test taking; identifying, utilizing, and evaluating campus resources and support services; fostering student responsibility for individual learning and behaviors promoting student achievement. College-level reading skills recommended. Credit not allowed for both HDEV 116 and HDEV 117. [GE]

### **Course Outcomes:**

- Become an active participant in the academic setting by accepting personal responsibility for learning, time management and goal setting.
- Demonstrate the ability to utilize study skills, including note taking, academic reading, memory enhancement and test taking.
- Gain knowledge of Clark College programs, requirements and classes by utilizing college resources to plan educational goals.
- Recognize that the application of the concepts of a "Master Student" can lead to greater success in all aspects of life.

## **PRACTICAL REASONING AND DECISION MAKING**

HDEV 120

3 Credits

33 hours of lecture

Develop, analyze, evaluate and apply critical thinking to academic, career and personal pursuits. College level reading and eligibility for ENGL& 101 are strongly recommended. [GE] [PNP]

### **Course Outcomes:**

- Identify and utilize the Elements of Thought by applying them to discussions, concepts, text books, etc.
- Identify and apply Intellectual Standards to evaluate information.
- Identify essential Intellectual Traits and apply them to the decision making/problem solving process.
- Explore personal and cultural values and ethical concepts and apply them to "right versus right" ethical issues.

## **RELATIONSHIPS**

HDEV 123

2 Credits

22 hours of lecture

Strategies for strengthening relationships of all types. Designed to help participants explore relationship patterns and styles; information and skill building to facilitate more successful and satisfying relationships both personally and professionally. [GE]

### **Course Outcomes:**

- Identify and describe key elements to strengthen relationships.
- Distinguish between rational and irrational beliefs and change destructive self-talk.
- Recognize own relationship patterns and styles.
- Improve interpersonal communication and conflict management by practicing a variety of communication techniques.
- Create a personal vision and action plan for establishing, maintaining, and increasing satisfaction in relationships.

## **BASIC MINDFULNESS SKILLS**

HDEV 125

2 Credits

22 hours of lecture

Mindfulness skills practice enhances physical and psychological wellbeing. Students will learn basic theory and application of these techniques for an effective mindfulness practice. [GE] [PNP]

### **Course Outcomes:**

- Gain a basic understanding of the emerging science on the effects of mindfulness practice for mental and physical health.
- Learn and develop the practical skills of mindfulness meditation, including methods for increasing concentration and responding skillfully to difficult sensations, thoughts, emotions, and stress.

## **ASSERTIVENESS**

HDEV 155

3 Credits

33 hours of lecture

Teaches skills needed to achieve personal goals related to assertive behavior. Focuses on reducing emotional blocks and changing thoughts, feelings, and behavior to enable one to act in their own best interest and to express themselves in challenging situations without excessive anxiety or anger. Role play is used to demonstrate and practice skills. Recommended for both those who find it difficult to speak up and those who appear abrasive. [GE, HR]

### **Course Outcomes:**

- Identify verbal vs. nonverbal behavior/communication in situations.
- Distinguish between passive, aggressive, and assertive behavior in situations.
- Identify interpersonal rights in situations.
- Distinguish between rational and irrational thoughts, how it influences feelings, and how it promotes/interferes with assertive behavior in situations.
- Apply listening/paraphrasing and conflict management/negotiation to situations.
- Identify challenging situations and plan out, set goals, and implement assertive behavior in them.

## **INTRO TO SERVICE LEARNING & CIVIC ENGAGEMENT**

HDEV 175

2 Credits

22 hours of lecture

The concept of service learning and its potential for inspiring civic engagement and community-based problem solving. Effective democratic citizenship demands awareness, knowledge, involvement, problem solving, and leadership. Through the development of a Community Action Project, we will explore all of these factors and their contributions to the development of democratic citizenship. Note: 10 hour service project requirement. [GE]

### **Course Outcomes:**

- Explore practical and experiential approaches to democratic citizenship, community building, and civic engagement through service-learning.
- Identify successful components of leadership and organizational skills.
- Identify issues of inequality and inequity and societal structures that contribute to community concerns.
- Increase awareness of career paths in the non-profit sector or government agencies.

## **STRESS MANAGEMENT**

HDEV 186

1 Credits

11 hours of lecture

Stress is an inevitable part of life affecting health, productivity, and relationships. Too little or too much stress can cause problems. Discover your unique reactions to stress and new options for handling stressful situations. [GE]

### **Course Outcomes:**

- Increase and demonstrate knowledge of the stress response and its impact on human functioning.
- Develop a personalized plan to identify and manage stressors.

## **CAREER-RELATED WORKSHOP**

HDEV 190

1 - 3 Credits

33 hours of lecture

Independent study in career exploration. Includes testing and course-work in self-assessment, and career research while consulting with a career counselor. One to three credits can be earned based upon the amount of course work completed. Students must have instructor permission to register after the fourth week of class. [GE]

## **WORKPLACE SUCCESS**

HDEV 195

1 Credits

11 hours of lecture

Learn how to analyze your current work experiences to increase your success and potential for advancement. Gain knowledge specific to your work demands, develop transferable skills in human relations, information, and resource management. Satisfies the concurrent enrollment requirements for Co-op Work Experience. [GE]

### **Course Outcomes:**

- Identify and demonstrate the ability to utilize both job specific and transferable skills, abilities, and values to gain and maintain success in the job search process and in the workplace.
- Demonstrate strategies for addressing factors in workplace success, including but not limited to: communication, teamwork, motivation and conflict resolution.

## **PORTFOLIO DEVELOPMENT**

HDEV 198

1 Credits

11 hours of lecture

A career/employment portfolio will be developed, including a career goals statement, qualifications brief, resume, work samples, recommendations and references. Learn to effectively use the portfolio to achieve employment goals. Satisfies the concurrent enrollment requirement for co-op work experience. [GE]

### **Course Outcomes:**

- Clarify career/employment goals and qualifications.
- Develop components of a professional career/employment portfolio including Introduction/Career Goals; Resume; Qualifications or Skills and Related Work Samples; Individualized Documentation/Credentials.
- Become more familiar with employment resources at Clark College which are available to them today and in the future.
- Compile and present the final portfolio.

## **COOPERATIVE WORK EXPERIENCE**

HDEV 199

1 - 5 Credits

165 hours of clinical

Supervised work experience in an approved job. Completion of specific learning objectives and employer evaluation. Concurrent enrollment in HDEV 195, 198 or 200 required. Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Demonstrate skills development and work-related accomplishments appropriate to their setting.
- Demonstrate workplace skills and techniques, including time management, work ethics, problem solving, interpersonal relations, and conflict resolution.
- Demonstrate satisfactory job performance.

## **PROFESSIONAL DEVELOPMENT**

HDEV 200

2 Credits

22 hours of lecture

Job search strategies and techniques using the latest techniques and technologies, will be discussed and practiced, including preparing an electronic resume for the Internet, e-mail and computer scanner. Various methods to conduct your personalized labor market research, prepare effective cover letters, and how to secure informational or employment interviews will be learned. Guest speakers from local business and industry to speak about etiquette and ethics in the work place. May satisfy concurrent enrollment for Co-op Work Experience. [GE]

### **Course Outcomes:**

- Develop professional job search tools including resume, cover letter and interview processes.
- Identify and demonstrate the ability to utilize both job specific and transferable skills, abilities, and values to gain and maintain success in the job search process and in the workplace.
- Demonstrate strategies for addressing factors in workplace success, including but not limited to: communication, teamwork, motivation and conflict resolution.

### **PRIOR LEARNING ASSESSMENT**

HDEV 211

3 Credits

33 hours of lecture

Introduction to the process of preparing a portfolio that demonstrates and documents knowledge and skills equivalent to college-level learning acquired through other formal or informal learning methods, including work experience, community service, personal study, travel, or sponsored training. [GE]

### **SELECTED TOPICS**

HDEV 280

1 - 3 Credits

33 hours of lecture

Variety of topics in human development as listed in the quarterly class schedule. May be repeated for credit. [GE]

#### **Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this course.

## **Health Occupations**

### **BASIC CONCEPTS OF ANATOMY AND PHYSIOLOGY**

HEOC 100

4 Credits

33 hours of lecture - 22 hours of lab

Introduction to basic anatomical and physiological concepts as they apply to the following health occupations: EMT, Pharmacy Tech, Medical Assisting, and Phlebotomy. Basic overview of all body systems including the respiratory, muscular, urinary, reproductive, digestive, cardiovascular, lymphatic, immune, nervous, skeletal, integumentary and the senses. The course includes a laboratory component that is integral to the course concepts and skills. [GE]

#### **Course Outcomes:**

- Access information effectively and efficiently.
- Demonstrate progress toward healthier behavior.
- Synthesize information appropriately.
- Locate and name basic anatomical structures and associate them with their functions.
- Relate anatomical structures to the organizational level (molecular, cellular, tissue type, organ system, or a combination of these) of the body.
- Explain basic mechanisms and concepts of physiological functions by which the body maintains homeostasis.
- Describe physiological interconnectedness among human body systems.
- Collaborate with team members to produce fundamental solutions to health-related case studies, applying industry-appropriate terminology and professional communication.



## **HEALTH CARE DELIVERY & CAREER EXPLORATION**

HEOC 104

3 Credits

33 hours of lecture

An introduction to the healthcare delivery system in the United States and the many health professions available as career choices, as well as their academic, licensing, and certification requirements. [GE]

### **Course Outcomes:**

- Demonstrate the importance of accepting responsibility for one's learning, goal setting, and self-management in academia.
- Identify and access the campus as well as online resources that support career research and planning.
- Recall, understand, apply, and evaluate the U.S Healthcare Delivery System, the ACA, role of the U.S. government in Healthcare, inpatient and outpatient services, as well as other global and state healthcare related issues.
- Develop awareness of work environment, skills related to healthcare professions, individual abilities, interests; while evaluating educational pathways including requirements for educational programs and professional licensing or certification.

## **AIDS EDUCATION**

HEOC 120

1 Credits

11 hours of lecture

A comprehensive look at AIDS, etiology, epidemiology, clinical manifestations, treatment, transmission, testing, legal, ethical and psychological issues. Fulfills Washington State Department of Licensing requirement for license renewal for persons governed by Chapter 18.130.RCW. [GE]

### **Course Outcomes:**

- Successfully fulfill Washington State Department of Licensing requirement for healthcare provider licensing governed by Chapter 18.130.RCW.

## **PHARMACOLOGY FOR HEALTH ASSISTANTS**

HEOC 130

3 Credits

33 hours of lecture

Introduction to the basics of medication administration including trade and generic names of prescription and over-the-counter medications commonly prescribed, medication classifications, routes of administration, dosages, effects and implications and appropriate methods of documentation. Prerequisite: BIOL 164 (or 160) or HEOC 100, BMED 110, consent of Health Occupations or Business Technology Advisor. [GE] [PNP]

### **Course Outcomes:**

- Appropriately identify and use drug reference materials to locate information about unfamiliar medications.
- Begin to create a personal database for frequently prescribed medications.
- Identify correct trade and generic names, routes of administration, dosage strengths and precautions as found in drug reference materials.
- Correctly interpret abbreviations that are used in prescriptions and drug reference materials.

- Demonstrate an understanding of the characteristics of drugs within major classifications.

### **LABORATORY PROCEDURES FOR THE MEDICAL OFFICE**

HEOC 160

4 Credits

22 hours of lecture - 44 hours of lab

Specimen collection and processing. Basic laboratory tests: blood count, microscopic urine tests; microbiology specimen handling (including gram smears and basic culture techniques) blood typing and prepared test kit use. Equipment use and maintenance. Re-agent storage and handling. Lab safety emphasized. Prerequisite: A grade of "C" or better in BTEC 163 or consent of the Health Occupation Advisor. [GE]

#### **Course Outcomes:**

- Identify and effectively use the appropriate technology to achieve the desired outcome or result.
- Present information effectively through written/oral communication.
- Demonstrate effective interpersonal relations.
- Assess the potentials and limitations of technology.

### **COOPERATIVE WORK EXPERIENCE**

HEOC 199

1 - 5 Credits

165 hours of clinical

Supervised work experience in an approved job. Completion of specific learning objectives and employer evaluation. Completion of, or concurrent enrollment in, HDEV 195, 198, or 200 required. Prerequisite: Consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Fulfill the job requirements of the internship provider.

### **SELECTED TOPICS**

HEOC 280

1 - 5 Credits

55 hours of lecture

Selected topics in Health Occupations. Topics vary and course theme and content change to reflect new topics. Because the course varies in content, it is repeatable for credit. Specific topics are listed in the quarterly class schedule. [GE]

#### **Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this course.

### **SPECIAL PROJECTS**

HEOC 290

1 - 15 Credits

Learning contract with the student to meet specialized needs of the individual. Credit based upon the type of learning activities planned. Credit not applicable toward a major at Clark College. Prerequisite: Consent of the Science and Health Sciences Dean. [GE]

**Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

**Health Informatics****INTRODUCTION TO US HEALTH CARE SYSTEM**

HI 201

3 Credits

33 hours of lecture

Introduction to U.S. health care systems: the major components and the interaction of elements within the system, including the history, issues and problems of today's system. Topics include the national context and history of health services, international health systems, the role of government in health care, health insurance, Medicaid, Medicare, managed care, hospitals and facilities, health workforce, medical technologies, access and quality of care and the future of the health care system. Focus on the future direction of healthcare and identifying likely changes. Readings and discussion cover consumer, industry and governmental agendas related to improving the US health care system. [GE]

**Course Outcomes:**

- Identify the forces influencing health care services and describe their impact on the future of the system.
- Explain the funding sources, reimbursement methodologies and the government's role in health care finance.
- Explain the role of technology in the management, delivery and advancement of health care services.

**INTRODUCTION TO HEALTH CARE QUALITY**

HI 202

3 Credits

33 hours of lecture

Introduction to the principles, processes and procedures associated with measuring, managing and improving quality in the delivery of health care, health services and health care management. Presents various national efforts, systems and tools used in quality assessment, performance, improvement and measurement. [GE]

**Course Outcomes:**

- Analyze a case by identifying a project team, developing performance measures, and preparing plan to communicate improvements, collect data and utilize performany improvement tools.
- Explain quality improvement theory and describe methodologies and tools used to evaluate health care quality.
- Identify the steps of process improvement in health care organizations.
- Identify and describe current efforts used in health care systems to improve quality outcomes.

**INTRODUCTION TO HEALTH SERVICES MANAGEMENT**

HI 210

3 Credits

33 hours of lecture

Introduction to managerial skills and behaviors applied to components of health care organizations at several levels: including individual, interpersonal, group, intergroup, system, and inter-organization; managerial challenges faced by health care managers and skills essential for successfully planning, organizing, directing, and controlling. Topics include strategic and operational planning, human resource management, motivation, communication, conflict resolution, organizational structures, health care budgeting and finance. [GE]

**Course Outcomes:**

- Describe and illustrate the managerial and team processes involved in health care organizations.
- Identify services and management problems as they relate to ongoing operations.
- Analyze case studies to demonstrate familiarity with actual managerial processes.
- Identify future trends in health care and discuss various approaches the manager might adopt to meet the challenges imposed on the organization by these trends.

**INTRODUCTION TO HEALTH INFORMATICS**

HI 211

3 Credits

33 hours of lecture

Introduction to health informatics, the application of computers, communication and information technologies combined with systems used in problem solving, decision making to improve health and health care. Topics include a survey of history, basic knowledge of health informatics, data management, standards and tools used in the support of health care delivery. Emphasis on impact of information technology on the health care industry and vice versa. Intended as a survey of the emerging field of health informatics, allowing interested students to learn its significance, its breadth, and its opportunities. [GE]

**Course Outcomes:**

- Describe the current landscape of the discipline of Health Informatics.
- Discuss the role of information technologies in revolutionizing healthcare delivery, administration, education, and research.
- Distinguish the various types of healthcare information, including knowledge, data sources, protocols, and standards.
- Identify and analyze the major health informatics applications and systems.
- Analyze obstacles and success factors for implementing and integrating information and decision technologies in healthcare.

**History**

**WORLD CIVILIZATIONS I**

HIST&126

5 Credits

55 hours of lecture

The beginnings of civilization, c. 3500 B.C. to the High Middle Ages, c. 950 A.D. Areas to be covered include the ancient Near East, Egypt, India, China, Greece, Rome, and early medieval Europe. [SE, SS]

**Course Outcomes:**

- Discuss the concepts of geographic, economic, political, cultural, and social order and their interaction in response to changing historical circumstances.
- Analyze and evaluate primary and secondary sources as they pertain to understanding the historical past.

- To critically think and write about the cause and effect of historical events.

## **WORLD CIVILIZATIONS II**

HIST&127

5 Credits

55 hours of lecture

The High Middle Ages through the Late Middle Ages, the Renaissance and Reformation eras, the emergence of early modern society, witchcraft, the Enlightenment, the formation of nation-states and continued historical development in Europe, China, India, Africa, the Near East, plus Central and South America. [SE, SS]

### **Course Outcomes:**

- Discuss the concepts of geographic, economic, political, cultural, and social order and their interaction in response to changing historical circumstances.
- Analyze and evaluate primary and secondary sources as they pertain to understanding the historical past.
- To critically think and write about the cause and effect of historical events.

## **WORLD CIVILIZATIONS III**

HIST&128

5 Credits

55 hours of lecture

The French Revolution through modern times. Incorporated into this framework are the political, military, economic, social, cultural and religious manifestations throughout the various regions of the world. [SE, SS]

### **Course Outcomes:**

- Discuss the concepts of geographic, economic, political, cultural, and social order and their interaction in response to changing historical circumstances.
- Analyze and evaluate primary and secondary sources as they pertain to understanding the historical past.
- To critically think and write about the cause and effect of historical events.

## **UNITED STATES HISTORY I**

HIST&146

5 Credits

55 hours of lecture

Pre-Columbian era, colonial settlements and foundations of American institutions, seeds of revolution, Confederation and Constitution, federalism and states' rights, Jacksonian era. [SE, SS]

### **Course Outcomes:**

- Discuss the concepts of geographic, economic, political, cultural, and social order and their interaction in response to changing historical circumstances.
- Analyze and evaluate primary and secondary sources as they pertain to understanding the historical past.
- To critically think and write about the cause and effect of historical events.

## **UNITED STATES HISTORY II**

HIST&147

5 Credits

55 hours of lecture

Antebellum reform, Manifest Destiny, roots of Southern secession, Civil War and Reconstruction, rise of big business and organized labor, immigration and assimilation, American Imperialism and Progressive reform movement. [SE, SS]

### **Course Outcomes:**

- Discuss the concepts of geographic, economic, political, cultural, and social order and their interaction in response to changing historical circumstances.
- Analyze and evaluate primary and secondary sources as they pertain to understanding the historical past.
- To critically think and write about the cause and effect of historical events.

## **UNITED STATES HISTORY III**

HIST&148

5 Credits

55 hours of lecture

World War I, the Twenties, the Great Depression and the New Deal, World War II, the Cold War consensus, Vietnam and the Watergate era, and issues connected to the recent past. [SE, SS]

### **Course Outcomes:**

- Discuss the concepts of geographic, economic, political, cultural, and social order and their interaction in response to changing historical circumstances.
- Analyze and evaluate primary and secondary sources as they pertain to understanding the historical past.
- To critically think and write about the cause and effect of historical events.

## **PACIFIC NORTHWEST HISTORY**

HIST&214

5 Credits

55 hours of lecture

Survey of the political, cultural, economic and social development of the Pacific Northwest with special emphasis on Washington State history. [SE] [PNP]

### **Course Outcomes:**

- Discuss the concepts of geographic, economic, political, cultural, and social order and their interaction in response to changing historical circumstances.
- Analyze and evaluate primary and secondary sources as they pertain to understanding the historical past.
- To critically think and write about the cause and effect of historical events related to Pacific Northwest history.

## **WOMEN IN U.S. HISTORY**

HIST&215

5 Credits

55 hours of lecture

The role of women in America from the Native American women up to today. Included within these parameters will be women's contributions and status within the family, the economy, the

religious communities, the legal and political systems, and the culture. [SE] [PNP]

**Course Outcomes:**

- Identify and discuss the importance of perspective and information type as they relate to historic events in women's history.
- Demonstrate a working knowledge of the cause-and-effect of historical events.
- Analyze the impact of gender, race, and class on the development and study of women's history.
- Use a variety of different types of resources to reconstruct the most complete version available of women's history.

**NATIVE AMERICAN HISTORY**

HIST&219

5 Credits

55 hours of lecture

A survey of Native American history from the pre-Columbian era to the Twentieth century. Topics include Indian cultures, treaty making and breaking, Indian patriots, and law and Indian rights. [SE]

**Course Outcomes:**

- Demonstrate a broad based knowledge including the concepts of geographies, economic, political, cultural, and social order and their interaction in response to changing historical circumstances in respect to Native American cultures and history.
- Develop a research paper using library resources including monographs, academic journals and internet sources.

**EAST ASIAN HISTORY**

HIST 221

5 Credits

55 hours of lecture

Survey of Far Eastern history from 1800 to the present. Primary emphasis will be placed on Far East - United States diplomacy and the emergence of the Far East in the modern world. [SE]

**Course Outcomes:**

- Identify and know the historical importance of the major events, ideas (intellectual, religious and political) and personalities of Modern East Asia.
- Gain the ability to research and write on historical questions of limited scope using primary and secondary sources, recognizing the difference between the two.
- Demonstrate an understanding of the influence of geography on East Asian history.
- Recognize the impact of events and ideas from the past on the world of today, drawing connections among diverse societies and time frames, while supporting such generalizations with factual evidence.

**HISTORY OF GENOCIDE**

HIST 231

3 Credits

33 hours of lecture

Examination of several incidences of genocide beginning with the extermination of the Herero of Namibia in the late 19th century; utilizing the definition of genocide developed by Raphael Lemkin and adopted by the United Nations; developing criteria for recognizing when and where genocide

has occurred, based on reading and lectures; developing criteria to identify a genocide in the making; designing an action plan to extend the lessons of the course. [SE, SS]

**Course Outcomes:**

- Identify and discuss what constitutes genocide.
- Identify and explain the general processes that have historically led to genocide.
- Analyze contemporary situations that might lead to genocide.
- Analyze the impact of race, class, ethnicity, gender, ideology, and/or sexual identity on genocide.

**WOMEN IN WORLD HISTORY I**

HIST 251

5 Credits

55 hours of lecture

A survey course exploring the role of women in world history from pre-historical times up to the pre-Industrial Age. Included within these parameters is the role of women in the family, economy, culture, religion and political structures of their given societies. Topics include: the development of patriarchy and misogyny; women's contributions to Eastern, Middle Eastern and Judeo/Christian religious experiences; and women's roles in Africa and South America. [SS, SE]

**Course Outcomes:**

- Identify the changing positions and roles of women in the history of world civilizations.
- Identify the origins and continuation of negative and positive attitudes about women throughout history.
- Identify the contributions of women in the various areas such as the economy, political and religious structures, etc. in the different cultures.

**WOMEN IN WORLD HISTORY II**

HIST 252

5 Credits

55 hours of lecture

A survey course exploring the role of women in World History from the pre-Industrial Age to modern times. Included within these parameters is the role of women in the family, economy, culture, religion and political structures of their given societies. Topics include: the role of women in an industrial society and their influence in major movements such as the Scientific Revolution and the Enlightenment; origins of feminism; and the equal rights movement as it applies to voting, property ownership and areas of marriage and divorce. [SS, SE]

**Course Outcomes:**

- Identify the changing positions and roles of women in the history of world civilizations.
- Give the origins and continuation of negative or misogynistic attitudes about women throughout history
- Identify the various contributions of women in the various areas such as family, the economy, culture, political structures, religion, law, etc.

**AMERICAN DIPLOMATIC HISTORY**

HIST 255

5 Credits

55 hours of lecture

The development of America's relationship with other governments and the global community



from WWI to the First Gulf War, looking for specific patterns of behavior, such as isolationism, neutral rights, market expansion, brinkmanship and foreign intervention to explain how America's role and image in the world has changed over time. Topics include: World War I, The Good Neighbor Policy, World War II, The Cold War, The Vietnam War, Detente, and The First Gulf War. [SE]

**Course Outcomes:**

- Use critical thinking to evaluate American foreign policy actions and their impact on world and national events.
- Recognize and appreciate the various ways past diplomatic decisions and actions have affected current foreign policy issues.
- Explain different interpretations of the intentions of foreign countries affected the internal decision making of America's foreign policy agencies.
- Understand that there are few arenas where history is more important than in the realm of foreign policy, for foreign policy is the study of relationships between countries and all relationships are based on a shared past.

**AFRICAN HISTORY**

HIST 260

5 Credits

55 hours of lecture

Survey of the period from gathering/hunting societies through African independence, with focus on major events from an African perspective, including Africa's discovery of Europe, and resistance to colonialism. Prior completion of HIST& 126, 127, or 128 (or HIST 101, 102 or 103) recommended. [SE] [PNP]

**Course Outcomes:**

- Identify and describe African locations, peoples, and resources as they apply to the history of the continent.
- Identify and explain the importance of individual African figures and groups of Africans as they apply to Africa's history.
- Analyze the relationship between peoples of the African continent and those from elsewhere.
- Connect events in the history of Africa to modern-day events on the continent; Analyze the role of race, class, and gender in African historical events and situations;

**AFRICAN-AMERICAN HISTORY**

HIST 275

5 Credits

55 hours of lecture

Survey of the history of the African-American experience from 1619 to the present. [SE] [PNP]

**Course Outcomes:**

- Analyze and evaluate primary sources of historical information.
- Demonstrate in discussion and in writing a comfortable working knowledge of key events, trends, and issues in African-American history.
- Analyze the historical roots of current social issues.
- Make effective arguments about the past using a variety of sources of information.

**SELECTED TOPICS**

HIST 280

1 - 5 Credits

55 hours of lecture

Selected topics in History as listed in the quarterly class schedule. May be repeated for credit. [SE]

**Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this course.

**HISTORY OF LATIN AMERICA**

HIST 285

5 Credits

55 hours of lecture

Survey of Latin American history, examining social, economic, political, cultural and intellectual trends and developments from ancient civilizations to the present Latin America in transition. [SE]

**Course Outcomes:**

- Demonstrate in discussion and in writing a comfortable working knowledge of key events, trends, and issues in Latin- American history.
- Locate different kinds of sources of information on the past. Analyze and evaluate a variety of different kinds of sources.
- Analyze the historical roots of current social issues.
- Make effective arguments about the past using a variety of sources of information.

**Health**

**FOOD AND YOUR HEALTH**

HLTH 100

2 Credits

22 hours of lecture

Exploration of the connection between food choices and health with an emphasis on whole foods. Focus on developing personalized healthy strategies to advance health. [HE, SE] [PNP]

**Course Outcomes:**

- Demonstrate progress toward healthy eating behaviors.
- Identify factors that influence food choices.
- Evaluate personal eating choices based on established guidelines.
- Interpret food labels.
- Develop behavior change strategies.
- Examine the relationship between food and health.
- Explore both mindful and sustainable eating practices.
- Apply healthy eating practices.
- Determine the credibility of health related information.

**HEALTH FOR ADULT LIVING**

HLTH 101

3 Credits

33 hours of lecture

Exploration of the connection between personal choices and health across multiple dimensions of

wellness. Focus on developing personalized behavior change strategies to advance health. [HE, SE]

**Course Outcomes:**

- Explore health as a multi-dimensional model.
- Evaluate current wellness priorities in each dimension.
- Develop behavior change strategies.
- Explore the connection between personal choices and health.
- Apply practices that advance personal health.
- Determine the credibility of health related information.

**ENVIRONMENTAL HEALTH**

HLTH 103

2 Credits

22 hours of lecture

Exploration of the connection between personal choices, human health, and the environment. Focus on developing personalized behavior change strategies to advance health. [HE, SE]

**Course Outcomes:**

- Explore the factors that influence an individual's ecological footprint such as resource usage and consumerism.
- Develop behavior change strategies.
- Identify potential hazards and ways to promote environmental justice.
- Apply practices that advance environmentally healthy behaviors.
- Determine the credibility of health related information.

**WEIGHT AND YOUR HEALTH**

HLTH 104

2 Credits

22 hours of lecture

Exploration of the connection between weight and health. Focus on the multiple factors that contribute to optimal health and on developing personalized behavior change strategies to advance health at any size. [HE, SE] [PNP]

**Course Outcomes:**

- Explore different perspectives of healthy weight.
- Examine various influences on weight and how the body regulates weight.
- Explore, evaluate and apply practices that result in positive, sustainable health behavior.
- Develop behavior change strategies.
- Apply practices that advance health.
- Determine the credibility of health related information.

**HAPPINESS AND YOUR HEALTH**

HLTH 108

2 Credits

22 hours of lecture

Exploration of the relationship between happiness and your health. Focuses on the dynamics of happiness, including positive emotion, engagement, and meaning; and the potential health benefits of implementing them into daily life. Students will develop personalized behavior change strategies to advance well-being. [HE, SE]

**Course Outcomes:**

- Evaluate emotional health status.
- Analyze core concepts including character strengths, flow, optimism, forgiveness, mindfulness, kindness, and gratitude; and the potential benefits of implementing them in daily life.
- Develop behavior change strategies for sustainable happiness.
- Evaluate health related information.
- Distinguish between myth and fact in regards to happiness and wellbeing based on research.

**ADULT CPR AND FIRST AID**

HLTH 120

1 Credits

11 hours of lecture

Introduction to adult CPR and general first aid skills that will prepare the student to recognize emergencies, make first aid decisions, and provide care. Upon successful completion of the course, students will receive Adult CPR and Standard First Aid certification. Does not meet AA distribution requirement. [GE]

**Course Outcomes:**

- Recognize and respond to emergencies effectively.
- Assess a victim's condition and determine proper care.
- Administer rescue breathing and CPR to adults.
- Identify injury prevention strategies.
- Assess a victim's condition and perform appropriate first aid.
- Determine the appropriate and proper response to situational questions and select the best answer.

**WILDERNESS FIRST AID**

HLTH 122

2 Credits

22 hours of lecture

Foundation of first aid principles and skills necessary to respond to emergencies where immediate emergency medical services are not available, such as wilderness, remote environments, and urban disasters. Prerequisite: Proof of current Adult CPR/AED certification (bring to first class). [GE, SE]

**Course Outcomes:**

- Respond to emergencies where immediate emergency medical services are not available, such as wilderness, remote environments, and urban disasters.

**PEDIATRIC FIRST AID & CPR**

HLTH 123

1 Credits

11 hours of lecture

First aid preparation to prevent injuries and respond to emergencies involving children and infants. Skills include child and infant CPR, use of an AED, first aid, and injury prevention. Successful completion of the course includes certification for first aid, child and infant CPR and AED. Does NOT fulfill health distribution requirement. [GE]

**Course Outcomes:**

- Obtain certification for first aid, child and infant CPR and AED.

## **HEALTHCARE PROVIDER CPR AND FIRST AID**

HLTH 124

1 Credits

11 hours of lecture

Cardiopulmonary resuscitation and first aid and for health care providers as required by the Washington Occupation and Health Act. Designed specifically for health care providers. Upon successful completion of the course, students will receive Basic Life Support for the Healthcare Provider and First Aid Certifications from the American Heart Association. Students are required to purchase the required text and workbook (available at Clark College Bookstore) and bring to class. Does not meet AA HLTH distribution requirement. [GE]

### **Course Outcomes:**

- Recognize and respond to life threatening emergencies in a healthcare setting effectively.
- Demonstrate first aid for medical and environmental emergencies.
- Administer rescue breathing, CPR and relieve choking with adults, children and infants.
- Initiating early use of an AED.
- Practice 2-rescuer team CPR.

## **HUMAN SEXUALITY**

HLTH 206

2 Credits

22 hours of lecture

Exploration of the connection between personal choices and sexual health through the life cycle. Focus on social, cultural and historical influences and on developing personalized behavior change strategies to advance sexual health. [HE, SE]

### **Course Outcomes:**

- Explore the spectrum of human sexuality.
- Consider multiple perspectives in human sexuality.
- Develop the connection between personal choices and sexual health.
- Explore family planning, sexually transmitted infections and sexual violence.
- Evaluate the impact of social, cultural, and historical factors on sexual health.
- Develop behavior change strategies.
- Apply practices that advance sexual health.
- Determine the credibility of health related information.

## **WOMEN'S HEALTH**

HLTH 207

2 Credits

22 hours of lecture

Exploration of women's personal health. Focus on social, cultural and historical influences and on developing personalized behavior change strategies to advanced health. [HE, SE]

### **Course Outcomes:**

- Explore health as a multi-dimensional model.
- Evaluate personal behaviors and their influence on wellness.
- Explore women-specific health issues across the lifespan.
- Evaluate the impact of social, cultural, and historical factors on women's health.

- Develop behavior change strategies; applying practices that advance health.
- Determine the credibility of health related information.

## **MEN'S HEALTH**

HLTH 208

2 Credits

22 hours of lecture

Exploration of men's personal health. Focus on social, cultural and historical influences and on developing personalized behavior change strategies to advance health. [HE, SE]

### **Course Outcomes:**

- Explore health as a multi-dimensional model.
- Evaluate personal behaviors and their influence on wellness.
- Explore male-specific health issues across the lifespan.
- Evaluate the impact of social, cultural, and historical factors on men's health.
- Explore support services for men.
- Develop behavior change strategies.
- Apply practices that advance health.
- Determine the credibility of health related information.

## **MULTICULTURAL HEALTH**

HLTH 210

2 Credits

22 hours of lecture

Exploration of the current health system within the US and the cultures that shaped its foundation. Focus on developing personalized behavior change strategies to advanced health. [HE]

### **Course Outcomes:**

- Evaluate cultural norms and their effects on health choices.
- Interpret mainstream and "alternative" systems of medicine.
- Evaluate the business, politics and structures of medical systems in the US and other countries.
- Develop behavior change strategies.
- Apply practices that advance health.
- Determine the credibility of health related information.

## **SELECTED TOPICS**

HLTH 280

1 - 3 Credits

33 hours of lecture

Course focuses on selected topics in health. Topics vary, and course theme and content change to reflect new topics. Because the course varies in content, it is repeatable for credit for different topics. [SE]

### **Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this course.

## **SPECIAL PROJECTS**

HLTH 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the department.  
Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## **Health & Physical Education**

### **INDUSTRIAL HEALTH AND FITNESS**

HPE 220

3 Credits

22 hours of lecture - 22 hours of lab

Study of health and fitness for those entering the workforce in industrial jobs. Includes workplace safety and First Aid/CPR skills. Health issues explored include nutrition, fitness, stress management, substance abuse, and disease prevention. Students will be eligible to receive CPR/First Aid certification. [GE]

### **Course Outcomes:**

- Demonstrate workplace safety and First Aid/CPR skills.

### **FITNESS-WELLNESS**

HPE 258

3 Credits

22 hours of lecture - 44 hours of lab

Exploration of the connection between fitness and health. Focusing on nutrition, stress, and developing a personalized health plan for lifelong physical activity. Participating in physical activity is required. Activities focus on improving flexibility, strength and cardiovascular fitness. Fulfills both Health and Physical Education requirements. [HPE, SE]

### **Course Outcomes:**

- Evaluate personal fitness status based on established guidelines.
- Develop behavior change strategies.
- Reflect on the roles of nutrition and stress on wellness.
- Engage in physical activity.
- Determine the credibility of health related information.

### **MIND BODY HEALTH**

HPE 266

3 Credits

22 hours of lecture - 44 hours of lab

Exploration of the mind/body connection. Focusing on health, illness, healing, and developing personalized behavior change strategies to advance health. Participating in movement activities is required. Activities may include mediation, yoga, tai chi and breathing techniques in addition to activities that improve strength and cardiovascular fitness. Fulfills both Health and Physical Education requirements. [HPE, SE] [PNP]

### **Course Outcomes:**

- Demonstrate Progress Toward Healthy Behaviors. This is established through: developing skills in body awareness, relaxation and mindfulness; evaluating personal wellness status; developing behavior change strategies; defining the stress response; engaging

### **SELECTED TOPICS**

HPE 280

1 - 5 Credits

55 hours of lecture

Varying topics in Health Physical Education and sports, as listed in the quarterly class schedule. May be repeated for credit. [SE]

#### **Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of health and physical education.

### **SPECIAL PROJECTS**

HPE 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the department.

Prerequisite: Consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## **Human Services Substance Abuse**

### **INTRO TO ADDICTIVE DRUGS**

HSSA&101

5 Credits

55 hours of lecture

Basic theories course: effects on the body, diagnosis, treatment, and prevention of substance abuse. Emphasis on alcohol abuse and related problems in individuals and society. [GE]

#### **Course Outcomes:**

- Understand a variety of models and theories of addiction and other problems related to substance use.
- Recognize the social, political, economic, and cultural context within which addiction and substance abuse exist, including risk and resiliency factors that characterize individuals and groups and their living environments.
- Describe the behavioral, psychological, physical health, and social effects of psychoactive substances on the user and significant others.
- Recognize the potential for substance use disorders to mimic a variety of medical and psychological disorders and the potential for medical and psychological disorders to co-exist with addiction and substance abuse.
- Describe the philosophies, practices, policies, and outcomes of the most generally accepted and scientifically supported models of treatment, recovery, relapse prevention, and continuing care for addiction and other substance-related problems.
- Recognize the importance of family, social networks, and community systems in the treatment and recovery process.



- Understand the importance of research and outcome data and their application in clinical practice.
- Understand the value of an interdisciplinary approach to addiction treatment.

## Humanities

### **INTRO TO HUMANITIES**

HUM& 101

5 Credits

55 hours of lecture

Interdisciplinary exploration of the human experience and expression, which travels through multiple time periods and cultures to investigate art, philosophy, religion, politics, literature, and what it means to be "human". [HA, SE]

#### **Course Outcomes:**

- Evaluate, through critical thinking skills, the worth and value of both esoteric and broad-spectrum themes/ideas in art, music, philosophy, history, religion, politics, and theatre.
- Analyze the cultural relevance of key themes in the humanistic evaluations of art, music, philosophy, history, religion, politics, and theatre.
- Examine historical phenomena across a broad spectrum of time, and be able to identify some of the core chronological influences upon the western world.
- Communicate effectively about many different cultural experiences of humans across historical and geographical boundaries.
- Identify commonalities in human expression and the human experience which transcend historical and geographical boundaries.
- Examine the ways social and cultural mores impact human experiences at the levels of both the individual as well as the group.

### **POPULAR CULTURE**

HUM 103

3 Credits

33 hours of lecture

Introduction to American Popular Culture using methodology and theory from various disciplines: music, television and cinema studies, sociology, communication studies, literature, anthropology, and history. Central questions will focus on the ways popular culture serves not simply as a reflection of a culture's beliefs and values, but also as a site of conversation between the various sub-groups that thrive in America. [HA, SE]

#### **Course Outcomes:**

- Identify and discuss the development of characters and plots from areas of popular culture such as television, film, popular music, and video games.
- Identify a branded product and discuss its role in the American marketplace and in the lives of American consumers.
- Analyze and interpret some past and current examples of American popular culture and their impact on the way Americans live their lives today.

### **EVOLUTION FOR EVERYONE**

HUM 105

3 Credits

33 hours of lecture

Explore the interdisciplinary nature of the Humanities by integrating key scientific elements with studies of culture and the values associated with being human. Evolution for Everyone brings the core biological concepts of adaptation and change across the divide of "science" versus "arts" to create connections and understandings of not only how we experience being human through our own places in the world, but how biological principles affect our expressions of humanity. [GE, HA]

**Course Outcomes:**

- Describe the basic methods of how living organisms evolve, distinguishing between "adaptation" and "mutation."
- Discuss the relationships between evolution and key themes of human experiences such as art, music, literature, and education.
- Evaluate the ways in which evolutionary understanding can promote connections between disciplines and fosters more subject-matter relationships in the Humanities.

**NATURE AND THE HUMANITIES**

HUM 112

4 Credits

44 hours of lecture

Interdisciplinary study of historical and current ways of "constructing" and relating to nature in the Humanities. Topics include how cultures value nature, derive ethics and aesthetics from it, and interact with it in the creation of literature, art, architecture, social environments, social commentary, and legislation. Emphasis on 19th and 20th Century American cultures, with background in Asian, European, and Native and Early American perspectives on nature. Can be linked with specific courses in the following departments for an integrated learning project: ART, BIOL, ENGL, ENVS, GEOL, MUSC, and PE. [HA, GE]

**Course Outcomes:**

- Identify major themes, trends, and figures in cultural representations of nature.
- Discuss how disciplines in the humanities influence and reflect cultural definitions and personal experiences of Nature.
- Analyze, create, interpret, or critique representations of Nature using the appropriate tools and vocabulary.
- Discuss the individual, institutional, and ideological components that maintain and challenge power, privilege, and inequity in access to and experiences of natural environments on the basis of race, class, sex, gender, and ability.

**INTRODUCTION TO CINEMA**

HUM 152

5 Credits

44 hours of lecture - 22 hours of lab

Introductory course on the study of Film history, production techniques, aesthetics and social impact of the American film industry from early 1900's to present. [HA, SE]

**Course Outcomes:**

- Identify and discuss the cultural contexts of films and explain how they influence and reflect cultures.
- Describe significant technological and creative developments in film from the early 1900s to the present.
- Recognize and describe the elements of filmmaking and the appropriate terminology.
- Describe and evaluate different kinds of film criticism and apply critical methods to analyses of films.

- Interpret and evaluate a film in an essay.

## **INTRODUCTION TO LGBTQ STUDIES**

HUM 175

5 Credits

55 hours of lecture

An interdisciplinary survey of lesbian, gay, bisexual, and trans issues in the sciences, social sciences, and humanities with an emphasis on the period from 1900 to the present in the United States. Introduction to the most compelling and problematic aspects of modern cultural representation of and discourse on sexual and gender identity. Replaces HUM 210, Intro to GLBT Studies. Student cannot get credit for both HUM 210 and HUM 175. College level reading and writing recommended. [GE, SE, HA, SS]

### **Course Outcomes:**

- Identify major trends, themes, events, figures, and developments in LGBTQ history, science, social and behavioral theory, culture, politics, law, literature, and media.
- Discuss the value of the humanities to LGBTQ cultures, communities, and individuals.
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences.
- Analyze, create, interpret, or evaluate LGBTQ-relevant works from a discipline in the humanities using appropriate tools and vocabulary.
- Discuss LGBTQ concepts and issues as they relate to individual, institutional, ideological, and symbolic experiences of power, privilege and inequity.

## **BIOETHICS**

HUM 180

3 Credits

33 hours of lecture

A study of biological science and ethics. Ethical principles and theories are used in solving bioethical dilemmas. Concepts studied include genetic engineering, inherited disorders, cloning, physician assisted suicide, allocation of health resources, organ donation, and environmental ethics. Credit not allowed for both BIOL 180 and HUM 180. [HA, NS, SE]

### **Course Outcomes:**

- Demonstrate an understanding of the basic process of moral development of humans from a scientific view point , how society and religion affect this development, and how these processes affect a person's opinions on bioethical issues.
- Explain the fundamentals of the various ethical theories and principles that are present in the study of ethics.
- Demonstrate an understanding of the complexity of bioethical issues and the ability to build resolutions to them in a group setting through logical, stepwise processes.
- Identify the basic concepts of modern biology in genetics and cell biology and understand how recent advancements in these areas have influenced current bioethical issues.
- Research a current bioethical issue, present it in written and oral form to the class, and guide the class through an activity to build a resolution to the issue.

## **THEMES THROUGH THE HUMANITIES**

HUM 200

5 Credits

55 hours of lecture

Investigation of the phenomena of the collective human experience by examining themes such as love, war, and death through the interdisciplinary lenses of literature, art, and music. Builds upon the methods of interdisciplinary analysis cultivated in HUM 101, while providing a more focused and theme-specific mode of critical engagement with both historical as well as modern ideas of common human experiences. Prerequisites: A grade of "C" or better in HUM& 101, HUM 103, or HUM 152. [GE, HA]

**Course Outcomes:**

- Identify common archetypes and themes that connect humans across the boundaries of time period, region, and culture.
- Explain transcendent themes, such as "love" and "war", within the realm of collective human experiences.
- Discuss the ways in which archetypes and themes of human experiences are manifest through expressive forms such as art, music, and literature.
- Analyze archetypes and themes of human experiences for modern-day occurrence and significance.

**HUMANITIES AND TECHNOLOGY**

HUM 201

5 Credits

55 hours of lecture

Students will examine various forms of technology, especially examples of "media." Course will be a dynamic, interactive exploration of the relationships between technology and such variables as work, education, gender, sex, and war. Students will collaborate to generate critical explanations of the relationships between intellectual movements, events, and technologies from the Industrial Age to the present and their impacts upon experiences and identities of individuals and cultures/societies today. [GE, HA] [PNP]

**Course Outcomes:**

- Analyze and evaluate key elements of technologies, and how these technologies convey our experiences of being human.
- Identify the relationships between the arts, media, and personal/collective identities juxtaposed to technologies since the Industrial Age.
- Examine and explain the ways various technologies inform or manipulate our ideas of identity, politics, ethics, and meaning and their impacts upon the lives of individuals, groups, societies, and cultures.

**SELECTED TOPICS**

HUM 280

1 - 5 Credits

55 hours of lecture

Selected topics in Humanities. Topics vary and course theme and content change to reflect new topics. This course may be repeated for credit. Specific topics are listed in the quarterly class schedule. [SE]

**Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this course.

## **SPECIAL PROJECTS**

HUM 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the department.  
Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## **Intensive English Language Program**

### **INTENSIVE MATH REVIEW**

IELP 045

8 Credits

88 hours of lecture

This academically rigorous course is designed for students who want to prepare for college-level math classes. Curriculum includes whole numbers, fractions, decimals, signed numbers, percent, geometry, standard/metric measurement and basic algebra. Application problems and test taking/study skills will be emphasized. Credit not allowed for both CAP 045 and IELP 045.

Concurrent enrollment as international student required. Prerequisite: Compass Math Score of 21-30; or IELP 035, or IELP 099:Basic Math, or ENL 099:Basic Math or permission of department.

### **Course Outcomes:**

- Accurately solve and explain basic operations with integers, fractions, decimals, proportions and percent with and without a calculator.
- Evaluate algebraic expressions and solve equations.
- Create and interpret visual representations such as charts, graphs and tables.
- Describe and apply concepts and procedures involving geometry and measurement.
- Identify and demonstrate techniques for solving application problems.
- Identify, demonstrate and apply effective study and test taking techniques.

### **ESSENTIAL WRITING**

IELP 061

5 Credits

55 hours of lecture

For learners of English language who need to develop/improve writing skills at the beginning to low-intermediate level of academic English. Designed for students who have some prior English study, rather than true beginners. The goal is to develop writing skills for general and academic purposes, with emphasis on sentence and paragraph level writing. Students will improve written fluency as well as accuracy in writing, grammar, and vocabulary use. Prerequisite: Written assessment score of 0-2 and ESL Compass Grammar score of 1 to 62, or permission of department.

### **Course Outcomes:**

- Determine purpose and audience for communicating in writing.
- Use multiple planning and pre-writing strategies to identify and organize a limited number of ideas to support a single purpose (such as writing to inform, to complete a task, or for personal expression) to produce written communication.
- Appropriately use both everyday and limited academic vocabulary to write coherent sentences or a few well-constructed paragraphs easily and with few errors to independently accomplish well defined and structured writing activities for varied purposes and

- Use some simple revision strategies to monitor one's own writing and make edits and improvements in written work.
- Demonstrate study skills, classroom and online behavior appropriate in an American college setting, including working collaboratively with others both in and out of class.

## **ESSENTIAL ORAL COMMUNICATION**

IELP 062

5 Credits

55 hours of lecture

For learners of English language who need to develop/improve oral communication skills at the beginning to low-intermediate level of academic English. Designed for students who have had some prior English Instruction, rather than true beginners. Students will develop skills and strategies for speaking and comprehending spoken English in general, and informal and formal academic contexts including conversations, small group and class discussion. They will also learn how and/or improve ability to listen actively, speak so others can understand and develop skills to improve communication across cultural boundaries. Prerequisite: ESL Compass Listening score of 1 to 66, or consent of department.

### **Course Outcomes:**

- Determine purpose for communication with awareness of audience.
- Demonstrate study skills, classroom and online behavior appropriate in an American college setting, including working collaboratively with others both in and out of class.
- 3 Focus attention, choose listening/speaking strategies, and organize information to effectively serve the purpose, context, and listener.
- Comprehend and respond to a variety of medium-length oral communication tasks, using a range of strategies to understand some complex information and ideas and convey information with appropriate register.
- Select from a range of strategies to monitor understanding in communication and repair misunderstanding or gaps in understanding.
- Use strategies to build and understand vocabulary related to a broad range of general and some specialized/vocational topics

## **ESSENTIAL READING**

IELP 063

5 Credits

55 hours of lecture

This course is for learners of English language who need to develop/improve reading skills at the beginning to low-intermediate level of academic English. This course meets the needs of students who have had some prior English study, rather than true beginners. The primary goal of this course is to develop reading ability for general and academic reading, and improve comprehension of a range of simple, single and multi-paragraph texts. This course prepares students for IELP 073. Prerequisite: ESL Compass Reading score of 1-64; or permission of department.

### **Course Outcomes:**

- Use pre-reading, while-reading, and post-reading strategies to monitor and improve comprehension of range of simple, single and multi-paragraph texts for adult learners of English.
- Identify purpose and general topic, locate important information and some details in paragraph or multi-paragraph length texts.
- Analyze and respond logically to simple texts.
- Use basic strategies for understanding stated or implied information or ideas in simple text

for adult learners of English.

- Employ vocabulary building strategies, such as using basic context clues and an English-English learner dictionary.
- Demonstrate study skills, classroom and online behavior appropriate in an American college setting, including working collaboratively with others both in and out of class.

## **ESSENTIAL INTEGRATED SKILLS**

IELP 064

3 Credits

33 hours of lecture

For learners of English language who need to develop/improve all language skills at the beginning to low-intermediate level of academic English. Meets the needs of students who have had some prior English study, rather than true beginners. The primary goal is to develop/improve English skills, while exploring basic content in units and beginning to utilize learning technology at Clark as well as developing basic problem solving skills. Prerequisite: Written assessment score of 0-2 and ESL Compass Grammar score of 1 to 62, or permission of department.

### **Course Outcomes:**

- Communicate utilizing basic English, communication strategies, and content knowledge appropriate for intended audience and purpose.
- Explore content in basic areas of study at Clark College: e.g. humanities, STEM, SOFA, and business, building and using basic discipline-specific vocabulary (including numerical vocabulary), pronunciation and grammar appropriate for task.
- Demonstrate ability to work with a partner effectively face-to-face.
- Utilize basic Clark College learning technology, such as e-mail and computer applications.
- Demonstrate creative thinking related to problem and solution, recalling and using basic vocabulary, grammar and pronunciation to carry out tasks (e.g. identify questions, solve a problem, or select and relay information).
- Demonstrate study skills, classroom and online behavior appropriate in an American college setting, including working collaboratively with others both in and out of class.

## **INTERMEDIATE WRITING**

IELP 071

5 Credits

55 hours of lecture

For learners of English language who need to improve writing skills at the intermediate level of academic English. Includes review and mastery of skills developed in IELP 061. The goal is to develop writing skills for general and academic purposes, with emphasis on paragraph, short essay, and other short text writing. Students will improve written fluency as well as accuracy in writing, grammar, and vocabulary use. Credit not allowed for both ENL 081 and IELP 071. Prerequisite: Written assessment score of 3 and ESL Compass Grammar score of 63-72; grade of "C" or better in IELP 061; successful completion of ESL level 6 reading/writing or permission of department.

### **Course Outcomes:**

- Determine the purpose and audience for communicating in writing.
- Plan for written communication using multiple planning and pre-writing strategies to identify and organize a limited number of ideas to support a single purpose: e.g. writing to inform, to get things done, or to express feelings and ideas.
- Accomplish writing activities to produce a few well-constructed and linked paragraphs to convey ideas, which appropriately use both everyday and limited specialized vocabulary.
- Use several simple revision strategies to monitor one's own writing and make edits/

improvements in written work.

- Begin to summarize others' ideas and thoughts ethically.
- Demonstrate study skills, classroom and online behavior appropriate in an American college setting, including working collaboratively with others both in and out of class.

## **INTERMEDIATE ORAL COMMUNICATION**

IELP 072

5 Credits

55 hours of lecture

For learners of English language who need to develop/improve oral communication skills at the intermediate level of academic English. Students will develop skills and strategies to carry out some complex medium-length communication tasks in informal and formal academic contexts including conversations, small group, class discussion and short presentations and will learn how and/or improve ability to listen actively, speak so others can understand and develop skills to improve communication across cultural boundaries. Credit not allowed for both ENL 082 and IELP 072. Prerequisite: A grade of "C" or better in IELP 062; Successful completion of ESL level 6 Listening/Speaking; ESL Compass Listening score of 67-74, or consent of department.

### **Course Outcomes:**

- Determine purpose for communication with awareness of audience.
- Focus attention and choose from a variety of linguistically and culturally appropriate listening/speaking strategies, and organize information to effectively serve the purpose, context, and listener.
- Comprehend and respond to somewhat complex types of medium-length communication tasks, using a range of strategies to understand some complex information and ideas and convey information with appropriate register.
- Select from a wide range of strategies to monitor and enhance understanding in communication and repair misunderstanding or gaps in understanding.
- Use strategies to build and understand vocabulary that includes words needed from some specialized vocational and/or academic topics.
- Demonstrate study skills, classroom and online behavior appropriate in an American college setting, including working collaboratively.

## **INTERMEDIATE READING**

IELP 073

5 Credits

55 hours of lecture

For learners of English who need to improve reading skills at the intermediate level of academic English. The primary goal is to develop reading ability for general and academic reading, and improve comprehension of a range of authentic and some modified multi-paragraph texts. Credit not available for both ENL 099A-Reading and IELP 073. Prerequisite: ESL Compass Reading score of 65-74; Grade of "C" or better in IELP 063; Successful completion of ESL level 6 reading/writing; or permission of department.

### **Course Outcomes:**

- Use pre-reading, while-reading, and post-reading strategies to monitor and improve comprehension of range of authentic and some modified materials.
- Identify purpose, topic, main idea, and supporting details in authentic and some modified multi-paragraph texts.
- Demonstrate appropriate strategies for understanding inferences, as well as stated information.
- Analyze, summarize, and respond logically to texts.



- Employ vocabulary building strategies, such as using context clues and using a learner English-English dictionary.
- Demonstrate study skills, classroom and online behavior appropriate in an American college setting, including working collaboratively with others both in and out of class.

## **INTERMEDIATE INTEGRATED SKILLS**

IELP 074

3 Credits

33 hours of lecture

For learners of English language who need to improve all language skills at the intermediate level of academic English. The primary goal is to improve English skills, while exploring academic content, utilizing learning technology and developing problem solving skills. Concurrent enrollment in IELP 071, 072, and 073 required for international program students to maintain credit level unless alternatives are approved by International Programs office. Prerequisite: Written assessment score of 3 and ESL Compass Grammar score of 63-72; grade of "C" or better in IELP 064; successful completion of ESL level 6 or permission of department.

### **Course Outcomes:**

- Communicate clearly utilizing intermediate English, communication strategies, and content knowledge appropriate for intended audience and purpose.
- Explore possible majors/areas of study at Clark College in areas of humanities, STEM, SOFA, and business through classroom work and online activities, building and using some discipline-specific vocabulary (including numerical vocabulary), pronunciation a
- Communicate and work with a small group effectively face-to-face.
- Utilize Clark College learning technology, including Canvas, and library resources.
- Demonstrate creative thinking related to problem and solution, recalling and using intermediate vocabulary, grammar, and pronunciation to carry out tasks (e.g. interpreting and drawing inferences from information given, communicating reasoning, identifyin
- Demonstrate study skills, classroom and online behavior appropriate in an American college setting, including working collaboratively.

## **ADVANCED WRITING**

IELP 081

5 Credits

55 hours of lecture

For non-native speakers of English who need to improve writing skills at the advanced level of academic English. Includes review and mastery of skills developed in IELP 071. The goal is to develop writing skills for academic purposes, with emphasis on complex sentences and mid-length texts such as essays and other types of academic writing. Students will improve written fluency as well as accuracy in writing, grammar, and vocabulary use. Credit not allowed for both ENL 091 and IELP 081. Prerequisite: Written assessment score of 4 and ESL Compass Grammar score of 73-83; grade of "C" or better in IELP 071 or ENL 081; or permission of department.

### **Course Outcomes:**

- Determine the purpose and audience for communicating in writing.
- Select from and use a range of tools and strategies for planning and organization: outline, using sources restate and summarize, draw conclusions and categorize ideas to plan for written communication.
- Accomplish structured and fairly complex writing activities to produce comprehensible written text, which appropriately uses both everyday and some specialized vocabulary in mid-length, coherently linked, and detailed text.
- Choose from a variety of strategies to make sentence and global, and make edits of written

work.

- Describe, paraphrase, summarize, and quote accurately and ethically.
- Demonstrate study skills, classroom and online behavior appropriate in an American college setting, including working collaboratively with others both in and out of class.

## **ADVANCED ORAL COMMUNICATION**

IELP 082

5 Credits

55 hours of lecture

For learners of English language who need to develop/improve oral communication skills at the advanced level of academic English. Students will develop skills and strategies to carry out complex extended communication tasks in informal and formal academic contexts (conversation, group discussion, and simple academic informational or persuasive presentations), improve their ability to listen actively, speak so others can understand and develop skills to improve communication across cultural boundaries. Credit not allowed for both ENL 092 and IELP 082. Prerequisite: A grade of "C" or better in IELP 072 or ENL 082; ESL Compass Listening score of 75-81; or consent of department.

### **Course Outcomes:**

- Determine purpose for communication with awareness of audience.
- Demonstrate study skills, classroom and online behavior appropriate in an American college setting, including working collaboratively with others both in and out of class.
- Focus attention and choose from a full range of linguistically and culturally appropriate listening/speaking strategies, to select, organize, and communicate information to effectively serve the purpose, context, and listener.
- Comprehend and respond to a variety of complex, extended, and perhaps unstructured communication tasks (e.g. conversation, group discussion, and simple academic informational or persuasive presentations) while minimizing barriers to listeners' comprehensi
- Select from a wide range of strategies to monitor whether or not communication purpose has been met, enhance understanding, and repair misunderstanding.
- Employ strategies to build, understand, and use vocabulary that includes words needed for some specialized, abstract, vocational and /or academic topics.

## **ADVANCED READING**

IELP 083

5 Credits

55 hours of lecture

For learners of English language who need to improve reading skills at the advanced level of academic English. The primary is to develop reading ability for general and academic reading and improve comprehension of a range of authentic, basic college-level materials. Credit not allowed for both ENL 099 and IELP 083. Prerequisite: ESL Compass Reading score of 75-85; Grade of "C" or better in IELP 073 or ENL 099 (Reading A); or permission of department.

### **Course Outcomes:**

- Use pre-reading, while-reading, and post-reading strategies to monitor and improve comprehension of range of authentic, basic college-level materials.
- Identify purpose, topic, main idea, supporting details, and organizational patterns in multi-paragraph texts.
- Demonstrate appropriate strategies for understanding inferences, as well as making own inferences from text.
- Analyze, summarize, paraphrase and respond logically to texts.

- Recognize, define, use, and build targeted advanced academic vocabulary, including use of either college-level dictionary or advanced learner dictionary.
- Demonstrate study skills, classroom and online behavior appropriate in an American college setting, including working collaboratively with others both in and out of class.

## **ADVANCED INTEGRATED SKILLS**

IELP 084

3 Credits

33 hours of lecture

For learners of English language who need to improve all language skills at the advanced level of academic English. The primary goal is to develop advanced English skills, while exploring a range of academic content, utilizing learning technology and developing problem solving skills.

Prerequisite: Written assessment score of 4 and ESL Compass Grammar score of 73-83; grade of "C" or better in IELP 074; or permission of department.

### **Course Outcomes:**

- Communicate clearly utilizing advanced English, a range of communication strategies, and content knowledge appropriate for intended audience and purpose.
- Utilize occupational information from online resources and Clark Career Center to explore intended major/career pathway and develop a basic career path to personal and professional goals.
- Utilize Clark learning technology (including Canvas and library resources), and demonstrate ability to use responsibly technology for research, communication, and collaboration.
- Communicate and work effectively in a team using a variety of media and formats building and using some discipline-specific vocabulary (including numerical vocabulary), pronunciation and grammar appropriate for task
- Demonstrate creative thinking related to problem and solution, communicating effectively with advanced vocabulary, grammar, and pronunciation appropriate for a variety of possible academic majors. (e.g. interpreting and drawing inferences from information)
- Demonstrate study skills, classroom and online behavior appropriate in an American college setting, including working collaboratively with others both in and out of class

## **UPPER ADVANCED WRITING**

IELP 091

5 Credits

55 hours of lecture

For learners of English language who need to improve writing skills at the upper advanced level of academic English. Includes review and mastery of skills developed in IELP 081. The goal is to develop writing skills for academic purposes, with emphasis on complex sentences and mid-length texts such as essays and other types of academic writing. Students will improve written fluency as well as accuracy in writing, grammar and vocabulary use in preparation for transfer into college-level courses. Prerequisite: Written assessment score of 5 and ESL Compass Grammar score of 84-93; grade of "C" or better in IELP 081 or ENL 091; or permission of department.

### **Course Outcomes:**

- Determine purpose and audience for communicating in writing.
- Select from a wide range of tools and strategies for overall planning and organization: identify and focus/narrow topic and thesis for written output, gather needed information, appropriately use sources to analyze/synthesize and draw sound conclusions fr
- Accomplish structured or unstructured complex writing activities to produce comprehensible, medium-length, well-organized detailed texts, with appropriate use of common and uncommon academic and specialized vocabulary.

- Choose from a variety of strategies to make multiple simple and global revisions and edits of written work.
- Describe, paraphrase, summarize, quote, and cite sources accurately and ethically.
- Demonstrate study skills, classroom and online behavior appropriate in an American college setting, including working collaboratively with others both in and out of class.

## **UPPER ADVANCED ORAL COMMUNICATION**

IELP 092

5 Credits

55 hours of lecture

For learners of English language who need to develop/improve oral communication skills at the upper advanced level of academic English. Students will develop skills and strategies to carry out complex, extended and unstructured communication tasks in informal and formal academic contexts (academic multi-party conversation, group discussion, and simple academic informational or persuasive presentations). Learn how and/or improve ability to listen actively, speak so others can understand and develop skills to improve communication across cultural boundaries in preparation for transfer into college-level courses. Prerequisite: A grade of "C" or better in IELP 082 or ENL 092; ESL Compass Listening score of 82-91; or consent of department.

### **Course Outcomes:**

- Determine purpose for communication with awareness of audience.
- Demonstrate study skills, classroom and online behavior appropriate in an American college setting, including working collaboratively with others both in and out of class, and giving proper citation in oral discourse.
- Focus attention and choose from a wide range of linguistically and culturally appropriate listening/speaking strategies, to select, organize, and communicate information to effectively serve the purpose, context, and listener.
- Carry out a variety of complex, extended, and unstructured communication tasks (e.g. academic conversation, group discussion, and simple academic informational or persuasive presentations) while selecting from a wide range of strategies to minimize barriers.
- Select from a wide range of strategies to monitor whether or not communication purpose has been met, enhance understanding, and repair misunderstanding, and adjust strategies as needed.
- Employ strategies to build, understand, and use vocabulary that includes words needed for many specialized, abstract, vocational and /or academic topics.

## **UPPER ADVANCED READING**

IELP 093

5 Credits

55 hours of lecture

For learners of English language who need to improve reading skills at the upper advanced level of academic English. The primary goal is to develop reading ability for academic reading, and improve comprehension of a range of authentic, multi-paragraph, multi-page college-level materials in preparation for transfer into college-level courses. Prerequisite: ESL Compass Reading score of 86-91; Grade of "C" or better in IELP 083 or ENL 099 (Reading B); or permission of department.

### **Course Outcomes:**

- Identify purpose, topic, main idea, supporting details, and organizational patterns in multi-paragraph and multi-page texts.
- Use pre-reading, while-reading, and post-reading strategies to monitor and improve comprehension of a range of college-level materials.

- Use textual evidence to make and support inferences drawn from texts.
- Analyze, summarize, paraphrase, and respond logically to text.
- Employ vocabulary building strategies, such as using context clues and using a college-level dictionary.
- Demonstrate study skills, classroom and online behavior appropriate in an American college setting, including working collaboratively with others both in and out of class.

## **UPPER ADVANCED INTEGRATED SKILLS**

IELP 094

3 Credits

33 hours of lecture

For learners of English language who want to improve all language skills at the upper advanced level of academic English. The primary goal is to develop upper advanced English skills, while exploring a wide range of college level content, utilizing learning technology and developing problem solving skills in preparation for transfer into college-level courses. Prerequisite: Written assessment score of 5 and ESL Compass Grammar score of 84-93; or grade of "C" or better in IELP 084, or permission of department.

### **Course Outcomes:**

- Communicate clearly utilizing upper advanced English, a wide range of communication strategies, and content knowledge appropriate for intended audience and purpose.
- Identify and utilize the occupational information available in the Clark College Career Center and advising in order to make informed educational and career decisions.
- Utilize Clark learning technology (including Canvas and library resources), and demonstrate ability to use responsibly technology for research, communication, and collaboration.
- Communicate and work effectively in a team using a wide variety of media and formats, building and using discipline-specific vocabulary (including numerical vocabulary), pronunciation and grammar appropriate for task.
- Demonstrate creative thinking related to problem and solution, communicating effectively with advanced vocabulary, grammar, and pronunciation appropriate for college level work.
- Demonstrate study skills, classroom and online behavior appropriate in an American college setting, including working collaboratively with others both in and out of class, and giving proper citation in oral discourse.

## **SELECTED TOPICS**

IELP 099

1 - 8 Credits

88 hours of lecture

Various topics, themes, content in intensive English language studies. Because the content varies, this course is repeatable for credit for different topics. [PNP]

### **Course Outcomes:**

- Demonstrate an understanding of the core concepts of the selected topic.
- Apply the core concepts of the selected topic.

## **COLLEGE ESSENTIALS: INT'L STUDENT INTRO TO**

IELP 101

3 Credits

33 hours of lecture

Designed for international students new to Clark College. Focuses on making a successful

transition to college and US life. Topics include goal setting, personal management skills, developing an academic plan, developing cultural competence including American cultural behaviors in education settings, communication skills, financial literacy, and an introduction to student resources at the college, as well as serving as an extension of the International student orientation program. Credit not allowed for both IELP 101, COLL 101, and COLL 111. Prerequisite: Admission to Clark College as an international student or consent of International Programs Office. New students only.

**Course Outcomes:**

- Describe campus resources, including Career Services and Cannell Library, and their relationship to student success.
- Utilize Clark College learning technology.
- Demonstrate knowledge of US college expectations of students, including student conduct, attendance, homework, and plagiarism.
- Describe differences between US college education system and international education systems.
- Develop two-quarter educational plan that works toward academic goals and increases understanding of the Academic Advising process.
- Define and discuss introductory concepts of power, privilege, and inequity.
- Know and demonstrate strategies for communicating with people from other cultures and language groups.
- Identify and apply personal learning styles and associated learning strategies
- Apply introductory understanding of financial literacy to personal budgeting and college funding options.

## Japanese

### JAPANESE I

JAPN&121

5 Credits

55 hours of lecture

Primary emphasis on oral communication with additional practice in basic reading and writing. Not open to native speakers except with instructor's permission. [HA, SE]

**Course Outcomes:**

- Use simple phrases and sentences to describe where he/she lives and people he/she knows.
- Make dialogues in a simple way provided the native-speaker is prepared to repeat or rephrase things at a slower rate of speech and help me formulate what I am trying to say. Ask and answer simple questions in areas of immediate need or on very familiar t
- Identify/use familiar words and very basic phrases concerning myself, my family and immediate concrete surrounds when people speak slowly and clearly.
- Identify familiar names, words, and very simple sentences, for example, on notices and posters or in catalogs.
- Write a short letters and compositions such as seasonal greetings and dairy.
- Demonstrate some of the cultural aspects for communications.

### JAPANESE II

JAPN&122

5 Credits

55 hours of lecture

Continuation of JAPN& 121. Not open to native speakers except with instructor's permission. Completion of JAPN& 121 or equivalent required. [HA, SE]

**Course Outcomes:**

- Narrate a series of phrases and sentences to describe in simple terms family and other people, living conditions, educational background and present or most recent job.
- Use a series of phrases and sentences to describe in simple terms family and other people, living conditions, educational background and present or most recent job. Communicate in simple and routine tasks requiring a simple and direct exchange of information
- Comprehend phrases and the highest frequency vocabulary related to areas of most immediate personal relevance (e.g. very basic personal and family information, shopping, local area, employment). Catch the main point in short, clear, simple messages and an
- Recognize specific, personal information in simple everyday material such as advertisements, prospectuses, and personal letters with at least 50 kanji.
- Write short, simple notes and messages.
- Identify the institutions and organizations which relate to college life and surroundings. Identify and explain the differences between the target culture and US culture.

**JAPANESE III**

JAPN&amp;123

5 Credits

55 hours of lecture

Continuation of JAPN& 122. Not open to native speakers except with instructor's permission. Completion of JAPN& 122 or equivalent required. [HA, SE]

**Course Outcomes:**

- Use a series of phrases and sentences to describe simple topics, but can include some complex sentences to talk about various topics such as family, traveling, and future plans.
- Use a series of phrases and sentences to describe in simple terms family and other people, living conditions, educational background and present or most recent job. Communicate in simple and routine tasks requiring a simple and direct exchange of information
- Comprehend phrases and the highest frequency vocabulary related to areas of most immediate personal relevance (e.g. very basic personal and family information, shopping, local area, employment). Catch the main point in short, clear, simple messages and an
- Comprehend everyday materials easily such as advertisements, prospectuses, and understand letters with various topics with at least 100 kanji.
- Write short narratives and simple to moderate messages with at least 50 Kanji.
- Identify introductory natural features of Japan, for example how Japanese geographical features and climates influence peoples' lives in Japan.

**STUDY ABROAD ORIENTATION**

JAPN 150

1 Credits

11 hours of lecture

Preparing students to travel with the Clark College study abroad program in Japan. Successful completion of this course required for students to participate in the travel abroad program. Application and acceptance into the study abroad program also required. Prerequisite: A grade of "C" or better or concurrent enrollment in JAPN& 122 or above; or consent of Instructional Unit. [SE]

**Course Outcomes:**

- Identify the host cities, schools, historical landmarks the students will visit.
- Explain norms, taboos, manners, and how to behave appropriately in Japan in various situations and places.

## **JAPANESE READING AND WRITING**

JAPN 151

1 Credits

11 hours of lecture

Reading and writing about various themes and topics in Japanese and English. Focus on manga; short literature, Japanese cultural readings, and letters from Japan. Instruction in English. No prior Japanese experience necessary. [SE] [PNP]

### **Course Outcomes:**

- Read and write 50 new characters.
- Construct sentences with 10 new sentence structures.

## **JAPANESE READING AND WRITING**

JAPN 152

1 Credits

11 hours of lecture

Continuation of reading and writing about various themes and topics in Japanese and English. Focus on manga, short literature, Japanese cultural readings, and letters from Japan. Instruction in English. No prior experience in Japanese necessary. Prerequisite: A grade of "C" or better in JAPN 151. [SE] [PNP]

### **Course Outcomes:**

- Read and write 50 new characters in addition to the 50 characters from JAPN 151.
- Construct sentences with 10 new sentence structures in addition to the 10 sentence structures from JAPN 151.

## **JAPANESE READING AND WRITING**

JAPN 153

1 Credits

11 hours of lecture

Continuation of reading and writing about various themes and topics in Japanese and English. Focus on manga, short literature, Japanese cultural readings, and letters from Japan. Instruction in English. No prior experience in Japanese necessary. Prerequisite: A grade of "C" or better in JAPN 152. [SE] [PNP]

### **Course Outcomes:**

- Read and write 50 new characters in addition to the 100 characters from JAPN 152.
- Construct sentences with 10 new sentence structures in addition to the 20 sentence structures from JAPN 152.

## **JAPANESE SOCIETY**

JAPN 171

3 Credits

33 hours of lecture

Structure of Japanese society and organizations. Emphasis on social obligation in the nature of one's relations to others. [SE]

### **Course Outcomes:**



- Identify various facts of Japanese studies.
- Explain why Japanese behavior is different from my own culture.

## **JAPANESE IV**

JAPN&221

5 Credits

55 hours of lecture

Continuation of First-Year Japanese: speaking, reading and writing with primary emphasis on oral communication. [HA, SE]

### **Course Outcomes:**

- Converse on topics that are familiar, of personal interest or pertinent to everyday life. (e.g. food, shopping) .
- Identify the main points of clear standard speech on familiar matters regularly encountered in work, school, leisure, etc.
- Read and understand the texts that consist of mainly high frequency everyday language with approximately 150 high frequency kanji.
- Write simple connected text on topics which are familiar or of personal interest using approximately 100 high frequency kanji.
- Demonstrate Japanese table manners and shopping, the measuring units such as metric system commonly used in Japan, and the cultural connotations of different colors.

## **JAPANESE V**

JAPN&222

5 Credits

55 hours of lecture

Continuation of First-Year Japanese: speaking, reading and writing with primary emphasis on oral communication. Prerequisite: JAPN& 221 or equivalent. [HA, SE]

### **Course Outcomes:**

- Deal with most situations likely to arise while traveling in an area where the language spoken. Use a series of sentences to describe "how to do" certain things that are of personal interest.
- Understand the main points of some TV dramas and films in clearly spoken standard dialect.
- Read and understand informative literatures that consist of mainly high frequency everyday language with approximately 170 high frequency kanji.
- Write personal letters describing experiences and impressions using approximately 120 high frequency kanji.
- Demonstrate the manners of gift giving in Japan as well as its importance and its meaning. Improve understanding of the word "giri" or obligation. Understand what Japanese housing is like inside and outside, as well as Japanese furniture and how each room

## **JAPANESE VI**

JAPN&223

5 Credits

55 hours of lecture

Continuation of First-Year Japanese: speaking, reading and writing with primary emphasis on oral communication. Prerequisite: JAPN& 222 or equivalent. [HA, SE]

### **Course Outcomes:**

- Describe experiences and events, my dreams, hopes, and ambitions. Briefly give reasons and explanations for opinions and plans. Narrate a story or relate the plot of a book for film and describe his/her reaction.
- Understand the main point of many radio or TV programs on current affairs or topics of personal or professional interest when their delivery is relatively slow and clear.
- Read and understand the description of events, feelings and wishes in personal letters.
- Comprehend texts that consist of mainly high frequency everyday language with approximately 200 high frequency kanji.
- Write a short report or an essay, passing on information or giving reasons in support of or against a particular point of view with approximately 150 high frequency kanji.
- identify the cultural differences in driving in Japan and taking public transportation. Understand the Japanese people's attitude toward alcohol, tobacco, and drugs. Understand what the health care system is like in Japan.

## SELECTED TOPICS

JAPN 280

1 - 5 Credits

55 hours of lecture

Course focuses on selected topics in Japanese. Topics vary and course theme and content change to reflect new topics. Because the course varies in content, it is repeatable for credit for different topics. [SE]

### Course Outcomes:

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of Japanese.

## Journalism

### INTRODUCTION TO JOURNALISM

JOUR 101

5 Credits

55 hours of lecture

Introduction to skills fundamental to journalism and newswriting, as well as an understanding of the role and significance of journalists and their work. Topics include the evolution in media and news today, ethical challenges, shifts in audience involvement and technological advances.

Writing-intensive activities to master a clear, concise, accurate style. Prerequisite: ENGL& 101 (or ENGL 101) eligibility required. [HA, SE]

### Course Outcomes:

- Employ basic journalism style, structure and organization in the stories he or she writes.
- Conduct reporting (research) that produces news report-worthy information.
- Employ principled practices as he or she reports and writes news stories.
- Explain thoughtfully the role and significance of the news industry in society in the past, present and future.

### COLLEGE NEWS PRODUCTION

JOUR 110

1 - 3 Credits

66 hours of lab

Apply and expand upon the skills and lessons acquired in JOUR 101 to produce the Clark College

newspaper, "The Independent." Develop new expertise and insight in multimedia reporting and editing; photojournalism; digital production and delivery of news; workplace professionalism; ethics; teamwork; advanced reporting, writing and story development; critique; alternative story forms; and project and time management. Besides lectures and lessons, the format includes field work (research) and writing, collaborative problem-solving, exercises, quizzes and production of the final news product. Prerequisite: A grade of "C" or better in JOUR 101, or equivalent, or consent of the Instructional Unit. [GE, SE]

**Course Outcomes:**

- Employ basic journalism style, structure and organization in the stories, headlines, cutlines, page designs, video reports, digital products and photos he or she writes, produces or edits.
- Conduct reporting (research) that produces a news-worthy news report.
- Employ principled practices as he or she reports and writes news stories, takes photographs, produces video reports and photo slide shows, designs pages, and assigns and edits stories.
- Explain the role and significance of the news media in society.

**MULTIMEDIA NEWS REPORTING AND WRITING**

JOUR 111

5 Credits

55 hours of lecture

Writing-intensive instruction and training in digital news, including an introduction to and practice in online news delivery tools, including audio and video reporting and editing, social media, data visualization, blogs and others. Emphasis on ethical issues. Considerable hands-on work requiring high motivation to work independently as well as collaboratively with classmates and instructor. Prerequisite: A grade of "C" or better in JOUR 101 or consent of the Instructional Unit. [HA, GE, SE]

**Course Outcomes:**

- Demonstrate an understanding of the multitude of challenges print news organizations are encountering –and the steps they are taking -- as they transition to their new roles as creators of combined print/web or primarily web news products (which involves
- Describe the components and the value of each of the following multimedia platforms: Twitter, blogs, audio reports, photo slide shows, video reports and web text stories. Evaluate the quality of specific products in each medium.
- Plan, report, edit and produce basic audio, photo slide show and video reports as well as web text stories, Tweets and blogs. (This outcome includes being able to operate and utilize external microphones, digital recorders and video cameras, both "Flips"
- Report news accurately, fully and fairly, utilizing traditional news conventions and adhering to the Society of Professional Journalists Code of Ethics.
- Demonstrate an understanding of citizen journalism and be able to navigate the various ethical challenges citizen and multimedia journalism present, including create and adhere to a social media policy. Practice citizen journalism.

**COLLEGE NEWS PRODUCTION**

JOUR 120

1 - 3 Credits

66 hours of lab

Apply and expand upon the skills and lessons acquired in JOUR 101 to produce the Clark College newspaper, "The Independent." Develop new expertise and insight in multimedia reporting and editing; photojournalism; digital production and delivery of news; workplace professionalism; ethics; teamwork; advanced reporting, writing and story development; critique; alternative story forms; and project and time management. Besides lectures and lessons, the format includes field

work (research) and writing, collaborative problem-solving, exercises, quizzes and production of the final news product. Prerequisite: A grade of "C" or better in JOUR 101, and successful completion of JOUR 110 or its equivalent, or consent of the Instructional Unit. [GE, SE]

**Course Outcomes:**

- Employ basic journalism style, structure and organization in the stories, headlines, cutlines, page designs, video reports, digital products and photos he or she writes, produces or edits.
- Conduct reporting (research) that produces a news-worthy news report.
- Employ principled practices as he or she reports and writes news stories, takes photographs, produces video reports and photo slide shows, designs pages, and assigns and edits stories.
- Explain the role and significance of the news media in society.

**COLLEGE NEWS PRODUCTION**

JOUR 130

1 - 3 Credits

66 hours of lab

Apply and expand upon the skills and lessons acquired in JOUR 101 to produce the Clark College newspaper, "The Independent." Develop new expertise and insight in multimedia reporting and editing; photojournalism; digital production and delivery of news; workplace professionalism; ethics; teamwork; advanced reporting, writing and story development; critique; alternative story forms; and project and time management. Besides lectures and lessons, the format includes field work (research) and writing, collaborative problem-solving, exercises, quizzes and production of the final news product. Prerequisite: A grade of "C" or better in JOUR 101, and successful completion of JOUR 120 or its equivalent, or consent of the Instructional Unit. [GE, SE]

**Course Outcomes:**

- Employ basic journalism style, structure and organization in the stories, headlines, cutlines, page designs, video reports, digital products and photos he or she writes, produces or edits.
- Conduct reporting (research) that produces a news-worthy news report.
- Employ principled practices as he or she reports and writes news stories, takes photographs, produces video reports and photo slide shows, designs pages, and assigns and edits stories.
- Explain the role and significance of the news media in society.

**COOPERATIVE WORK EXPERIENCE**

JOUR 199

1 - 5 Credits

165 hours of clinical

Supervised work experience in newspaper or other journalism position. Completion of specific learning objectives and employer evaluation. Completion of, or concurrent enrollment in, HDEV 195, 198, or 200 required. Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Fulfill the job requirements of the internship provider.

**ADVANCED NEWSWRITING**

JOUR 201

3 Credits

33 hours of lecture

Continuation of JOUR 101. Focus on longer, more complex stories, including features and opinion writing. Students will complete a short research project. Prerequisite: JOUR 101. [GE]

**Course Outcomes:**

- J201 should demonstrate continued mastery of the following: Associated Press style; story organization, including the Wall Street Journal or Focus format of story-telling; the five W's and H and what's beyond the five W's and H; principles of fairness,
- Confidently explain the value of and practice of reporting and writing that is fair, accurate, transparent and thorough; write a basic straight-news story suitable for publication in The Independent; distinguish between news and opinion " properly organiz
- Gain greater understanding related to the following: the role of a news organization in a community; the role of the free press in American society; how the press and student journalists can impact - both negatively and positively -- the lives and opportu

**COLLEGE NEWS PRODUCTION**

JOUR 210

1 - 3 Credits

66 hours of lab

Apply and expand upon the skills and lessons acquired in JOUR 101 to produce the Clark College newspaper, "The Independent." Develop new expertise and insight in multimedia reporting and editing; photojournalism; digital production and delivery of news; workplace professionalism; ethics; teamwork; advanced reporting, writing and story development; critique; alternative story forms; and project and time management. Besides lectures and lessons, the format includes field work (research) and writing, collaborative problem-solving, exercises, quizzes and production of the final news product. Prerequisite: A grade of "C" or better in JOUR 101, and successful completion of JOUR 130 or its equivalent, or consent of the Instructional Unit. [GE, SE]

**Course Outcomes:**

- Employ basic journalism style, structure and organization in the stories, headlines, cutlines, page designs, video reports, digital products and photos he or she writes, produces or edits.
- Conduct reporting (research) that produces a news-worthy news report.
- Employ principled practices as he or she reports and writes news stories, takes photographs, produces video reports and photo slide shows, designs pages, and assigns and edits stories.
- Explain the role and significance of the news media in society.

**COLLEGE NEWS PRODUCTION**

JOUR 220

1 - 3 Credits

66 hours of lab

Apply and expand upon the skills and lessons acquired in JOUR 101 to produce the Clark College newspaper, "The Independent." Develop new expertise and insight in multimedia reporting and editing; photojournalism; digital production and delivery of news; workplace professionalism; ethics; teamwork; advanced reporting, writing and story development; critique; alternative story forms; and project and time management. Besides lectures and lessons, the format includes field work (research) and writing, collaborative problem-solving, exercises, quizzes and production of the final news product. Prerequisite: A grade of "C" or better in JOUR 101, and successful completion of JOUR 210 or its equivalent, or consent of the Instructional Unit. [GE, SE]

**Course Outcomes:**

- Employ basic journalism style, structure and organization in the stories, headlines, cutlines, page designs, video reports, digital products and photos he or she writes, produces or edits.
- Conduct reporting (research) that produces a news-worthy news report.
- Employ principled practices as he or she reports and writes news stories, takes photographs, produces video reports and photo slide shows, designs pages, and assigns and edits stories.

- Explain the role and significance of the news media in society.

## **COLLEGE NEWS PRODUCTION**

JOUR 230

1 - 3 Credits

66 hours of lab

Apply and expand upon the skills and lessons acquired in JOUR 101 to produce the Clark College newspaper, "The Independent." Develop new expertise and insight in multimedia reporting and editing; photojournalism; digital production and delivery of news; workplace professionalism; ethics; teamwork; advanced reporting, writing and story development; critique; alternative story forms; and project and time management. Besides lectures and lessons, the format includes field work (research) and writing, collaborative problem-solving, exercises, quizzes and production of the final news product. Prerequisite: A grade of "C" or better in JOUR 101, and successful completion of JOUR 220 or its equivalent, or consent of the Instructional Unit. [GE, SE]

### **Course Outcomes:**

- Employ basic journalism style, structure and organization in the stories, headlines, cutlines, page designs, video reports, digital products and photos he or she writes, produces or edits.
- Conduct reporting (research) that produces a news-worthy news report.
- Employ principled practices as he or she reports and writes news stories, takes photographs, produces video reports and photo slide shows, designs pages, and assigns and edits stories.
- Explain the role and significance of the news media in society.

## **NEWS EDITING**

JOUR 272

3 Credits

33 hours of lecture

Basic editing skills. Emphasis on proofreading, clarity, trimming headlines. Basic modular layout, editor responsibilities and Associated Press Style. Prerequisite: ENGL 135 (or ENGL 111) or JOUR 101. [GE]

### **Course Outcomes:**

- Outcomes suspended due to course inactivity

## **SELECTED TOPICS:**

JOUR 280

1 - 3 Credits

33 hours of lecture

The course focuses on selected topics in Journalism. Topics vary, and course theme and content change to reflect new topics. Because the course varies in content, it is repeatable for credit for different topics. Individual topics are listed in the quarterly class schedule. [GE]

### **Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this course.

## **SPECIAL PROJECTS**

JOUR 290

1 - 5 Credits

Opportunity to plan, organize, and complete special projects approved by the department.

Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## Library

### RESEARCH IN THE INFORMATION AGE

LIBR 105

1 - 3 Credits

33 hours of lecture

Survey of information research techniques. Students will learn to locate, analyze, and evaluate information. Students will develop search strategies and use a variety of information, resources including the Internet and other computerized tools. Repeatable up to 3 credits. Prerequisite: Eligibility for ENGL& 101 (or ENGL 101) or consent of Department. [GE] [PNP]

**Course Outcomes:**

- Locate, analyze, and evaluate information. Develop search strategies and use a variety of information, resources including the Internet and other computerized tools.

### INTERNET RESEARCH AND LIVING ONLINE

LIBR 115

2 Credits

22 hours of lecture

Introduction to global networking and the Internet from the student users' perspective, emphasizing basic skills required to do research and participate as members of the Internet community. Topics include network fundamentals, strategies for locating, analyzing and evaluating information, electronic mail, Internet-based communities, social, legal and ethical issues regarding Internet interactions. [GE]

**Course Outcomes:**

- Determine the type and depth of information needed.
- Find needed information effectively and efficiently.
- Evaluate information and information sources.
- Use information and technology to accomplish a specific purpose.
- Identify the economic, legal and social issues surrounding information, and use information ethically and legally.

## Machining Technology

### BASIC GENERAL MACHINING PROCESSES

MACH 111

5 Credits

22 hours of lecture - 66 hours of lab

Instruction and practical application in general shop safety, safe practices and dangers of a machine shop environment. Demonstrations of proper use of micrometers and measurement tools. Procedures for deburring parts. Types of drill bits and their uses. Drill bit sharpening. Use of

bandsaws and bandsaw blade welders. [GE]

**Course Outcomes:**

- Calculate feeds and speeds for the drill press.
- Perform safe set-up and operation of the saws and drill press.
- Understand and perform precision measurement.
- Produce required projects to specification, inspect, and record measurements.

**BASIC ENGINE LATHE PROCESSES I**

MACH 112

5 Credits

22 hours of lecture - 66 hours of lab

Instruction and practical application of engine lathe nomenclature and safety. Calculate speeds and feeds for use with an engine lathe. Setup and operation of engine lathe for the basic operations of turning, facing and drilling. Prerequisite: A grade of "C" or better in MACH 111 or concurrent enrollment in MACH 111. [GE]

**Course Outcomes:**

- Calculate feeds and speeds for the lathe.
- Perform safe set-up and operation of the lathe.
- Identify types, components, and tooling for the manual lathe.
- Produce required projects to specification, inspect, and record measurements.

**BASIC VERTICAL MILLING PROCESSES I**

MACH 113

5 Credits

22 hours of lecture - 66 hours of lab

Instruction and practical application using nomenclature and safety for the vertical mill. Setup indicators and edge finders. Operations to include squaring of a work piece, drilling and reaming holes in various materials. Prerequisite: A grade of "C" or better in MACH 111 or concurrent enrollment in MACH 111. [GE]

**Course Outcomes:**

- Produce required projects to specification, inspect, and record measurements.
- Calculate feeds and speeds for the vertical mill.
- Perform safe set-up and operation of the vertical mill.
- Identify types, components, and tooling for the vertical mill.

**BASIC SURFACE GRINDER PROCESSES I**

MACH 121

5 Credits

22 hours of lecture - 66 hours of lab

Instruction and practice to safely use the surface grinders. Instruction of nomenclature for surface grinders. The use and care of handtools for inspection and setup of the surface grinder. Identify and safely use grinding wheels. Setup workpiece and grind material parallel. Prerequisite: MACH 111. [GE]

**Course Outcomes:**

- Identify various work holding techniques.
- Produce required projects to specification, inspect, and record measurements.



- Perform safe set-up and operation of the surface grinder.
- Identify types, components, and tooling for the surface grinder.

## **BASIC ENGINE LATHE PROCESSES II**

MACH 122

5 Credits

22 hours of lecture - 66 hours of lab

Instruction and practice to use engine lathe for turning material both concentric and straight, creating square shoulders, and facing a part. Drilling with the tailstock. Cutting external UNF and UNC threads. The use and care of taps. Prerequisite: MACH 111 and MACH 112. [GE]

### **Course Outcomes:**

- Perform turning between centers using a carbide turning tool.
- Perform grooving, parting, and boring operations.
- Demonstrate inspection techniques for threads.
- Perform threading operations on the manual lathe.
- Produce required projects to specification, inspect, and record measurements.

## **BASIC VERTICAL MILLING PROCESSES II**

MACH 123

5 Credits

22 hours of lecture - 66 hours of lab

Instruction and practical application using the vertical mill for drilling procedures, squaring of a workpiece, and reaming operations. Practice in machine setups to complete these operations. Prerequisite: MACH 111 and MACH 113. [GE]

### **Course Outcomes:**

- Perform face mill and fly cutting operations.
- Perform offset boring head set-up and operation.
- Perform pocketing operations.
- Produce required projects to specification, inspect, and record measurements.

## **BASIC SURFACE GRINDER PROCESSES II**

MACH 131

5 Credits

22 hours of lecture - 66 hours of lab

Instruction and practical application using the surface grinder to grind a workpiece flat and parallel, setup and operation to dress various shapes on grinding wheels. Prerequisite: MACH 111 and MACH 121. [GE]

### **Course Outcomes:**

- Set up and operate the cylindrical grinder.
- Grind straight and tapered surfaces.
- Produce required projects to specification, inspect, and record measurements.
- Square a V block to .0002 squareness.
- Identify types of wheels and their use.

### **BASIC ENGINE LATHE PROCESSES III**

MACH 132

5 Credits

22 hours of lecture - 66 hours of lab

Instruction and practical application using the engine lathe with four jaw chucks, cutting multiple start and acme threads. Use of formulas and different methods for cutting tapers. Prerequisite: MACH 111, MACH 112 and MACH 122. [GE]

#### **Course Outcomes:**

- Perform face grooving and recessing operations.
- Produce ID and OD tapers.
- Produce required projects to specification, inspect, and record measurements.
- Inspect tapers using various techniques.

### **BASIC VERTICAL MILLING PROCESSES III**

MACH 133

5 Credits

22 hours of lecture - 66 hours of lab

Instruction and practical application using the vertical milling machine with an indexing head. Application of form cutting tools, keyway cutters, and face milling. Prerequisite: MACH 111, MACH 113 and MACH 123 [GE]

#### **Course Outcomes:**

- Cut keyways with proper orientation.
- Safely, produce required projects to specification, inspect, and record measurements.
- Demonstrate use of a rotary table.
- Calculate simple indexing with a dividing head.

### **COOPERATIVE WORK EXPERIENCE**

MACH 199

1 - 5 Credits

165 hours of clinical

Supervised work experience in an approved job. Completion of specific learning objectives and employer evaluation. Completion of, or concurrent enrollment in, HDEV 195, 198, or 200 required. Prerequisite: Consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Fulfill the job requirements of the internship provider.

### **ELEMENTARY METALLURGY**

MACH 235

2 Credits

22 hours of lecture

Introduction to physical metallurgy, oriented towards the machinist trade. Covers destructive and non-destructive testing, steel manufacturing and its classification, identification methods, alloy steel, cast and wrought iron, heat treating. Concurrent enrollment in MACH 236 required. Cannot receive credit for MTEC 235 and WELD 235 and MACH 235. [GE]

#### **Course Outcomes:**

- Recognize the many types of metals and their use.
- Write and speak clearly about the characteristics of metals.
- Define and use metallurgical terminology on tests, for written and/or oral reports, and during individual and group presentations.
- Analyze lab results and understand their relationships to everyday living.
- Apply metallurgical knowledge to welding and machining metals as-well-as other trade uses.
- Assess the value of metals in everyday use.

### **ELEMENTARY METALLURGY LAB**

MACH 236

2 Credits

44 hours of lab

Application of concepts and topics covered in MACH 235, including metallography, heat treatment, and testing of materials. Concurrent enrollment in MACH 235 required. Cannot receive credit for MTEC 236 and WELD 236 and MACH 236. [GE]

#### **Course Outcomes:**

- recognize the many types of metals and their use.
- write and speak clearly about the characteristics of metals.
- define and use metallurgical terminology on tests, for written and/or oral reports, and during individual and group presentations.
- analyze lab results and understand their relationships to everyday living.
- apply metallurgical knowledge to welding and machining metals as-well-as other trade uses.
- assess the value of metals in everyday use.

### **ADVANCED PRECISION MEASUREMENT**

MACH 241

5 Credits

22 hours of lecture - 66 hours of lab

Introducing the concepts and vocabulary of basic measuring systems and tools, basic tolerance, print reading, calibration fundamentals, surface measurements, threads and thread inspection, hole inspection, optical comparator operation and use, CMM operation and use and GD&T basics and inspection techniques. All required modules will be completed on the Tooling U website. Before moving on, the student will complete each module with 80% or higher and a certificate. [GE]

#### **Course Outcomes:**

- Understand measuring systems and basic measuring tools.
- Interpret reference material, document inspection procedures and results.
- Demonstrate use and operation of the optical comparator and CMM.
- Understand current quality control concepts.
- Explain and apply GD&T concepts.

### **INTRO TO CNC LATHE CONVERSATIONAL PROGRAMMING**

MACH 242

5 Credits

22 hours of lecture - 66 hours of lab

Setup and operation of Haas TL-1 CNC Lathe. Creating and editing Intuitive Programming System conversational programs. Prerequisite: Completion of the 100-level Machining series or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate compliance of all machine shop safety regulations.
- Interpret blueprints and perform inspection of machined parts.
- Proficiently perform entry level skills to program, operate, and set up TL-1 Lathe.
- Communicate and interact in a team/group environment to perform multiple projects in a professional and ethical manner.

**INTRO TO CNC MILL CONVERSATIONAL PROGRAMMING**

MACH 243

5 Credits

22 hours of lecture - 66 hours of lab

Setup and operation of TRAK bed mill. Creating and editing PROTO TRAK conversational programs. Prerequisite: Completion of the 100-level Machining series or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate compliance of all machine shop safety regulations.
- Interpret blueprints and perform inspection of machined parts.
- Proficiently perform entry level skills to program, operate, and set up TRAK mill.
- Communicate and interact in a team/group environment to perform multiple projects in a professional and ethical manner.

**TOOLING CONCEPTS**

MACH 251

5 Credits

22 hours of lecture - 66 hours of lab

Concepts of metal removal, quality systems, and workholding. [GE]

**Course Outcomes:**

- Understand metal removal concepts--HSS vs. Carbide, Current Industry techniques.
- Understand CNC Basics, Mill/Lathe machine design.
- Understand Current Quality Control Concepts.
- Understand Safety, Workholding, and Modern Manufacturing concepts.

**CNC LATHE SETUP AND OPERATION**

MACH 252

5 Credits

22 hours of lecture - 66 hours of lab

Instruction and practical application for the safe setup, operation, and Interactive Graphics Function programming of Okuma CNC lathe. Produce and edit NC programs on the CNC lathe. Cannot receive credit for both MACH 252 and 222. Prerequisite: Completion of the 100-level Machining series or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Safely produce required projects to specification.
- Produce required projects to specification, inspect and record measurements.
- Perform safe set-up, operation, and programming the CNC lathe.
- Communicate and interact in a team/group environment to complete eight projects & final in a professional and ethical manner.

## **CNC MILLING SETUP AND OPERATION**

MACH 253

5 Credits

22 hours of lecture - 66 hours of lab

Setup and operation of the Haas vertical mill. Manually create and edit M and G code numerical control programs for the Haas vertical mill. Cannot receive credit for both MACH 253 and 213. Prerequisite: Completion of the 100-level Machining series or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Safely produce required projects to specification.
- Produce required projects to specification, inspect and record measurements.
- Perform safe set-up, operation, and manual programming of the CNC vertical machining center.
- Communicate and interact in a team/group environment to complete multiple projects in a professional and ethical manner.

## **ADVANCED EDM PROCESSES**

MACH 261

5 Credits

22 hours of lecture - 66 hours of lab

Instruction and practical application for the safe setup, operation, and Mastercam software programming of the Charmilles Wire Electric Discharge Machine (EDM). Produce and edit Mastercam NC programs for the Charmilles Wire EDM. Cannot receive credit for both MACH 261 and 231. Prerequisite: Completion of the 100-level Machining series or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Safely produce required parts to specification.
- Produce required projects to specification, inspect and record measurements.
- Proficiently perform entry level skills to program, set-up, and operate the Charmilles Wire Electric Discharge Machine.
- Communicate and interact in a team/group environment to cut ten projects in a professional and ethical manner.

## **ADVANCED CNC LATHE PROGRAMMING**

MACH 262

5 Credits

22 hours of lecture - 66 hours of lab

Instruction and practical application for the safe setup, operation, and Mastercam software programming of Okuma CNC lathe. Produce and edit Mastercam NC programs for the Okuma CNC lathe. Cannot receive credit for both MACH 262 and 232. Prerequisite: Completion of the 100-level Machining series or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Safely produce required projects to specification.
- Produce required projects to specification, inspect and record measurements.
- Perform safe set-up, operation, and programming of the CNC lathe using Mastercam software.
- Communicate and interact in a team/group environment to complete ten projects & final in a professional and ethical manner.

## **ADVANCED MILLING 3D PROGRAMMING AND MACHINING**

MACH 263

5 Credits

22 hours of lecture - 66 hours of lab

Use 2D and 3D geometry within cam software (Mastercam) to produce CNC programs for vertical mills. Cannot receive credit for both MACH 263 and 233. Prerequisite: Completion of the 100-level Machining series or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Safely produce required parts to specification.
- Produce required projects to specification, inspect and record measurements.
- Perform safe set-up, operation, and programming of the CNC Vertical Machining Center using Mastercam software.
- Communicate and interact in a team/group environment to program multiple projects in a professional and ethical manner.

## **SELECTED TOPICS**

MACH 280

1 - 5 Credits

55 hours of lecture

Selected topics in Machining as listed in the quarterly class schedule. Repeatable for credit. Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this course.

## **SPECIAL PROJECTS**

MACH 290

1 - 6 Credits

Opportunity to plan, organize and complete special projects approved by the department. Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## **Mathematics**

### **PRE-ALGEBRA**

MATH 030

5 Credits

55 hours of lecture

An introduction to algebra, solving equations, the integers, fractions, decimals, ratios, proportions, percents, basic geometry, and measurement. Prerequisite: A grade of "C" or better in CAP 045 or DVED 023 or recommending score on placement test.

### **Course Outcomes:**

- Perform basic operations with integers, fractions, decimals, and percentages without a calculator.
- Use order of operations to evaluate an expression.
- Solve linear equations.

## **INDUSTRIAL MATHEMATICS**

MATH 085

5 Credits

55 hours of lecture

Mathematical calculations used in industry. Determining ratio and proportion, taper calculations, weights and measures, areas and volumes, circles, angles, triangles, percentages, and metric conversions. Prerequisite: A grade of "C" or better in DVED 023 or recommending score on placement test or consent of Instructional Unit.

### **Course Outcomes:**

- Find areas and volumes of basic geometric shapes.
- Demonstrate understanding of tolerances, precision and accuracy in measurements and in computations.
- Use measuring devices accurately.
- Demonstrate understanding of direct and inverse proportional relationships in applied problems.
- Solve right triangles using the Pythagorean Theorem and trigonometric ratios.

## **ALGEBRA I**

MATH 089

5 Credits

55 hours of lecture

Numeric and algebraic expressions, linear equations and inequalities, in one variable, the coordinate plane, lines, systems of linear equations and inequalities in two variables, introduction to functions. Prerequisite: A grade of "C" or better in MATH 030 or recommending score on placement test.

### **Course Outcomes:**

- Model and answer questions pertaining to real world situations, using linear equations.
- Demonstrate the transition from arithmetic expressions to algebraic expressions.
- Solve an equation for a specified variable using additive and multiplicative inverse operations.
- Connect a linear graph to its equation and to its representations in functional and verbal form.

## **ELEMENTARY ALGEBRA**

MATH 090

5 Credits

55 hours of lecture

Numeric and algebraic expressions, linear equations and inequalities, in one variable, the coordinate plane, lines, systems of linear equations and inequalities in two variables, functions, integer exponents, polynomials. Designed for the student who is prepared to take algebra at an accelerated pace. Prerequisite: A grade of "C" or better in MATH 030 or recommending score on placement test.

### **Course Outcomes:**

- Solve an equation for a specified variable using additive and multiplicative inverse operations.
- Model and answer questions pertaining to real world situations, using linear equations.
- Connect a linear graph to its equation and to its representations in functional and verbal form.
- Perform operations on polynomials.
- Demonstrate the transition from arithmetic expressions to algebraic expressions.

## **ALGEBRA II**

MATH 091

5 Credits

55 hours of lecture

A continuation of MATH 089. Integer exponents, polynomials, factoring, rational expressions, evaluating and graphing functions. Prerequisite: A grade of "C" or better in MATH 089 or MATH 090 or eligibility for MATH 095.

### **Course Outcomes:**

- Manipulate complex algebraic expressions to find a useful equivalent form.
- Factor and perform operations on polynomials.
- Choose an appropriate strategy to solve a real world problem, and interpret the solution.
- Demonstrate the transition from arithmetic expressions to algebraic expressions.

## **ALGEBRA III**

MATH 093

5 Credits

55 hours of lecture

A continuation of MATH 091. Radical expressions, rational exponents, quadratic equations, exponential and logarithmic functions. Prerequisite: A grade of "C" or better in MATH 091.

### **Course Outcomes:**

- Connect parabolic, exponential, and logarithmic functions with key elements of their graphs.
- Solve a quadratic, logarithmic, or exponential equation.
- Manipulate complex algebraic expressions to find a useful equivalent form.
- Choose an appropriate strategy to solve a real world problem, and interpret the solution.

## **INTERMEDIATE ALGEBRA**

MATH 095

5 Credits

55 hours of lecture

A continuation of MATH 090. Factoring, rational expressions, radical expressions, rational exponents, quadratic equations, exponential and logarithmic functions. Designed for the student who is prepared to take algebra at an accelerated pace. Prerequisite: A grade of "C" or better in MATH 090 or recommending score on placement test.

### **Course Outcomes:**

- Manipulate complex algebraic expressions to find a useful equivalent form.
- Connect parabolic, exponential, and logarithmic functions with key elements of their graphs.
- Factor polynomials.
- Choose an appropriate strategy to solve a real world problem, and interpret the solution.
- Solve quadratic, logarithmic, and exponential equations.



## **INTERMEDIATE ALGEBRA IN SOCIETY**

MATH 097

5 Credits

55 hours of lecture

Polynomials, dimensional analysis, proportions, functions, radicals, quadratic equations and inequalities, exponential and logarithmic functions, and an introduction to statistics, in preparation for MATH& 107. This course may only be used as a prerequisite for MATH& 107. Prerequisite: A grade of "C" or better in MATH 089 or MATH 090 or recommending score for MATH 095 on placement test.

### **Course Outcomes:**

- Read and interpret visual and numerical data in the context of applications.
- Use technology to create and interpret graphs.
- Interpret and use scientific notation.
- Apply exponent rules to simplify expressions with exponents, including negative exponents.
- Connect parabolic, exponential and logarithmic functions with key elements of their graphs.

## **COLLEGE TRIGONOMETRY**

MATH 103

5 Credits

55 hours of lecture

Trigonometric ratios, right angle trigonometry, law of sines, law of cosines, radian measure, trigonometric identities, inverse trigonometric functions, trigonometric equations, graphs of trigonometric functions, polar coordinates, and two-dimensional vectors. Prerequisite: A grade of "C" or better in MATH 093, or 095, or recommending score on placement test. [Q, SE]

### **Course Outcomes:**

- Demonstrate understanding of the various definitions and properties of the six trigonometric functions and their inverses.
- Connect the graphical and symbolic representations of transformations of the trigonometric functions.
- Solve equations involving trigonometric functions.
- Evaluate the trigonometric functions at standard angles measured in degrees or radians, without the use of a calculator.
- Use trigonometric functions to solve application problems involving triangles, and interpret the solutions.
- Use identities to verify trigonometric identities or to simplify trigonometric expressions.

## **FINITE MATHEMATICS**

MATH 105

5 Credits

55 hours of lecture

Lines; linear systems; matrices; linear programming using geometric and simplex methods; mathematics of finance; polynomial, rational, exponential and logarithmic functions and models. Prerequisite: A grade of "C" or better in MATH 093 or 095, or recommending score on placement test. [Q, SE]

### **Course Outcomes:**

- Construct an algebraic model of an applied linear programming problem.
- Use counting techniques to determine the number of elements in a set.

- Interpret a reduced row-echelon form matrix in terms of solutions of a linear system of equations.

### **MATH IN SOCIETY**

MATH&107

5 Credits

55 hours of lecture

Philosophy of mathematics and concepts of numerical relationships. Mathematical systems, logic, set theory, inductive and deductive reasoning, scientific attitudes, elementary properties of mathematics. Geometry and history of mathematics will be covered as time allows. For students who do not plan to take more mathematics. One field trip may be required. Prerequisite: A grade of "C" or better in MATH 093 or 095 or 097, or recommending score on placement test. [Q, SE]

#### **Course Outcomes:**

- Describe appropriate problem-solving strategies for real-world problems.
- Solve real-world problems, and interpret the solutions.

### **COLLEGE ALGEBRA**

MATH 111

5 Credits

55 hours of lecture

An introduction to functions from symbolic, numerical, and graphical points of view. Topics include polynomial; logarithmic, and exponential functions; inequalities, absolute value equations and inequalities, systems of equations, conic sections, and mathematical modeling. This is a challenging and technical course primarily intended for those majoring in Mathematics, Physical Science or Engineering. It is a preparatory class for the four-term Calculus series. Prerequisite: A grade of "C" or better in MATH 093 or 095, or recommending score on placement test. [Q, SE]

#### **Course Outcomes:**

- Solve polynomial, logarithmic and/or exponential equations, and interpret their solutions.
- Connect functions and conics to their visual, verbal, or symbolic representation.
- Provide a detailed analysis of the graph of a function.
- Demonstrate understanding of the notation and algebra of functions.

### **MATH FOR ELEMENTARY TEACHERS**

MATH 122

5 Credits

55 hours of lecture

The first of a three-quarter sequence of courses designed for prospective elementary school teachers. Focus on problem solving, set theory, numeration systems, whole number arithmetic, and fractions. Prerequisite: A grade of "C" or better in MATH 093 or MATH 095, or recommending score on placement test. [Q, SE]

#### **Course Outcomes:**

- Communicate mathematics using appropriate mathematical vocabulary and notation.
- Demonstrate multiple representations of whole number and fraction operations.
- Describe and apply appropriate problem solving strategies to non-routine problems.

## **MATH FOR ELEMENTARY TEACHERS**

MATH 123

5 Credits

55 hours of lecture

The second of a three-quarter sequence of courses designed for prospective elementary school teachers. Focus on geometric shapes, measurement, triangle congruence and similarity, coordinate geometry, transformations, trigonometry and geometric problem solving. May be taken concurrently with MATH 124, the third course in the sequence. Prerequisite: A grade of "C" or better in MATH 122. [[Q, SE]

### **Course Outcomes:**

- Demonstrate multiple representations of functions, and of integer and decimal operations.
- Organize and analyze data.
- Identify and interpret valid probability numbers.

## **MATH FOR ELEMENTARY TEACHERS**

MATH 124

5 Credits

55 hours of lecture

The third of a three-quarter sequence of courses designed for prospective elementary school teachers. Focus on integers, decimals, number theory; elementary statistics, combinatorics and probability; functions and their graphs. Study of data analysis and probability including problem solving techniques and concepts in algebra. May be taken concurrently with MATH 123, the second course in the sequence. Prerequisite: A grade of "C" or better in MATH 122. [Q, SE]

### **Course Outcomes:**

- Identify, derive and use geometric formulas.
- Use and convert units of measurement.
- Describe and apply appropriate problem solving strategies to geometric problems.

## **CALCULUS FOR LIFE SCIENCES**

MATH 140

6 Credits

66 hours of lecture

Survey of differentiation and integration with applications to problems in Biology and Environmental Science. Prerequisite: A grade of "C" or better in MATH 103 and 111, or recommending score on placement test. Please see advisor for transferability. [Q, SE]

### **Course Outcomes:**

- Estimate the derivative at a point on the graph of a function and interpret its meaning within the context of a life science application.
- Use differentiation to solve an optimization or related rates problem.
- Apply the fundamental theorem of calculus to a life science application.

## **BUSINESS CALCULUS**

MATH&148

5 Credits

55 hours of lecture

Introductory calculus with applications for business, life sciences, and social sciences. Differential, integral, and elementary multivariate calculus. Credit allowed for only one of MATH 140, MATH

106 and MATH& 148. Prerequisite: A grade of "C" or better in MATH 105 or 111 or recommending score on placement test. [Q, SE]

**Course Outcomes:**

- Use differentiation to solve an optimization and/or a marginal analysis problem.
- Use integration to solve an applied differential equation given boundary value conditions.
- Describe an applied situation in which an output value depends on two or more input values.
- Demonstrate understanding of the difference between average rates of change and instantaneous rates of change.
- Use technology to find numeric and symbolic derivatives and integrals.

**CALCULUS I**

MATH&151

5 Credits

55 hours of lecture

The first course in the four quarter calculus sequence intended primarily for students of mathematics, the physical sciences, or engineering. Covers the foundations of calculus of a single variable. Topics include limits, differentiation, applications of differentiation to properties of functions and their graphs, solving real-world problems, and the basics of integration. Credit not allowed for both MATH 113 and MATH& 151. Prerequisite: A grade of "C" or better in MATH 103 and MATH 111, or recommending score on placement test. [Q, SE]

**Course Outcomes:**

- Solve an applied rate of change problem.
- Evaluate a basic integral, and interpret its meaning in context.
- Determine if a limit exists using appropriate techniques, and evaluate it if it does exist.
- Demonstrate understanding of the relationship between a function and its derivatives.
- Find a derivative by hand using basic differentiation rules.

**CALCULUS II**

MATH&152

5 Credits

55 hours of lecture

Second course in the four quarter calculus sequence intended primarily for students of mathematics, the physical sciences, or engineering. Topics include techniques of integration, applications of integration, conics, parametric equations, polar coordinates, and polar equations. Credit not allowed for both MATH 211 and MATH& 152. Prerequisite: A grade of "C" or better in MATH& 151 (MATH 113). [Q, SE]

**Course Outcomes:**

- Demonstrate calculus techniques in the context of parametric and/or polar equations.
- Connect an integral with its geometric interpretation (such as its application to volumes).
- Construct an integral to model an applied problem.
- Select and use an appropriate technique to evaluate an integral.

**CALCULUS III**

MATH&153

5 Credits

55 hours of lecture

Third course in the four quarter calculus sequence intended for students of mathematics, the

physical sciences, or engineering. Topics include sequences and series, three-dimensional vectors and lines, planes, cylindrical and spherical coordinates; and vector valued functions and their derivatives, integrals, and applications. Credit not allowed for both MATH 212 and MATH& 153. Prerequisite: A grade of "C" or better in MATH& 152 (MATH 211). [Q, SE]

**Course Outcomes:**

- Represent points and equations in 3-dimensional coordinate systems.
- Write a function as a power series, and demonstrate its use in an appropriate context.
- Distinguish between sequences and series, and use appropriate methods to determine convergence or divergence.
- Demonstrate understanding of vector algebra including lines and planes.
- Analyze vector-valued functions using calculus.

**COOPERATIVE WORK EXPERIENCE**

MATH 199

1 - 5 Credits

165 hours of clinical

Supervised work experience in an approved job. Completion of specific learning objectives and employer evaluation. Completion of, or concurrent enrollment in, HDEV 195, 198, or 200 required. Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Meet the specific outcomes agreed upon by the individual student, the instructor and the site supervisor.

**DESCRIPTIVE STATISTICS**

MATH 203

3 Credits

33 hours of lecture

Descriptive methods, probability, binomial and normal probability distributions are included among other statistical topics with applications to fields of science, engineering, business, social science, and education. Credit allowed for only one of MATH 203 or BUS 203. Prerequisite: A grade of "C" or better in MATH 093 or 095, or recommending score on placement test. [Q, SE]

**Course Outcomes:**

- Compute the likelihood of an event pertaining to a normally distributed population.
- Draw valid inferences from numerical and visual descriptors.
- Identify and interpret valid probability numbers.
- Organize statistical information using appropriate visual and numerical descriptors.

**INFERENCE STATISTICS**

MATH 204

3 Credits

33 hours of lecture

Estimation of parameters, tests of hypotheses, regression analysis, nonparametric statistics and analysis of variance are included in this continuation of MATH 203. Applications in science, engineering, business, social science and education. Credit allowed for only one of MATH 204 or BUS 204. Prerequisite: A grade of "C" or better in MATH 203 or BUS 203. [Q, SE]

**Course Outcomes:**

- Determine the line of best fit for bivariate data, and interpret the associated correlation coefficient.
- Interpret a confidence interval.
- Determine which test to use from a hypothesis and available information.
- Demonstrate understanding of the importance of sample size and how it can affect a hypothesis test.

## **DISCRETE MATHEMATICS**

MATH 205

5 Credits

55 hours of lecture

Study of finite systems. Topics chosen from set theory, logic, relations, combinatorics, number systems, algorithms, graph theory, and automata. Credit not allowed for both MATH 205 and MATH 206. Prerequisite: A grade of "C" or better in MATH 111 or recommending score on placement test. [Q, SE]

### **Course Outcomes:**

- Demonstrate the equivalence of statements and/or test the validity of arguments using symbolic logic.
- Apply direct and/or indirect methods to prove mathematical results.
- Apply combinatorial techniques to counting problems.

## **LINEAR ALGEBRA**

MATH 215

5 Credits

55 hours of lecture

An introduction to Linear Algebra. This course is intended primarily for students of Mathematics, the Physical Sciences, or Engineering. Topics include systems of linear equations, matrices, linear transformations, vectors, vector spaces, eigenvalues, and orthogonality. Applications will also be explored. Credit not allowed for both MATH 215 and MATH 216. Prerequisite: A grade of "C" or better in MATH& 152 (MATH 211). [Q, SE]

### **Course Outcomes:**

- Compute and apply eigenvalues and eigenvectors.
- Demonstrate understanding of the geometrical uses of a matrix (such as linear transformations).
- Apply linear algebra to real-world problems.
- Demonstrate understanding of the structure of solutions to linear systems.
- Demonstrate understanding of a vector space and its core concepts (such as basis, isomorphism, etc.).

## **DIFFERENTIAL EQUATIONS**

MATH 221

5 Credits

55 hours of lecture

Elementary theory and applications of ordinary differential equations. Linear equations, linear systems, Laplace transforms, boundary value problems, series and iterative methods. Credit not allowed for both MATH 221 and MATH 241. Prerequisite: Concurrent enrollment in MATH& 254 (MATH 213) or a grade of "C" or better in MATH& 254 (MATH 213). [Q, SE]

### **Course Outcomes:**

- Model real-world situations using differential equations, solve the equations, and interpret the solutions.
- Solve an ordinary differential equation (ODE) using an appropriate method.
- Use appropriate technology to solve, approximate the solution of, or visualize the solution of an ODE that cannot be solved using traditional methods.

## **CALCULUS IV**

MATH&254

5 Credits

55 hours of lecture

Fourth course in the four quarter calculus sequence intended primarily for students of mathematics, the physical sciences, or engineering. Covers the calculus of functions of several variables. Topics include limits; partial derivatives, iterated integrals, and their applications, vector fields; gradient; divergence and curl; line and surface integrals; and classic vector calculus theorems. Credit not allowed for both MATH 213 and MATH& 254. Prerequisite: A grade of "C" or better in MATH& 153 (or MATH 212). [Q, SE]

### **Course Outcomes:**

- Translate geometric objects to another coordinate system or to an appropriate re-parameterization.
- Demonstrate geometric understanding of iterated integrals and the ability to evaluate them.
- Apply multi-variable calculus techniques to model real-world problems.
- Apply calculus to paths or surfaces within a vector field.
- Differentiate functions of several variables, and interpret the results.

## **SELECTED TOPICS**

MATH 280

1 - 5 Credits

55 hours of lecture

Selected topics in mathematics. Topics vary and course theme and content change to reflect new topics. Because the course varies in content, it is repeatable for credit. Individual topics are listed in the quarterly class schedules. [SE]

### **Course Outcomes:**

- Demonstrate an understanding of the core concepts of this selected topic.

## **SPECIAL PROJECTS**

MATH 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the department. Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## **Meteorology**

## **ATMOSPHERE AND THE ENVIRONMENT**

METR 101

5 Credits

44 hours of lecture - 44 hours of lab

Fundamental theories in meteorology and current topics in the atmospheric sciences are developed conceptually for non-science students interested in the changing environment. Topics include atmospheric structure and composition, global circulation and atmospheric motions, clouds and precipitation, weather patterns and weather prediction, tornadoes, hurricanes, the greenhouse effect, atmospheric ozone, air pollution, and El Nino. [NS, SE]

### **Course Outcomes:**

- Recall, recognize, select and apply physical laws, facts, and concepts related to the atmospheric sciences and the Earth system, and provide examples of how these relate to our everyday experiences.
- Use data acquisition and observations, data visualization (graphs, charts, and maps) , pattern recognition, analysis and modeling to explain facts, concepts, hypotheses, and theories related to atmospheric and climate science, i.e. the effective applicati
- Solve problems related to the atmospheric sciences using relevant information, physical relationships ,calculations, graphs and appropriate units of measurement.

## **SPECIAL PROJECTS**

METR 290

1 - 5 Credits

Opportunity to plan and complete special projects approved by the instructional unit. Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## **Management**

### **PRINCIPLES OF MANAGEMENT**

MGMT 101

3 Credits

33 hours of lecture

Introduction to management theory, functions, and topics to include diversity, leading change, decision making, and team work. Focus on practical applications, useful to both new and experienced managers. [GE]

### **Course Outcomes:**

- Evaluate the method used by managers to arrive at business decisions.
- Identify personal styles of management to include leadership, decision making, effective communications, and interpersonal skills.
- Examine the theory and practical operations of management.
- Analyze management problems and opportunities and make decisions and/or prepare solutions in increasingly effective ways.
- Apply group working skills to course learning situations.
- Recognize the many types of management careers and opportunities that individuals can pursue.



## **APPLIED MANAGEMENT SKILLS**

MGMT 103

3 Credits

33 hours of lecture

Developing concepts and skills in employee motivation, communication, and supervisory leadership. Promoting effective relations and performance in the work group. Case discussions and role situations develop understanding of individual and group problems encountered by the supervisor. [GE]

### **Course Outcomes:**

- Recognize and state three significant management theories that have relevance in modern management.
- Identify the elements of motivational skills and theories that have application in the work environment.
- Recognize communication challenges and barriers and resolving communication issues.
- Demonstrate an understanding of the skills, concepts, and the processes that ensure a diverse and productive work environment.
- Identify the factors of resistance to change and how change is achieved in the work environment.
- Recognize the importance of team-based work effort and developing people for the workplace of the future.
- Identify and understand the primary characteristics of a true learning organization and its impact on sustaining a competitive advantage.

## **MOTIVATION AND PERFORMANCE**

MGMT 106

3 Credits

33 hours of lecture

Review of motivational factors of human relations used to enhance motivation and interpersonal communications; focus on the ways motivation impacts the success or failure of organizations. [GE]

### **Course Outcomes:**

- Explain how individual performance influences organizational performance.
- Describe the various motivational factors that influence an individual's performance.
- Apply motivational techniques to enhance performance in others.

## **SUPERVISORY COMMUNICATION I, WRITTEN**

MGMT 107

3 Credits

33 hours of lecture

Review of writing mechanics covering grammar, punctuation, and sentence and paragraph structure. Students practice writing effective business letters, documentation, supervisory reports, office memoranda, and bulletins. [GE]

### **Course Outcomes:**

- Identify and utilize at least five aspects of audience adaptation for communication and demonstrate intercultural communication techniques by using audience-tailored messages and culturally sensitive language and practices.
- Describe the importance of communication in management and how to use the communication process effectively for both traditional and technology-driven channels.
- Use techniques for successful verbal and nonverbal communication in management

- situations, including listening, communicating across genders, and crisis communication.
- Use techniques for successful written communication in management. This includes writing well-organized and effective routine, persuasive, newsletters, memos, and e-mails. In addition they will be able to prepare proposals and management reports.

## **CREATIVE PROBLEM SOLVING**

MGMT 110

3 Credits

33 hours of lecture

Review of the creative and analytical thinking necessary for effective problem-solving in the workplace. Concepts include left/right brain thinking, stages in the creative process, habits that hinder thinking and producing ideas, the role of criticism, and effective communication of solutions. [GE]

### **Course Outcomes:**

- Identify seven basic themes that serve as the foundation for effective human relations.
- Describe how the traditional roles of men and women continue to change.
- Identify key elements of the conflict resolution process.
- Understand the impact of employee attitudes on the success of individuals as well as organizations.
- Understand how the study of human relations will help you achieve career success and increased work/life balance.

## **CONFLICT MANAGEMENT**

MGMT 112

2 Credits

22 hours of lecture

Study of the factors causing conflicts and ways to resolve them. Conflict with individuals and groups, conflict management styles, and win-win situations. [GE] [PNP]

### **Course Outcomes:**

- Assess personal background and its impact on the resolution of conflicts.
- Understand and explain the common causes of conflict.
- Discuss and apply soft negotiation, hard negotiation, and principled negotiation to actual workplace conflicts.
- Understand and explain the basic ways of resolving conflicts in most organizations: collaboration, compromise, competition, accommodation, and withdrawal.
- Understand how to separate people from the problem and give examples of objective criteria in negotiation.
- Understand how and when to consider ADR (Alternative Dispute Resolution) and BATNA (Best Alternative to Negotiated Agreement).

## **SUPERVISOR AS A TRAINER COACH**

MGMT 120

3 Credits

33 hours of lecture

Study of the supervisor's role in the training and professional of employees. Topics include identifying training needs, selecting the appropriate type of training, distinguishing between training and coaching situations, and supporting employees to improve performance. Activities include practical training and coaching techniques. [GE]

**Course Outcomes:**

- Apply coaching techniques to help employees improve performance and develop professionally.
- Understand the value of identifying training needs and select the appropriate type of training.
- Apply training techniques to improve performance.
- Describe the value of diversity in a multicultural workforce.

**LEADERSHIP PRINCIPLES**

MGMT 122

3 Credits

33 hours of lecture

Developing practical leadership skills to influence the organizational performance for managers and non-managers. Topics include leadership roles and styles; the communication process; team building and group interactions; and organizational politics, power, and influence. Applications include leading in business, not-for-profit organizations, clubs, and social organizations. [GE]

**Course Outcomes:**

- Understand the difference between managers and leaders.
- Apply leadership concepts to discussion topic scenarios.
- Assess your personal leadership skills.
- Evaluate power styles for their effectiveness.
- Collaborate within a team environment using both follower and leadership styles.

**TEAM BUILDING AND GROUP BEHAVIOR**

MGMT 125

3 Credits

33 hours of lecture

Methods for creating, developing, and nurturing work groups and teams in the workplace to achieve organizational objectives. Focus on the effective roles of the supervisor and team members. Topics include group behavior for problem-solving, group learning, conflict resolution, and team interactions and communications. [GE]

**Course Outcomes:**

- Apply principles and practices of interpersonal and intrapersonal communications for effective team performance.
- Understand the need and value of team building and team processes in modern organizations.
- Manage team processes including motivational techniques and conflict resolution.
- Evaluate teams and organizational roles to maximize creativity and organizational output.
- Lead a virtual team process with the appropriate and effective use of technology.
- Discuss why team work has become important in the the modern workplace
- Describe why team expectations and group behaviors differ in various cultures
- Explain the free rider syndrome and how to avoid it.
- Discuss groupthink- its causes and challenges.
- Analyze teams and determine the appropriate leadership styles for specific situations

**PROJECT MANAGEMENT**

MGMT 126

4 Credits

44 hours of lecture

Introduction to current practices in successful project management and in creating a quality project plan. Case examples provide the opportunity for first-hand practice in developing the individual steps of a project cycle, using current software in project management. [GE]

**Course Outcomes:**

- Associate best practices of project management with documented projects.
- Discuss concepts related to project management quality, human resources, communication, risk, and procurement. Discuss activities related to project monitoring, controlling, execution, integration, and closing.
- Complete a formal proposal (business case) for a project.
- Demonstrate a knowledge of the principles of standard project management by distinguishing between projects, programs, and portfolios and explaining project management knowledge areas.
- Plan and organize project initiation and management activities within work breakdown structure and milestones, using project management software to apply project management principles and create the professional presentation of a project using Gantt chart

**HUMAN RESOURCES MANAGEMENT**

MGMT 128

3 Credits

33 hours of lecture

Developing an understanding of the functions and skills needed by supervisors concerning employment recruitment, selection and placement, staff planning and development, job descriptions and analysis, promotions, transfers, separations, wage and salary administration, and EEO requirements. [GE]

**Course Outcomes:**

- Identify the basic principles, concepts and practices of staff planning, recruiting, evaluating, and selection; including providing applicable resources that can be utilized in any organization.
- Describe and develop training mechanisms for managerial and non-managerial employees in any organization.
- Identify reasons, methods and processes for providing performance evaluations.
- Define and identify all the aspects of compensation plan and how they differ depending on the organization.
- Understand, explain and apply different legal aspects of human resources within any organization.
- Demonstrate enhanced skills in labor and employee relations within any organization.

**LEGAL ISSUES IN EMPLOYEE RELATIONS**

MGMT 132

3 Credits

33 hours of lecture

Study of human resource topics such as employment law, hiring, discrimination, employment-at-will, drug testing, health insurance, unemployment, worker's compensation, wages and hours; and civil rights. Focus on due process for both public and private employees, including labor relations and collective bargaining. [GE]

**Course Outcomes:**

- Understand the legal considerations of the management – employee relationship as they apply to all areas of the employment process and the various legal protections provided to

employees and potential employees in the area of discrimination.

- Understand the legal requirements that employer policies and procedures must follow in the areas of employment-at-will; wage and hour, drug testing and the offering of fringe benefits and the protections provided to employees who are injured on the job.
- Understand and use online resources for research and communication (i.e., Internet, electronic mail, World Wide Web).
- Understand the role of unions in the workplace, collective bargaining, discipline and discharge, the protections provided to ex-employees in the area of unemployment and references, the grievance and mediation processes and the differences between private

## **PRODUCTION AND OPERATIONS MANAGEMENT**

MGMT 133

3 Credits

33 hours of lecture

Techniques for improving productivity and quality and reducing waste. Topics include measuring quality and productivity, process definition and control, problem-solving, continuous improvement, and personal productivity for the production and service environment. [GE]

### **Course Outcomes:**

- Describe production flow, monitor quality measures, and identify problems and opportunities for continuous improvement and/or reengineering.
- Identify the customer and the needs of the customer.
- Apply appropriate performance measures to improve productivity and quality and reduce waste.
- Define quality/productivity and use and apply the Seven Basic Quality Control tools.
- Use consensus decision making tools to determine quality, bench marking, and the evaluation process.

## **COOPERATIVE WORK EXPERIENCE**

MGMT 199

1 - 5 Credits

165 hours of clinical

Up to 5 credits for supervised work training in an approved job. Completion of or concurrent enrollment in BTEC 147 or HDEV 195, 198, or 200 required. Prerequisite: Completion of one class with a "C" or better in Business, Economics, or Management. Written consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Demonstrate a satisfactory job performance to include: using appropriate interpersonal skills with sensitivity to ethnic and cultural differences in dealing with external and internal customers, working as a team, managing conflicts, and handling telephon
- Demonstrate the development of workplace skills and attitudes appropriate to the setting.
- Demonstrate workplace skills and techniques in the areas of time management, work ethics, problem solving, interpersonal relations, and conflict management.

## **SELECTED TOPICS**

MGMT 280

1 - 5 Credits

55 hours of lecture

Varying topics in supervisory management, as listed in the quarterly class schedule. May be

repeated for credit. [GE]

**Course Outcomes:**

- Demonstrate an outcome(s), experience(s), or tangible product(s) as determined by the supervisory instructor.

**SPECIAL PROJECTS**

MGMT 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the department.

Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate an experience or tangible product as determined by the supervisory instructor.

**Medical Radiography**

**RADIOGRAPHIC SKILL ENHANCEMENT LAB I**

MRAD 011

1 Credits

22 hours of lab

Supervised lab experience for skill enhancement in radiographic positioning, evaluation of radiographic procedures, technique, and equipment for the first year medical radiography student. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [PNP]

**Course Outcomes:**

- Demonstrate the ability to use proper terminology.
- Describe anatomy related to current positioning class.
- Describe routine radiographic positioning related to current positioning class.
- Describe special projections of current positioning class.
- Demonstrate basic patient care, safety, and comfort in diagnostic imaging.
- Demonstrate radiation protection and safety.
- Describe and demonstrate working as a team to move the trauma or bedridden patient.
- Describe and demonstrate the different communication styles needed to address pediatric and geriatric patients.
- Explain the use of different immobilization devices in different patient scenarios.
- Describe the values, beliefs, and attitudes of the culturally diverse patient population.

**RADIOGRAPHIC SKILL ENHANCEMENT LAB II**

MRAD 012

1 - 5 Credits

110 hours of lab

Supervised lab experience for skill enhancement in radiographic positioning, evaluation of radiographic procedures, technique, and equipment for the second year medical radiography student. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [PNP]

**Course Outcomes:**

- Demonstrate the ability to use proper terminology.
- Describe anatomy related to past quarters of the positioning classes.
- Describe routine radiographic positioning related to past quarters of the positioning classes.
- Describe special projections of past quarters of the positioning classes.
- Demonstrate basic patient care, safety, and comfort in diagnostic imaging.
- Demonstrate ALARA in radiation protection and safety.
- Explain the use of different immobilization devices in different patient scenarios.

**RADIOGRAPHIC SKILL ENHANCEMENT LAB III**

MRAD 013

1 Credits

22 hours of lab

Supervised lab experience for advanced skill enhancement in radiographic positioning, evaluation of radiographic procedures, technique, and equipment for the second year medical radiography student. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit.

**Course Outcomes:**

- Evaluate and demonstrate ability to adjust positioning, technique and immobilization skills for the non- ambulatory patient competently and safely using "AIDET".
- Evaluate lab images generated of the non-ambulatory patient (lab phantoms) .
- Demonstrate accurate positioning technique skills for the overhead BE image routine of his/her clinical site in 10 mins.
- Demonstrate accurate positioning and technique skills for a skull or facial bones routine of his/her clinical site in ten minutes.
- Demonstrate accurate positioning technique skills for class created list of "clinically challenging exams", including radiation protection and safety.

**INTRODUCTION TO RADIOLOGIC TECHNOLOGY**

MRAD 101

3 Credits

22 hours of lecture - 22 hours of lab

An orientation to the radiologic technology profession, imaging equipment, radiation safety, patient care and radiographic examinations, professional development, career advancement, and professional ethics and associations. Prerequisite: Completion of, or concurrent enrollment in BIOL& 251, 252, or 253 (BIOL 231, 232, or 233). [GE]

**Course Outcomes:**

- Identify health care professions that participate in the patient's total health care.
- Describe patient services available in the Medical Imaging Department.
- Describe physical, intellectual, behavioral, and ethical requirements of the Radiologic Technologist.
- Demonstrate a self-awareness concerning her/his readiness and desire to pursue a career as a Radiologic Technologist.
- Demonstrate an ability to access information from the Moodle website.
- Demonstrate an ability to upload information onto the Moodle website.
- Demonstrate an ability to search for detailed information from the internet.
- Describe the values, beliefs, and attitudes of the culturally diverse patient population.

## **INTRODUCTION TO PATIENT CARE**

MRAD 102

5 Credits

44 hours of lecture - 44 hours of lab

Patient care aspects involved in being a Radiologic Technologist. Topics include: patient interactions, history taking, transfer techniques, immobilization, vital signs and oxygen, infection control, aseptic and non-aseptic techniques. The lecture for this course, quizzes, and other materials will be online and accessed through the course webpage. The class will be divided into two on-campus lab periods. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE]

### **Course Outcomes:**

- Demonstrate knowledge of patient transfers.
- Identify the qualities of a caring radiologic technologist.
- Discuss general needs that patients may have according to Maslow's hierarchy of needs.
- Explain why patient interactions are important to patients, as well as their family and friends.
- Define the terms associated with body mechanics.
- Demonstrate knowledge of the basic principles of proper lifting and transfer techniques.
- Demonstrate a range of immobilization techniques.
- Discuss the significance of each of the vital signs.
- Understand the factors involved in the spread of disease and the chain of infection.
- Understand the basic principles of sterile technique.
- Demonstrate knowledge regarding the need for patient teaching regarding the barium enema.
- Know the general priorities in working with patients in acute situations.

## **IMAGE PROCESSING**

MRAD 103

1 Credits

11 hours of lecture

Introduction to radiographic image processing using both traditional film and digital images. Topics for discussion include darkroom chemistry, equipment, and procedures and computer hardware and software in the radiology lab. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE]

### **Course Outcomes:**

- Describe the construction and various types of radiographic film.
- Describe the use of x-rays to form the latent image.
- Explain correct film handling and storage.
- Describe how processing the latent image creates the visible image.
- Describe the processing sequence of the automatic processor.
- List the processing solutions and explain the function of each.
- List the components of the radiographic intensifying screen.
- Explain the properties of rare earth screens and the importance of spectral matching.
- Compare film characteristics, including speed, latitude.
- Explain dark room cleanliness and safelight procedures.
- Identify common processing and handling artifacts and solutions.
- Explain the computed radiography and digital radiography systems.

## **RADIATION SAFETY AND RADIOBIOLOGY**



MRAD 104

2 Credits

22 hours of lecture

Introduction to proper procedures for working safely in the radiologic environment. Topics include: communication, radiation measurement, survey devices, conversion from traditional to systems international units, patient and radiographer protection, monitoring devices, safe operation of equipment, beam limitation, shielding, barriers, and fluoroscopic and mobile procedures. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of Instructional Unit. [GE]

**Course Outcomes:**

- Describe radiation protection methods.
- Recognize radiation measurement and apply conversion from traditional to Systems International units (SI) .
- Identify radiation dose limits.
- Explain radiation monitoring devices.

**RADIATION PHYSICS I**

MRAD 108

3 Credits

22 hours of lecture - 22 hours of lab

Focus on the fundamental principles of physics that underlie the use of radiation in diagnostic imaging. Using simplified math, and building on the concepts learned in Radiation Safety, develop a basic understanding of the production and control of X-radiation. Topics include: structure of atom, electromagnetic radiation, electrodynamics, electromagnetism, x-ray tube, x-ray production and interactions with matter. Hybrid course structure: some instruction will occur in the traditional classroom and some instruction will occur via the course website. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE]

**Course Outcomes:**

- Explain scientific principles related to x-ray imaging and apply these principles to analysis of x-ray imaging systems.
- Identify the name and function of components of x-ray imaging equipment.
- Characterize x-ray emission spectra and relate features of spectra to parameters of the x-ray imaging system.

**RADIATION PHYSICS II**

MRAD 109

4 Credits

33 hours of lecture - 22 hours of lab

Continuation of MRAD 108. The geometry of image formation and the radiographic qualities of density, contrast, detail and distortion. Topics include: radiographic equipment, controlling factors of density, contrast, detail and distortion, beam limiting devices and their impact on the image, grids, image receptors (analog and digital) and fundamentals of digital imaging. Includes heavy emphasis on solving problems involving radiographic qualities. This course will be structured as a hybrid course, with some instruction in the traditional classroom and some via the course website. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate proper usage of x-ray imaging equipment.
- Identify distortions and artifacts in x-ray images.
- Describe factors affecting image quality and patient exposure.
- Determine techniques to optimize image quality while limiting radiation exposure.

## **CLINICAL EXPERIENCE I**

MRAD 121

7 Credits

231 hours of clinical

First in a series of seven competency based clinical courses. Students orient to an assigned clinical education center and by instruction, observation, and experience, acquire the necessary skills to successfully image patients utilizing X-ray energy. Students will learn how to use the computer and PACS systems. Concurrent enrollment required in MRAD 108, 142, and 151. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE]

### **Course Outcomes:**

- Demonstrate the ability to use proper terminology.
- Describe anatomy related to the chest, abdomen, and upper limbs.
- Describe routine radiographic positioning related to the chest, abdomen, and upper limbs.
- Describe special projections of the chest, abdomen, and upper limbs.
- Demonstrate basic patient care, safety, and comfort in diagnostic imaging, and working as a team to move the trauma or bedridden patient.
- Demonstrate ALARA and safety in radiation protection.
- Describe and demonstrate working as a team with both imaging professionals and other clinical/hospital staff.
- Demonstrate the different communication styles needed to address pediatric, geriatric, and culturally diverse patients.

## **CLINICAL EXPERIENCE II**

MRAD 122

6 Credits

192 hours of clinical

Second in a series of seven competency-based clinical experience courses. Students orient to an assigned clinical site and by instruction, observation, and experience, acquire the necessary skills to successfully image patients utilizing x-ray energy. Students will be assessed for maintenance of competency from previous clinical evaluations and experiences. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE]

### **Course Outcomes:**

- Demonstrate the ability to use proper terminology.
- Describe anatomy related to the shoulder girdle, lower limb, hip and pelvis, and continuation of MRAD 121.
- Demonstrate routine radiographic positioning related to the shoulder girdle, lower limb, hip and pelvis.
- Describe special projections of the shoulder girdle, lower limb, hip and pelvis, and continuation of MRAD 121.
- Demonstrate basic patient care, safety, and comfort in diagnostic imaging.
- Demonstrate ALARA and radiation protection and safety.
- Demonstrate working as a team to move the trauma or bedridden patient.

- Describe and demonstrate the different communication styles needed to address pediatric and geriatric patients.
- Explain the use of different immobilization devices in different patient scenarios.

### **CLINICAL EXPERIENCE III**

MRAD 123

7 Credits

231 hours of clinical

Third in a series of seven competency-based experience courses. Students orient to an assigned clinical site and by instruction, observation, and experience, acquire the necessary skills to successfully image patients utilizing x-ray energy. Students will be assessed for maintenance of competency from previous clinical evaluations and experiences. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE] [PNP]

#### **Course Outcomes:**

- Demonstrate the ability to use proper terminology.
- Describe anatomy related to the vertebral column and bony thorax.
- Describe and demonstrate routine radiographic positioning related to the vertebral column and bony thorax.
- Describe and demonstrate special projections of the vertebral column and bony thorax.
- Demonstrate basic patient care, safety, and comfort in diagnostic imaging.
- Demonstrate ALARA in radiation protection and safety.
- Describe and demonstrate working as a team to move the trauma or bedridden patient.
- Describe and demonstrate the different communication styles needed to address pediatric and geriatric patients.

### **RADIOGRAPHIC POSITIONING I**

MRAD 141

5 Credits

44 hours of lecture - 44 hours of lab

Introduction to basic radiographic positioning principles, terminology, pathology, and anatomy for radiographic purposes. Lecture discussion, demonstration and lab experiences will be used to present information on positioning and anatomy of the chest, abdomen and upper extremities. Projections studied will include cross-table images for trauma exams. Radiographic compliance, ICD coding, and ABN will be discussed. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE]

#### **Course Outcomes:**

- Demonstrate the ability to use proper terminology.
- Describe anatomy related to the chest, abdomen, and upper limbs.
- Describe and demonstrate routine radiographic positioning related to the chest, abdomen, and upper limbs.
- Describe and demonstrate special projections of the chest, abdomen, and upper limbs.
- Demonstrate basic patient care, safety, and comfort in diagnostic imaging.
- Describe and demonstrate radiation protection and safety.
- Describe and demonstrate working as a team to move the trauma or bedridden patient.
- Describe and demonstrate the different communication styles needed to address pediatric and geriatric patients.
- Explain the use of different immobilization devices in different patient scenarios.
- Describe the values, beliefs, and attitudes of the culturally diverse patient population.

## **RADIOGRAPHIC POSITIONING II**

MRAD 142

5 Credits

44 hours of lecture - 44 hours of lab

Second in a five-course series that focuses on radiographic positioning principles, terminology, pathology, and anatomy for radiographic purposes. Lecture discussion, demonstration and lab experiences will be used to present information on positioning and anatomy of the shoulder, pelvic girdle, and lower limbs. Projections studied will include cross-table images for trauma exams. Radiographic compliance, ICD coding, and ABN will be discussed. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE]

### **Course Outcomes:**

- Demonstrate the ability to use proper terminology.
- Describe anatomy related to the shoulder, shoulder girdle, pelvic girdle, lower limbs.
- Describe special projections of the shoulder, shoulder girdle, pelvic girdle, and lower limbs.
- Evaluate radiographs for proper positioning.
- Describe specific types of pathology for the shoulder, pelvic girdle, and lower limbs.
- Describe and demonstrate the different communication styles needed to address pediatric and geriatric patients.
- Explain the use of different immobilization devices in different patient scenarios.
- Describe the values, beliefs, and attitudes of the culturally diverse patient population.

## **RADIOGRAPHIC POSITIONING III**

MRAD 143

5 Credits

44 hours of lecture - 44 hours of lab

Third in a five-course series that focuses on radiographic positioning principles, terminology, pathology, and anatomy for radiographic purposes. Lecture discussion, demonstration and lab experiences will be used to present information on positioning and anatomy of the bony thorax, vertebral column, and sacrum and coccyx. Projections studied will include information on performing cross-table images for trauma exams. Concurrent enrollment in MRAD 143L. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE]

### **Course Outcomes:**

- Demonstrate the ability to use proper terminology.
- Describe anatomy related to the C-spine, T-spine, L-spine, sacrum/coccyx, and bony thorax.
- Describe routine radiographic positioning related to the C-spine, T-spine, L-spine, sacrum/coccyx, and bony thorax.
- Demonstrate routine radiographic positioning related to the C-spine, T-spine, L-spine, sacrum/coccyx, and bony thorax.
- Describe special projections of the C-spine, T-spine, L-spine, sacrum/coccyx, and bony thorax.
- Demonstrate special projections of the C-spine, T-spine, L-spine, sacrum/coccyx, and bony thorax.
- Evaluate radiographs for proper positioning.
- Describe specific types of pathology for the shoulder, pelvic girdle, and lower limbs.
- Describe and demonstrate the different communication styles needed to address pediatric and geriatric patients.
- Explain the use of different immobilization devices in different patient scenarios.
- Describe the values, beliefs, and attitudes of the culturally diverse patient population.

## **IMAGE EVALUATION I**

MRAD 151

2 Credits

22 hours of lecture

First of a four-course series of radiographic image critique involving images of the chest, abdomen, and upper extremities. Emphasis on the evaluation and critique of radiographic anatomy, exposure factors, positioning, and pathology. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE]

### **Course Outcomes:**

- Describe radiographic criteria needed for images of the chest, abdomen, and upper extremities.
- Provide written and oral evaluation of radiographs of the chest, abdomen, and upper extremities.
- Describe errors, if present, on images due to improper exposure factors, poor positioning, or extrinsic factors.
- Describe how to adjust exposure factors or position to improve the image.
- Describe and identify radiation safety precautions utilized for the image, recognizing ALARA practices.
- Describe and identify immobilization devices utilized for the image.
- Describe radiographic anatomy and pathology pertinent to the exam.

## **IMAGE EVALUATION II**

MRAD 152

1 Credits

11 hours of lecture

Second in a four-course series of radiographic film critique involving images of the shoulder girdle, lower extremities, and pelvic girdle. Emphasis on the evaluation of radiographic anatomy, exposure factors, positioning, and pathology. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE]

### **Course Outcomes:**

- Describe radiographic criteria needed for images of the shoulder, foot, ankle, tib-fib, knee, femur, and hip/pelvis.
- Provide written and oral evaluation of radiographs of the shoulder, foot, ankle, tib-fib, knee, femur, hip/pelvis.
- Describe errors, if present, on images due to improper exposure factors, poor positioning, or extrinsic factors.
- Describe how to adjust exposure factors or position to improve the image.
- Describe and identify radiation safety precautions utilized for the image.
- Describe and identify immobilization devices utilized for the image.
- Describe radiographic anatomy and pathology pertinent to the exam.

## **IMAGE EVALUATION III**

MRAD 153

1 Credits

11 hours of lecture

Third of a four-course series of radiographic film critique involving images of the bony thorax,

vertebral column, and sacrum and coccyx. Emphasis on the evaluation of radiographic anatomy, exposure factors, positioning, and pathology. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE] [PNP]

**Course Outcomes:**

- Describe radiographic criteria needed for images of the vertebral column and bony thorax.
- Provide written and oral evaluation of radiographs of the vertebral column and bony thorax.
- Describe and identify errors, if present, on images due to improper exposure factors, poor positioning, or extrinsic factors.
- Describe how to adjust exposure factors or position to improve the image.
- Describe and identify radiation safety precautions utilized for the image.
- Describe and identify radiographic anatomy and pathology pertinent to the exam.
- Describe radiographic criteria needed for images of the skull, facial bones, and paranasal sinuses.
- Describe radiographic anatomy and pathology pertinent to the exam.
- Provide written and oral evaluation of radiographs of the skull, facial bones, and paranasal sinuses.
- Develop analytical skills to identify errors, if present, on images due to improper exposure factors, poor positioning, or extrinsic factors.

**IMAGE EVALUATION IV**

MRAD 154

1 Credits

11 hours of lecture

Fourth of a four-course series of radiographic film critique involving images of the cranium, facial bones, and paranasal sinuses. Emphasis on the evaluation of radiographic anatomy, exposure factors, positioning, and pathology. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE] [PNP]

**Course Outcomes:**

- Describe radiographic criteria needed for images of the skull, facial bones, and paranasal sinuses.
- Provide written and oral evaluation of radiographs of the skull, facial bones, and paranasal sinuses.
- Develop analytical skills to identify errors, if present, on images due to improper exposure factors, poor positioning, or extrinsic factors.
- Develop analytical skills to adjust exposure factors or positioning to improve the image.
- Describe and identify radiation safety precautions utilized for the image.
- Describe and identify immobilization devices utilized for the image.
- Describe radiographic anatomy and pathology pertinent to the exam.
- Describe the values, beliefs, and attitudes of the culturally diverse patient population.

**PHARMACOLOGY AND IV THERAPY**

MRAD 214

3 Credits

22 hours of lecture - 22 hours of lab

Introduction to the pharmacological principles and practices in patient care for the medical imaging professional including administration of diagnostic contrast agents and/or intravenous medications; includes competency in venipuncture practice. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical

Radiography Program and consent of the Instructional Unit. [GE] [PNP]

**Course Outcomes:**

- Demonstrate knowledge of contrast media.
- Describe the characteristics and components of contrast media used in imaging.
- Demonstrate knowledge of the characteristics, applications and indications/contraindications of medications used in imaging.
- Explain the reactions common to contrast media.
- Do the research necessary to develop a presentation on one of the contrast media assigned.
- Demonstrate knowledge of the medications used to treat adverse reactions.
- Demonstrate competency in venipuncture.
- Describe the values, beliefs, and attitudes of the culturally diverse patient population.

**RADIOGRAPHIC PATHOLOGY**

MRAD 216

3 Credits

33 hours of lecture

Basic terms and manifestations of pathological conditions, trauma, classifications of diseases, genetics, and the healing process. Imaging procedures and radiographic appearance as well as interventional techniques appropriate for diseases common to each body system. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE] [PNP]

**Course Outcomes:**

- Understand terminology; identify disease trends, resources for healthcare providers and multicultural health.
- Describe role of medical radiography in imaging human pathology, disease classifications, imaging congenital anomalies.
- Identify and describe hereditary diseases.
- Identify and describe inflammatory and degenerative diseases.
- Identify and describe neoplastic disease and staging of cancer.
- Understand signs and symptoms of diseases with correlative imaging: CT, MRI, ultrasound, and radiography.

**CLINICAL EXPERIENCE IV**

MRAD 224

7 Credits

231 hours of clinical

Fourth in a series of seven competency-based clinical experience courses. Students orient to an assigned clinical education center and by instruction, observation, and experience, acquire the necessary skills to successfully image patients utilizing x-ray energy. Students will be assessed for maintenance of competency from previous clinical evaluations and experience. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE] [PNP]

**Course Outcomes:**

- Demonstrate the ability to use proper terminology.
- Describe and demonstrate anatomy related to the alimentary tract, GU system, biliary system and surgical procedures. Review of all previously covered anatomy.
- Describe and demonstrate routine positioning related to the alimentary tract, GU system, biliary system and surgical procedures. Review of routine radiographic positioning covered in all previous radiographic positioning classes.

- Describe and demonstrate special projections of the alimentary tract, GU system, biliary systems, surgical procedures and any other special projections covered in all previous radiographic positioning classes.
- Demonstrate basic patient care, safety and comfort in diagnostic imaging.
- Demonstrate ALARA in radiation protection and safety.
- Describe and demonstrate working as a team to move and image the trauma or bedridden patient.

## **CLINICAL EXPERIENCE V**

MRAD 225

7 Credits

231 hours of clinical

Fifth in a series of seven competency-based clinical experience courses. Students orient to an assigned clinical education center and by instruction, observation, and experience, acquire the necessary skills to successfully image patients utilizing x-ray energy. Students will be assessed for maintenance of competency from previous clinical evaluations and experiences. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE] [PNP]

### **Course Outcomes:**

- Demonstrate the ability to use proper terminology.
- Describe anatomy related to the cranium, alimentary tract, GU, GB and biliary systems. Review of all previously covered anatomy.
- Describe and demonstrate routine positioning related to cranium, alimentary tract, GU, GB and biliary systems. Review of routine radiographic positioning covered in all previous radiographic positioning classes.
- Describe special projections of the cranium, alimentary tract, GU, GB and biliary systems, and any other special projections covered in all previous radiographic positioning classes.
- Demonstrate basic patient care, safety, and working as a team to move the trauma or bedridden patient.
- Demonstrate ALARA in radiation protection and safety.

## **CLINICAL EXPERIENCE VI**

MRAD 226

8 Credits

256 hours of clinical

Sixth in a series of seven competency-based clinical experience courses. Students orient to an assigned clinical site and by instruction, observation, and experience, acquire the necessary skills to successfully image patients utilizing x-ray energy. Students will be assessed for maintenance of competency from previous clinical evaluations and experiences. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE] [PNP]

### **Course Outcomes:**

- Demonstrate the ability to use proper terminology.
- Describe all body anatomy covered in all previous radiographic positioning classes.
- Describe and demonstrate all routine radiographic positioning covered in all previous radiographic positioning classes.
- Describe and demonstrate any special projection covered in all previous radiographic positioning class.
- Demonstrate basic patient care, safety, and comfort in diagnostic imaging, and working as a team to move the trauma or bedridden patient.



- Demonstrate ALARA and safety in radiation protection.
- Demonstrate the different communication styles needed to address pediatric, geriatric, and culturally diverse patients.
- Explain the use of different immobilization devices in different patient scenarios.

## **CLINICAL EXPERIENCE VII**

MRAD 227

10 Credits

328 hours of clinical

Seventh in a series of seven competency-based clinical experience courses. Students orient to an assigned clinical site and by instruction, observation, and experience, acquire the necessary skills to successfully image patients utilizing x-ray energy. Students will be assessed for maintenance of competency from previous clinical evaluations and experiences. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE] [PNP]

### **Course Outcomes:**

- Demonstrate the ability to use proper terminology.
- Describe all body anatomy covered in all previous Radiographic Positioning classes.
- Describe and review all routine radiographic positioning covered in all previous Radiographic Positioning classes.
- Describe special projections covered in all previous Radiographic Positioning classes.
- Demonstrate basic patient care, safety, and comfort in diagnostic imaging, and working as a team to move the trauma or bedridden patient.
- Demonstrate ALARA and safety in radiation protection.
- Describe and demonstrate working as a team with both imaging professionals and other clinical/hospital staff.
- Demonstrate the different communication styles needed to address pediatric, geriatric, and culturally diverse patients.
- Explain the use of different immobilization devices in different patient scenarios.
- Describe the values, beliefs, and attitudes of the culturally diverse patient population. Demonstrate high ethical standards of conduct.

## **RADIOGRAPHIC POSITIONING IV**

MRAD 244

3 Credits

22 hours of lecture - 22 hours of lab

Fourth in a five-course series that focuses on radiography positioning principles, terminology, pathology, and anatomy for radiographic purposes. Lecture discussion, demonstration and lab experiences will be used to present information on positioning and anatomy of conventional tomography, upper gastrointestinal system, lower gastrointestinal system, gallbladder and biliary ducts, urinary system, and surgical radiography. Projections studied will include cross-table images for trauma exams. Radiographic compliance, ICD coding, and ABN will be discussed. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE] [PNP]

### **Course Outcomes:**

- Demonstrate the ability to use proper terminology.
- Describe anatomy related to the UGI system, lower GI system, GB and biliary ducts, and GU system.
- Describe and demonstrate routine radiographic positioning related to the UGI system, lower

GI system, GB and biliary ducts, and GU system.

- Describe and demonstrate special projections of upper and lower GI system, GB and biliary ducts, and GU system.
- Evaluate radiographs for proper positioning.
- Describe and demonstrate the use of conventional tomography.
- Describe specific types of pathology for the UGI system, lower GI system, GB and biliary ducts, and GU system.

## **RADIOGRAPHIC POSITIONING V**

MRAD 245

3 Credits

22 hours of lecture - 22 hours of lab

Fifth in a five-course series that focuses on radiographic positioning principles, terminology, pathology, and anatomy for radiographic purposes. Lecture discussion, demonstration and lab experiences will be used to present information on positioning and anatomy of the cranium, facial bones and paranasal sinuses. Projections studied will include cross-table images for trauma exams. Radiographic compliance, ICD coding, and ABN will be discussed. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE] [PNP]

### **Course Outcomes:**

- Demonstrate the ability to use proper terminology.
- Describe anatomy related to the skull, cranium, facial bones, and paranasal sinuses.
- Describe and demonstrate routine radiographic positioning related to the skull, cranium, facial bones, and paranasal sinuses.
- Describe and demonstrate special projections of the skull, cranium, facial bones, and paranasal sinuses.
- Demonstrate radiation protection and safety.
- Explain the use of different immobilization devices in different patient scenarios.

## **RADIOGRAPHIC INFORMATION MANAGEMENT**

MRAD 251

2 Credits

22 hours of lecture

Fundamentals of digital radiography, Radiology Information System (RIS), and Picture Archiving and Communication System (PACS), basic Medical Imaging Information systems, CR and DR Image acquisition, manipulation and quality control. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE]

### **Course Outcomes:**

- Apply digital imaging terminology when discussing imaging with peers and other professionals.
- Demonstrate understanding of basic computer principles.
- Utilize digital radiographic image processing.
- Exhibit a culturally sensitive attitude when working with culturally diverse patient populations.
- Reproduce radiographic images.

## **RADIOBIOLOGY**

MRAD 253

2 Credits

22 hours of lecture

Overview of the principles involving the interaction of radiation with living systems. Radiation effects on molecules, cells, tissues, and the body as a whole. Topics include: radiolysis of water, linear energy transfer, relative biologic effectiveness, acute radiation syndrome, effects on embryo and fetus, chromosomal aberrations, mutations, risk estimates, and carcinogenesis. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE]

**Course Outcomes:**

- Explain cell biology and describe body chemical composition.
- Differentiate between the effects of radiation on genetic and somatic tissues in the human body.
- Explain the body's response to radiation exposure and the effects of total body irradiation.
- Describe radiation interactions with matter and the biophysical events at the cellular and sub-cellular level.

**ADVANCED MODALITIES**

MRAD 255

1 Credits

11 hours of lecture

Introduction to CT, MRI, sonography, mammography, special fluoroscopic procedures and other advanced imaging modalities including angiography and interventional. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE] [PNP]

**Course Outcomes:**

- Describe and discuss the new and emerging imaging modalities such as CT, PET/CT, MR, Sonography, Mammography.
- Describe anatomy and pathology pertinent to the exam including imaging protocols.
- Explain the features and benefits of advanced imaging as complementary procedures in the diagnosis of disease in a multicultural health environment.
- Describe the similarities and differences between advanced imaging modalities. Mammography, Sonography, Interventional, CT, MRI, PET/CT, and Angiography.

**LEADERSHIP AND MANAGEMENT**

MRAD 270

1 Credits

11 hours of lecture

Introductory to leadership skills associated with patient care and management. Focus on supervision, delegation, conflict resolution, leadership styles, quality assurance, ethics, work environment, responsibility, accountability, collaboration and teamwork; as well as interviewing and resume training. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE] [PNP]

**Course Outcomes:**

- Formulate a perspective on their individual problem solving and leadership style.
- Discriminate between service and self-service in own words and actions as a leader.
- Create the connection between their own personal and professional leadership with their

drive to be an independent/self-directed learner.

- Effectively express/articulate their perspective as a leader through words (written and spoken) as well as their actions.
- Devise strategies for leading in a diverse and demanding work environment in support of patients.

## **MEDICAL RADIOGRAPHY REVIEW**

MRAD 275

2 Credits

22 hours of lecture

Comprehensive review class to prepare students to sit for the American Registry of Radiologic Technologists (ARRT) certification examination: radiation protection, equipment operation and quality control, image production and evaluation, radiographic procedures, and patient care and education are covered in adherence with ARRT exam specifications. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE] [PNP]

### **Course Outcomes:**

- Knowledge of biological aspects of radiation, minimizing patient exposure, personnel protection and radiation exposure and monitoring.
- Knowledge of principles of radiation physics, equipment operation of radiographic equipment, quality control of radiographic equipment and accessories.
- Knowledge of factors affecting radiographic quality, evaluation of image processing and quality assurance, and criteria for image evaluation.
- Knowledge of radiographic procedures which cover positioning, projections, anatomy, and technical factors.
- Knowledge of patient care and education to include ethical and legal aspects, interpersonal communication, infection control, physical assistance and transfer, medical emergencies and contrast media.
- Knowledge of standard terminology for positioning and projections.
- Describe the values, beliefs, and attitudes of the culturally diverse patient population.

## **CROSS SECTIONAL ANATOMY FOR IMAGING PROFESSIONAL**

MRAD 279

3 Credits

33 hours of lecture

Sectional human anatomy in the axial/transverse, sagittal, and coronal planes with emphasis on the brain, head, chest and abdominopelvic cavity. Introduction to basic CT physics. Concurrent enrollment in the Medical Radiography Program with a grade of "C" or better. Prerequisite: Admission in the Medical Radiography Program and consent of the Instructional Unit. [GE] [PNP]

### **Course Outcomes:**

- Describe anatomy of the head, facial bones, nasal bones, eye, orbit, sinuses, cranial bones, meninges, brain, neurons, ventricles, cisterns as seen on CT and MRI.
- Describe anatomy of the neck as seen on CT and MRI.
- Describe anatomy of the thorax including the bones, lungs, heart, vessels, trachea, esophagus, and thymus as seen on CT.
- Describe anatomy in diagnostic imaging of the abdominal cavity including the use of contrast agents as seen on CT.
- Describe anatomy in diagnostic imaging of the pelvis including the gravid patient and the use of contrast agents as seen on CT.
- Describe anatomy in diagnostic imaging of the spine including the use of contrast agents as

seen on CT and MRI.

- Describe anatomy in diagnostic imaging of the extremities as seen on CT and MRI.

### **SELECTED TOPICS**

MRAD 280

1 - 5 Credits

55 hours of lecture

Varying topics in Medical Radiography, as listed in the quarterly class schedule. May be repeated for credit. Prerequisite: Consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this course.

### **SPECIAL PROJECTS**

MRAD 290

1 - 5 Credits

Opportunity to plan, organize, and complete special projects approved by the department. Prerequisite: Consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## **Mechatronics**

### **INDUSTRIAL SAFETY**

MTX 100

1 Credits

11 hours of lecture

Introduction to the general safety practices and information needed while working in a manufacturing setting. Material will include federal safety regulations, safe operations and practices in the technical crafts of the industry. Concurrent enrollment in MTX 101 or consent of Instructional Unit. Prerequisite: A grade of "C" or better in MATH 030 or recommending score on placement test. [GE]

#### **Course Outcomes:**

- Describe proper safety procedures in manufacturing environments.
- Demonstrate the ability to adhere to personal and industry safety standards to protect personal and equipment.
- Explain and illustrate methods of control of hazards with particular reference to regulatory Standards.
- Produce a safety hazard analysis.

### **DC FUNDAMENTALS**

MTX 101

3 Credits

11 hours of lecture - 44 hours of lab

Fundamentals of DC circuits with emphasis on algebraic analysis of resistive networks. Includes hands-on experience in DC circuit construction, measurement and troubleshooting. Concurrent enrollment in MTX 100 or consent of Instructional Unit. Prerequisite: A grade of "C" or better in ENGL 098 or equivalent placement score, MATH 090 or higher. [GE]

**Course Outcomes:**

- Identify a waveform generator and its functions. Demonstrate ability to measure circuit quantities using specified measuring equipment.
- Demonstrate the relationship of electrical quantities by using Ohm's Law.
- Determine resistance, current, and voltage in a parallel resistive circuit by using a formula.
- Demonstrate voltage distribution, current distribution, and the effect of a load on a voltage divider and current divider circuit.

**AC FUNDAMENTALS**

MTX 102

3 Credits

11 hours of lecture - 44 hours of lab

Fundamentals of AC resistive, capacitive and inductive networks with emphasis placed on methods of analysis and circuit characteristics. Includes hands-on experience in AC circuit construction, measurement, and troubleshooting. Prerequisite: Successful completion of MTX 100, MTX 101, and MATH 095. [GE]

**Course Outcomes:**

- Demonstrate accurate conversion between scientific and engineering notation using proper prefixes.
- Identify basic AC measurements including Peak, Peak-to-Peak and RMS voltages and currents.
- Demonstrate the proper identification and usage of schematic diagrams and electrical symbols.
- Determine electrical values in series circuits using capacitors and inductors. Determine electrical values in parallel circuits using capacitors and inductors.

**BASIC MEASUREMENT TOOLS**

MTX 103

2 Credits

11 hours of lecture - 22 hours of lab

Fundamentals of measurement tools. Topics include basic measurement, S.I. and U.S. customary measurement, precision measurement tools and dimensional gauging. Concurrent enrollment in MTX 100 or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Define and explain dimensional measurement and explain its importance.
- Describe and accurately convert two systems of measurement: U.S. Customary and SI Metric.
- Describe and demonstrate proper use of a micrometer, a machinist's rule, and both dial and digital calipers.
- Convert between common measurement types and between units.

**BASIC HYDRAULICS**

MTX 105

2 Credits

11 hours of lecture - 22 hours of lab

Fundamentals of hydraulics. Topics include hydraulic power systems, hydraulic circuits, principles of hydraulic pressure and flow and various types of hydraulic valves. Concurrent enrollment in MTX 100 or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate proper design, set up and operation of hydraulic circuits, multiple actuator circuits, pressure limiter circuits, and pressure sequencing circuits.
- Calculate cylinder forces, speed, and stroke time within given parameters.
- Measure the cylinder force and the Delta P across a hydraulic component.
- Convert between absolute pressure and gauge hydraulic pressure.
- Draw a hydraulic schematic from a circuit connection pictorial.

**BASIC PNEUMATICS**

MTX 107

2 Credits

11 hours of lecture - 22 hours of lab

Fundamentals of pneumatics. Topics include pneumatic power systems, basic pneumatic circuits principles of pneumatic pressure and flow and pneumatic speed control. Concurrent enrollment in MTX 102. Prerequisite: Successful completion of MTX 100 and MTX 101 or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Define pneumatics and explain the function of its basic components, schematics and safety rules.
- Demonstrate knowledge of pressure gauges, proper plumbing of branch circuits, cylinders, control valves, and multiple cylinder circuits.
- Describe and demonstrate the function and operation of a pneumatic cylinder, pressure regulator valve, and proper operation of various speed control techniques.
- Calculate cylinder forces given pressure in various scenarios and use Boyle's Law for pressure and volume changes.

**ELECTRIC MOTOR CONTROL 1**

MTX 110

4 Credits

22 hours of lecture - 44 hours of lab

Fundamentals of electric motor control. Topics include electrical safety, control transformers, overload protection, ladder logic, control relays, electronic sensors, and other topics related to the fundamental operation of electronic motor control. Concurrent enrollment in MTX 102.

Prerequisite: Successful completion of MTX 100 and MTX 101 or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Use a voltmeter to verify supply voltage and a digital multimeter to check the condition of a fuse.
- Connect and operate an electric control circuit, a dual voltage, three phase motor in a control circuit given a ladder diagram and logic circuits.
- Calculate the turns ratio of a transformer and the secondary voltage of a transformer.
- Design, connect, operate, and troubleshoot logic circuits, ladder diagrams, multiple station control circuits, and basic electric control circuits.

- Set the trip level of a bimetallic overload and the correct heaters for a NEMA overload.
- Perform a lockout/tagout.

## **ELECTRICAL POWER DISTRIBUTION**

MTX 113

2 Credits

11 hours of lecture - 22 hours of lab

Fundamentals of electrical power distribution as it relates to mechatronics. Topics include an introduction to raceways, conduit bending, rigid conduit, flexible conduit, conductors, disconnects, overcurrent protection, conduit sizing, and wire pulling techniques. Concurrent enrollment in MTX 102. Prerequisite: Successful completion of MTX 100 and MTX 101 or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Demonstrate an understanding of wire sizing, methods of measuring wire gauge, NEC Standards, methods of connection, accepted wiring systems and common lighting systems.
- Describe the function of an three wire AC circuit of the ground wire, of an installation plan, of an electrical outlet.
- Read and correctly interpret a wiring installation plan, installation of flexible metal conduit, and proper wire pulling technique.
- Calculate line drop.

## **MECHATRONICS 1**

MTX 117

2 Credits

11 hours of lecture - 22 hours of lab

Fundamentals of mechatronics. Topics include automation operations, control systems, mechatronic safety, component adjustments, manual operation, pneumatic and electric pick and place. Prerequisite: Successful completion of MTX 102 or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Identify control system component types.
- Power up, manipulate, and power down an automated machine while using proper safety techniques.
- Manually override electro-pneumatic valves, magnetic motor starters, and jog an actuator.
- Demonstrate how to measure I/O signals, proper set-up and interface procedures.

## **MECHANICAL DRIVES 1**

MTX 120

3 Credits

22 hours of lecture - 22 hours of lab

Introduction to mechanical drive systems. Topics include mechanical power transmission safety, machine installation, motor mounting, shaft speed measurement, torque and power measurement, v-belt, chain and spur gear drives and other topics as well. Advantages of each system type will be discussed and compared. Prerequisite: Successful completion of MTX 102 or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Calculate rotary mechanical power, mechanical efficiency, pulley ratio, gear ratio, shaft speed, and torque of a belt drive and chain drive system.



- Install, align, remove a chain with a master link using sprocket teeth, a chain puller, a roller chain drive with adjustable centers, a fractional HP V-belt drive with a finished bore a pillow block antifriction bearing and shaft, a flexible jaw coupling.
- Use a ruler and straight edge to measure and adjust chain sag to a specific amount using adjustable centers.
- Adjust and measure belt tension using adjustable mounting base and determine belt deflection force.
- Select, measure, cut, and file proper key stock to fit a key way.
- Assemble a hub to a shaft using a key fastener.
- Select proper procedure to mount and level an electric motor to correct for 'soft foot' condition.
- Measure motor current, shaft speed, and shaft torque.
- Properly calculate sprocket ratio.
- Convert between English and SI Units of motor power.
- Describe and perform proper safety measures.
- Identify and align shafts using a straight edge and feeler gauge.

## **SEMICONDUCTORS I**

MTX 121

3 Credits

11 hours of lecture - 44 hours of lab

Fundamentals and applications of diodes, transistors and special-purpose semiconductor devices. Includes hands-on experience in semiconductor circuit construction, measurement and troubleshooting. Prerequisite: A grade of "C" or better in MTX 101 and MTX 102 or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Identify and demonstrate proper application of diodes in rectification circuits.
- Demonstrate zener diode voltage regulator circuits and troubleshooting characteristics.
- Identify and demonstrate diode wave shaping circuits.
- Determine transistor junction characteristics and DC bias options.
- Determine transistor load lines and gain calculations and design a circuit per specifications.

## **PICK AND PLACE ROBOT**

MTX 123

3 Credits

11 hours of lecture - 44 hours of lab

Fundamentals of the pick and place robot using the SMC system. Topics include pneumatic robotic systems, preventive maintenance and troubleshooting as well as pneumatic robot control. Prerequisite: Successful completion of MTX 102 or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Prepare, operate, adjust, and maintain a "Pick and Place" Robot, and its circuitries, for correct and accurate operation.
- Describe and design a robot program that loads a CNC mill and transfers materiel from one line to another.
- Describe and enter a PLC program that controls a non-servo, pneumatic robot.

## **SERVO ROBOT**

MTX 125

3 Credits

22 hours of lecture - 22 hours of lab

Introduction to the articulated arm servo robot using the SMC system. Topics include basic robot operation, teach point programming, PC software programming, application development, flexible manufacturing cells, quality control and production control. Prerequisite: Successful completion of MTX 102 or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate knowledge of the capabilities of the robot and its double-jointed arm, gripper and controller.
- Construct a flow chart given general sequence of operations.
- Design a robot program that will complete various tasks using conveyors, servo conveyors when given a general description including operator interface.
- Use PC software to complete various tasks, including using and viewing Cartesian coordinates.

**PIPING**

MTX 127

2 Credits

11 hours of lecture - 22 hours of lab

Fundamentals of piping. Topics include metal piping systems, metal piping installation, metal tubing systems and hoses. Concurrent enrollment in MTX 102. Prerequisite: Successful completion of MTX 100 and MTX 101 or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate proper identification of pipe and tubing characteristics and specifications, installation, leak detection, expansion joints, and other critical system devices within safety guidelines.
- Write a piping and tubing specification.
- Properly and within safety guidelines operate a tube bender.
- Accurately select size of tubing and hose for a given application.

**PROGRAMMABLE LOGIC CONTROLLERS 1**

MTX 130

4 Credits

22 hours of lecture - 44 hours of lab

Introduction to programmable logic controllers. Topics include basic programming of PLCs, PLC motor control methods, discrete I/O interfacing, event sequencing, timers, counters and program control instructions. Prerequisite: Successful completion of MTX 102 or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Design, demonstrate, and troubleshoot PLC programs, devices, and data using proper programming methods.
- Demonstrate ability to articulate the status of data tables.
- Demonstrate proper use of PLC software to document a PLC program file, and use proper testing techniques for PLC devices.
- Design a PLC program that uses a safety interlock for control.
- Troubleshoot a processor fault.
- Design a PLC program that uses Safety Interlock for control.

## **INDUSTRIAL ELECTRICAL WIRING**

MTX 135

3 Credits

11 hours of lecture - 44 hours of lab

Fundamentals of industrial electrical wiring. Topics include electrical prints, electrical panels, wiring between panels, wire color coding, control system wiring and wire bundling. A final grade of "C" or better is required for degree or certification consideration. Prerequisite: Successful completion of MTX 102 or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Properly interpret an electrical print and correctly use labeling methods.
- Accurately select, install and verify terminal blocks.
- Demonstrate proper installation in an electrical panel.
- Accurately discuss specific wiring specifications, procedures and techniques as appropriate, including wiring colors based on NEC code.

## **MECHANICAL DRIVES 2**

MTX 150

2 Credits

11 hours of lecture - 22 hours of lab

Intermediate concepts of mechanical drive systems. Topics include heavy-duty v-belts, v-belt selection and maintenance, synchronous belt drives, lubrication concepts, precision shaft alignment techniques and heavy duty chain drives. Advantages of each system type will be discussed and compared. Prerequisite: A grade of "C" or better in MTX 120 or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Install, align and troubleshoot v-belt, chain coupling, and belt drive systems.
- Demonstrate proper use of a belt code and belt gauge.
- Demonstrate how to use a viscosimeter to measure oil viscosity.
- Demonstrate ability to read and interpret a material safety data sheet.

## **DC DRIVES**

MTX 153

4 Credits

22 hours of lecture - 44 hours of lab

Introduction to DC drives. Topics include DC motion control, SCR control, DC spindle drives, DC axis drives and DC pulse width modulation drives. Prerequisite: Successful completion of MTX 102 or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Accurately identify blocks in a motion control block diagram.
- Demonstrate ability to control various types of DC motors.
- Demonstrate proper use of an oscilloscope for troubleshooting.
- Demonstrate ability to determine and set the firing angle for a given application.
- Demonstrate proper connection and operation of an SCR drive and a DC full-range drive.
- Demonstrate proper measurement and interpretation of the output of a DC PWM drive.

## **AC DRIVES**

MTX 155

4 Credits

22 hours of lecture - 44 hours of lab

Introduction to AC drives: Topics include AC motion control, AC Vector drives, AC axis drives, general purpose AC drives and AC drive troubleshooting. Prerequisite: Successful completion of MTX 102 or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate and explain proper connection operation and stopping methods of AC drives and vector drives.
- Demonstrate proper use of a meter to check the electrical characteristics of an AC induction motor.
- Program, operate, and troubleshoot general-purpose AC drive.

**ELECTRIC MOTOR CONTROL 2**

MTX 165

4 Credits

22 hours of lecture - 44 hours of lab

Introduction to electric motor control troubleshooting techniques. Techniques include control component, motor starter and systems troubleshooting methods. Related topics include various motor braking methods and power distribution. Prerequisite: A grade of "C" or better in MTX 110 or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate proper testing methods of motor control circuits.
- Demonstrate proper testing techniques with a digital multimeter.
- Demonstrate how to perform and analyze circuit signal tests.
- Troubleshoot sequence control systems, control circuits, time delay circuits.

**CO-OP WORK EXPERIENCE**

MTX 199

1 - 5 Credits

165 hours of clinical

Work-based learning experience that enables students to apply specialized occupational theory, skills and concepts. Specific objectives are developed by the College and the employer. Prerequisite: Completion of, or concurrent enrollment in HDEV 105, 198 or 200 required. Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Fulfill the job requirements of the internship provider.

**FLOW PROCESS CONTROL**

MTX 205

5 Credits

33 hours of lecture - 44 hours of lab

Introduction to level/flow process control using the SMC system. Topics include process control concepts, safety, sight gauges, instrument tags, piping and instrumentation diagrams, loop controllers, final control elements, level management, liquid level control, methods of automatic control as well as other concepts. Prerequisite: Successful completion of MTX 102 with a grade of "C" or better or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate proper operation of a loop controller.
- Demonstrate proper understanding, connection, and operation of an O/P converter, diaphragm actuator proportional valve, pressure sensors.
- Properly calibrate an I/P converter to specifications.
- Discuss sighting specific examples of proper flow control techniques.

**THERMAL PROCESS CONTROL**

MTX 207

5 Credits

33 hours of lecture - 44 hours of lab

Introduction to thermal process control using the SMC system. Topics include process control concepts, safety, instrument tag fundamental, piping and instrumentation diagrams, thermal energy, basic temperature control elements, final control elements, temperature sensors, and temperature transmitters. Prerequisite: Successful completion of MTX 102 with a grade of "C" or better or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Convert between Fahrenheit/Celsius temperature scales, BTU/Joule energy units, and common power units.
- Calculate, demonstrate, and control the heat transfer rate required to raise the temperature of a flowing fluid.
- Interpret instrument data using an instrument index.
- Draw a P&ID given an actual process control system.

**ELECTRO-FLUID POWER**

MTX 210

4 Credits

22 hours of lecture - 44 hours of lab

Fundamentals of electro-fluid power. Topics include electrical control systems, basic control devices, power devices, control relays, sequencing, timer and pressure control and circuit applications. Prerequisite: Successful completion of MTX 102 with a grade of "C" or better or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Design, draw, and demonstrate a ladder diagram using logic elements of a control circuit and proper connections.
- Design and demonstrate proper connection and operation of logic circuit, control devices, and safety interlocks.
- Demonstrate proper connection and operation a pressure-controlled electro-fluid-power sequencing circuit.

**MECHATRONICS 2**

MTX 216

5 Credits

33 hours of lecture - 44 hours of lab

Advanced concepts of manufacturing stations of the SMC system as it applies to mechatronics. Topics include flexible materials handling, robot workstations, inventory control, serial robot communications, PLC communications, barcode pallet tracking, manufacturing execution systems,

manufacturing management and simulation, ethernet operation and applications. Prerequisite: Successful completion of MTX 102 with a grade of "C" or better or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Design PLC programs to perform specific tasks.
- Adjust non-servo linear traverse axis travel and other critical set points.
- Adjust non-servo linear traverse axis travel and other critical set points.
- Design PLC programs control and manipulate multiple processes.

**WORKPLACE ORGANIZATION AND PRACTICES**

MTX 220

2 Credits

11 hours of lecture - 22 hours of lab

Introduction to the enterprise system: topics include technology sectors, team concepts, product design, business presentation and business presentation software. Prerequisite: Successful completion of MTX 102 with a grade of "C" or better or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Participate in a brainstorming session.
- Interpret a bill of materials.
- Create and deliver a short presentation using visual aids.
- Demonstrate proper use of a spreadsheet to create a bill of materials.
- Create and deliver a short presentation using visual aids.
- Evaluate visual aids.

**WORK TEAMS AND PRODUCT DESIGN**

MTX 223

3 Credits

22 hours of lecture - 22 hours of lab

Intermediate concepts of the enterprise system. Topics include team development, team problem solving, product design analysis and engineering impacts. Prerequisite: Successful completion of MTX 102 with a grade of "C" or better or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Explain the characteristics of a team dynamic, its personalities and functions, and how to conduct a meeting.
- Construct and analyze a team constitution, a flow chart, a fishbone diagram, an impact/effort grid, a Pareto chart, multi-voting, and proper use of a criteria screen to make decisions.
- Demonstrate good interpersonal skills.
- Discuss ergonomics, concurrent engineering to improve a design and its performance.
- Prepare a patent application.
- Analyze a problem based on engineering ethics.

**SPEED CONTROL SYSTEMS**

MTX 225

2 Credits

11 hours of lecture - 22 hours of lab

Introduction to speed control systems. Topics include variable frequency AC drives, VFD speed and torque, VFD acceleration, deceleration, braking, VFD fault diagnostics and troubleshooting as

well as SCR motor control. Prerequisite: A grade of "C" or better in MTX 101, 102, and 121; or concurrent enrollment in MTX 101, 102, and 121; or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Connect, operate, program, and troubleshoot a variable frequency AC drive.
- Connect, control, operate and troubleshoot a speed control motor circuit with a variable frequency AC drive.
- Demonstrate how to calculate Volts per Hertz ratio.
- Determine faults based on the fault display and program to automatically reset a fault.

**MECHANICAL DRIVES 3**

MTX 227

4 Credits

22 hours of lecture - 44 hours of lab

Introduction to various bearing types as used in mechanical drive systems as well as advanced gear drives. Topics include plain bearings, ball bearings, roller bearings and anti-friction bearings, as well as gaskets and seals and advanced gear drives. Prerequisite: A grade of "C" or better in MTX 150 or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Install and adjust bearings.
- Troubleshoot bearing and antifriction bearings installation.
- Identify type and size of bearings given samples.
- Identify the size and type of gear given a sample.
- Demonstrate how to properly calculate pitch.
- Troubleshoot a gear drive system.

**LASER ALIGNMENT**

MTX 230

2 Credits

11 hours of lecture - 22 hours of lab

Introduction to the concept and proper practices of laser alignment. Topics include laser shaft alignment, including rough and precision alignment, soft foot correction and analysis.

Prerequisite: Successful completion of MTX 102 with a grade of "C" or better or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Describe the operation of a laser and give an application.
- Discuss the construction of a laser shaft alignment system.
- List safety rules for a laser alignment system.
- Install and align a power transmission system using a jack bolt motor base.
- Determine shaft alignment tolerances for a given machine installation.

**ADVANCED PROGRAMMABLE LOGIC CONTROLLERS**

MTX 250

4 Credits

22 hours of lecture - 44 hours of lab

Intermediate concepts of Programmable Logic Controls. Topics include analog input and output modules, analog scaling, network concepts, an introduction to Panelview and remote I/O concepts. Prerequisite: A grade of "C" or better in MTX 130, or equivalent, or consent of

Instructional Unit. [GE]

**Course Outcomes:**

- Calculate sensor sensitivity given measurement data.
- Convert between sensor input and output units given sensitivity.
- Install an analog input module.
- Test an analog input module.
- Demonstrate PLC programming with math scaling.
- Design a PLC program that uses an analog output to control an SCR power.

**ADVANCED HYDRAULICS**

MTX 255

3 Credits

11 hours of lecture - 44 hours of lab

Advanced concepts of hydraulics. Topics include hydraulic directional control valves, hydraulic cylinder applications, relief valves, check valves and accumulators. Prerequisite: A grade of "C" or better in MTX 105 or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Identify the correct application for a hydraulic motor.
- Calculate the theoretical pump flow rate given displacement.
- Calculate and demonstrate actual pump flow rate given volumetric efficiency.
- Size a prime mover given a pump's overall efficiency.
- Determine actual motor torque using a torque-speed curve.
- Properly size and select a reservoir for a given application.

**ADVANCED PNEUMATICS AND VACUUM**

MTX 260

3 Credits

22 hours of lecture - 22 hours of lab

Advanced concepts of pneumatics and vacuum concepts as well as troubleshooting as they apply to industry standards using the SMC training system. Topics include moving loads pneumatically, vacuum systems, air compressors, air preparation troubleshooting, troubleshooting pneumatic cylinders, motor and rotary actuator troubleshooting, vacuum system troubleshooting and other topics as well. Prerequisite: A grade of "C" or better in MTX 107, equivalent, or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Size pneumatic cylinders based on specifications and needs.
- Calculate the airflow needed for a pneumatic motor.
- Convert between units of mercury and units of air pressure.
- Discuss the operation and demonstrate a vacuum generator.
- Use the ideal gas law to calculate the effect of changes in air temperature, pressure, and volume.
- Interpret an air compressor nameplate to accurately determine specifications.

**CAPSTONE**

MTX 270

3 Credits

66 hours of lab



Integration of Mechatronics course concepts and skills. Activities include five weeks of lab time for a student team to create a manufacturing scenario using the SMC automated manufacturing equipment. Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate ability to work as a team member on a project.
- Develop a list of manufacturing steps to produce a finished product or subassembly.
- Determine and present manufacturing process given identified manufacturing steps.
- Create and present a flowchart representing process flow.
- Demonstrate process knowledge through oral presentation.
- Create and demonstrate a functioning manufacturing process given operating parameters.

**PROJECT MANAGEMENT AND LEAN MANUFACTURING**

MTX 285

2 Credits

11 hours of lecture - 22 hours of lab

Introduction to project management within the enterprise system. Various topics include project management, lean manufacturing and industrial engineering systems. Prerequisite: Successful completion of MTX 102 with a grade of "C" or better or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Define project management and explain its role in engineering.
- Describe and demonstrate a PERT chart to plan a process.
- Describe and develop a budget for a project.
- Use a GANTT chart to manage a process.
- Use a spreadsheet to calculate the total cost of manufacturing a product.
- Analyze a production process to improve efficiency.

**SPECIAL PROJECTS**

MTX 290

1 - 5 Credits

55 hours of lecture

Opportunity to plan, organize, and complete special projects approved by the department. Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

**ORGANIZATIONAL ENTREPRENEURSHIP**

MTX 295

3 Credits

22 hours of lecture - 22 hours of lab

Introduction to economics and marketing techniques applicable to the business enterprise. Topics include enterprise economics, marketing basics and entrepreneurship. Prerequisite: A grade of "C" or better in MTX 101, 102, 121; or concurrent enrollment in MTX 101, 102, and 121; or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Use the Internet to find economic statistics.
- Demonstrate how to use an Excel spreadsheet.

- Use the Internet to find commodity price data.
- Define a target market and explain its importance.
- Use Excel to write pro forma financial documents.

## Music

### **SPECIAL SEMINARS**

MUSC 100

1 - 5 Credits

55 hours of lecture

Special workshops on various musical topics as listed in the quarterly class schedule. [HA, SE]

#### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

### **BEGINNING PIANO CLASS**

MUSC 101

2 Credits

22 hours of lecture

Beginning-level study of the piano. [HB, SE]

#### **Course Outcomes:**

- Demonstrate ability to read music notation in both treble and bass clefs.
- Demonstrate ability to count basic musical rhythms.
- Read, learn and perform pieces of music you have not seen before.
- Understand and apply basic piano techniques in order to "communicate" with listener.
- Demonstrate accurate scale fingerings and six different sharp key signatures which are used to study new pieces of music.

### **APPLIED INSTRUMENT:FLUTE**

MUSCA101

1 Credits

11 hours of lecture

Private flute lessons. Prerequisite: Written consent of Instructional Unit required. [HA, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED INSTRUMENT:VIOLIN**

MUSCA102

1 Credits

11 hours of lecture

Private violin lessons. Prerequisite: Written consent of Instructional Unit. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:CELLO**

MUSCA103

1 Credits

11 hours of lecture

Private cello lessons. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:VIOLA**

MUSCA104

1 Credits

11 hours of lecture

Private viola lessons. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**MUSIC APPRECIATION**

MUSC&104

3 Credits

33 hours of lecture

Study and understanding of music. Nonverbal explorations into the listening process, a brief look at the history of Western music, and work in formal descriptive music analysis. [HA, SE]

**Course Outcomes:**

- Use and pronounce musical vocabulary.
- Distinguish between performing media.
- Identify, by ear, composers/works from the assigned music.
- Identify style characteristics by time period, by composer, and by genre.
- Establish a timeline of styles/composers.

**APPLIED INSTRUMENT:TRUMPET**

MUSCA105

1 Credits

11 hours of lecture

Private trumpet lessons. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:GUITAR**

MUSCA106

1 Credits

11 hours of lecture

Private guitar lessons. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**MUSIC IN EARLY CHILDHOOD EDUCATION**

MUSC 106

3 Credits

33 hours of lecture

Introduction to music as a teaching tool for young children, and to the importance of music in the educational development of children. Students develop skills in reading music, working with the musical abilities of young children, and using music in the classroom. [HB, SE]

## **Course Outcomes:**

- Demonstrate familiarity with, and competently employ and identify the National Standards for Arts Education: Music and the Washington State K–12 Learning Standards.
- Select specific learning objectives for music and reading, language arts, science, math, and social studies, locate and develop musical activities that integrate singing, listening, moving, creating, reading, writing, and playing instruments to enhance ch
- Demonstrate a basic understanding of music theory and basic music reading skills.
- Utilize the musical elements of form, dynamics, and rhythm, to create a music composition to teach a non-music concept.
- Learn the Kodály hand positions for solfège and lead the class in a song using the method.
- Create original lyrics to familiar children’s song melodies.
- Demonstrate mastery of playing simple songs on the recorder and/or to play song accompaniments on the autoharp. (Students may substitute accompanying songs using the guitar in lieu of the autoharp if they possess adequate knowledge and playing ability on
- Demonstrate confident singing of songs used in elementary classroom teaching.
- Research and demonstrate knowledge of topically appropriate resources by writing lesson plans, and research and write an annotated bibliography of at least twenty sources for quality classroom music materials.

## **APPLIED INSTRUMENT:CLARINET**

MUSCA107

1 Credits

11 hours of lecture

Private clarinet lessons. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

## **APPLIED INSTRUMENT:BASS**

MUSCA108

1 Credits

11 hours of lecture

Private bass lessons. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:HORN**

MUSCA109

1 Credits

11 hours of lecture

Private horn lessons. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:BASSOON**

MUSCA110

1 Credits

11 hours of lecture

Private bassoon lessons. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**BEGINNING GUITAR CLASS**

MUSC 110

2 Credits

22 hours of lecture

Beginning-level study of the guitar. [HB, SE]

**Course Outcomes:**

- Demonstrate proficiency in scales.
- Demonstrate proficiency in selected literature.
- Demonstrate proficiency in bar shapes.
- Demonstrate proficiency in chord forms.
- Demonstrate proficiency in keys.
- Demonstrate proficiency in chord progressions (various keys I IV V7 I and I im7 iim7 IVMaj 7 V7 IMaj7).

**APPLIED INSTRUMENT:TROMBONE**

MUSCA111

1 Credits

11 hours of lecture

Private trombone lessons. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury. .
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors

**APPLIED INSTRUMENT:SAX**

MUSCA112

1 Credits

11 hours of lecture

Private sax lessons. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:PERCUSSION**

MUSCA113

1 Credits

11 hours of lecture

Private percussion lessons. Prerequisite: Written consent of Instruction Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:OBOE**

MUSCA114

1 Credits

11 hours of lecture

Private oboe lessons. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:EUPHONIUM**

MUSCA115

1 Credits

11 hours of lecture

Private euphonium lessons. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**BEGINNING VOICE CLASS**

MUSC 115

2 Credits

11 hours of lecture - 22 hours of lab

Basic technique and knowledge about singing. No previous experience or music study required. [HB, SE]

**Course Outcomes:**

- Increase awareness, ability, and use of voice including improved breath management, tone and resonance.
- Increase skill, vocal artistry, and knowledge of vocal repertoire.
- Read basic elementary vocal solo music using interpretation symbols and other notations in singing solo music with accompaniment.
- Perform with proper tone production and diction to express and interpret songs in English as well as in world languages.
- Perform in solo and group ensemble settings and improve proper tonal concepts by evaluating own solo performance and by observing other class members.

**MUSIC HISTORY: MIDDLE AGES TO BAROQUE**

MUSC 116

5 Credits



55 hours of lecture

Music of the Middle Ages, Renaissance and Baroque studied in context of its cultural and historical environment. Recordings of Gregorian chant, polyphonic music of the Renaissance (des Pres and Palestrina) and Baroque music (Bach, Frescobaldi, Corelli, Monteverdi, and Handel) listened to and studied. [HA, SE]

**Course Outcomes:**

- Use and pronounce musical vocabulary.
- Distinguish between performing media.
- Identify, by ear, composers/works from the list.
- Identify style characteristics by time period, by composer, and by genre.
- Establish a timeline of styles/composers.

**APPLIED INSTRUMENT:TUBA**

MUSCA116

1 Credits

11 hours of lecture

Private tuba lessons. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**MUSIC HISTORY: CLASSICAL/ROMANTIC**

MUSC 117

5 Credits

55 hours of lecture

Music of the classical and romantic eras studied in context of its cultural and historical environment. Recordings of Haydn, Mozart, Beethoven, Schubert, Wagner, Brahms, and others listened to and studied. [HA, SE]

**Course Outcomes:**

- Use and pronounce musical vocabulary.
- Distinguish between performing media.
- Identify, by ear, composers/works from the list.
- Identify style characteristics by time period, by composer, and by genre.
- Establish a timeline of styles/composers.

**MUSIC HISTORY: TWENTIETH CENTURY**

MUSC 118

5 Credits

55 hours of lecture

Music of the twentieth century studied in context of its cultural and historical environment.

Recordings and live performances. Debussy, Stravinsky, Schoenberg, Berg, Hindemith, Stockhausen, and others listened to and studied in context of 20th century culture. [SE, HA]

**Course Outcomes:**

- Use and pronounce musical vocabulary.
- Distinguish between performing media.
- Identify, by ear, composers/works from the list.
- Identify style characteristics by time period, by composer, and by genre.
- Establish a timeline of styles/composers.

**EAR TRAINING 1**

MUSC&121

2 Credits

22 hours of lecture

Learning to write what is heard in melodic and intervallic ways. Sight singing and chord recognition. Develops rhythmic, melodic, and harmonic perception skills through dictation, sight singing and drill. [HB, SE]

**Course Outcomes:**

- Evaluating and notating basic rhythmic subdivisions of the beat.
- Classifying and notating major/minor/perfect intervals through the fifth.
- Distinguishing and notating major-key tonic, dominant and subdominant harmonic progressions with inversions.
- Synthesizing rhythmic proficiency with evaluating/notating melodies of steps/thirds.
- Performing sight-singing of conjunct major-key melodies, including tonic-arpeggiation, applying the moveable-tonic solfeggio system.
- Synthesizing the solfeggio system through memorization of melodic exercises including seconds and thirds.

**EAR TRAINING 2**

MUSC&122

2 Credits

22 hours of lecture

Continuation of MUSC& 121. Learning to write what is heard in melodic and intervallic ways. Sight-singing and chord recognition. Develops rhythmic, melodic, and harmonic perception skills through dictation, sight-singing and drill. Prerequisite: MUSC& 121 or consent of Instructional Unit. [HB, SE]

**Course Outcomes:**

- Evaluating and notating half-beat rhythmic figures in syncopation.
- Classifying and notating major/minor/perfect intervals through the sixth.
- Distinguishing and notating major-key tonic, supertonic, dominant and subdominant harmonic progressions with inversions.
- Synthesizing rhythmic proficiency with evaluating and notating melodies of steps/skips through the fifth and arpeggiations of tonic and dominant triads.
- Performing sight-singing of significant melodies of the common-practice period in major and minor keys, including arpeggiation of tonic and dominant triads, applying the moveable-tonic solfeggio system.
- Synthesizing the solfeggio system through memorization of melodic exercises including leaps through the interval of the sixth.

### **EAR TRAINING 3**

MUSC&123

2 Credits

22 hours of lecture

Learning to write what is heard in melodic and intervalic ways. Sight-singing and chord recognition. Prerequisite: MUS 145 or consent of Instructional Unit. [HB, SE]

#### **Course Outcomes:**

- Evaluating and notating quarter-beat rhythmic figures.
- Classifying and notating all melodic intervals through the major seventh.
- Distinguishing and notating major and minor key harmonic progressions consisting of tonic, supertonic, dominant, subdominant and submediant with inversions.
- Synthesizing rhythmic proficiency with evaluating and notating melodies with intervals through the octave including arpeggiations of tonic, dominant, subdominant and leading-tone triads.
- Performing sight-singing of melodies by significant composers in major and minor keys (with modulation) , including all diatonic arpeggiations, applying the moveable-tonic solfeggio system.
- Synthesizing the solfeggio system through memorization of melodic drills including the interval of the seventh as well as arpeggiations of triads and diatonic seventh chords.

### **ROCK MUSIC**

MUSC 125

3 Credits

33 hours of lecture

Rhythm, melody, harmony, timbre, text uses, and form in current rock music. Problems and definitions of these elements with illustrations from various styles of rock music. [HA, SE]

#### **Course Outcomes:**

- Describe and discuss the origins of U.S. popular music from 1607 to c. 1970.
- Analyze pop music selections for elements of rhythm, melody, harmony, form, instrumentation, vocal characteristics, and style.
- Assess unfamiliar music, recognizing the cross-cultural nature of American popular music.

### **WORLD FOLK MUSIC**

MUSC 127

3 Credits

33 hours of lecture

Folk music in selected cultures beginning with the Anglo-American folk song. Music and cultural values. Role of music in folk cultures. Appreciation of differences in music styles as they relate to their social settings. [HA, SE]

#### **Course Outcomes:**

- Explore a variety of folk music from different parts of the world.

### **APPLIED INSTRUMENT:FLUTE**

MUSCA131

1 Credits

11 hours of lecture

Private flute lessons. Continuation of MUSCA 101. Prerequisite: Written consent of Instructional

Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:VIOLIN**

MUSCA132

1 Credits

11 hours of lecture

Private violin lessons. Continuation of MUSCA 102. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:CELLO**

MUSCA133

1 Credits

11 hours of lecture

Private cello lessons. Continuation of MUSCA 103. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:VIOLA**

MUSCA134

1 Credits

11 hours of lecture

Private viola lessons. Continuation of MUSCA 104. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**JAZZ APPRECIATION**

MUSC 135

3 Credits

33 hours of lecture

Jazz Appreciation is intended to provide students with relevant and compelling facts about jazz that illustrate its colorful history, its mixture of ethnic diversity, and the impact the music has had on American popular culture. The class utilizes multimedia presentations and music examples to guide students through an interactive process of learning how to listen to jazz, a chronology of significant jazz periods, the societal events that impact each period, and the biographies and significance of key musicians. [HA, SE]

**Course Outcomes:**

- Aurally develop an understanding and appreciation of styles and performance characteristics of jazz, significant jazz periods, and key performers of each period.
- Understand how jazz music reflects the cultural diversity inherent to the United States and how societal and political events encouraged the transition to each jazz period.
- Appreciate the history of the jazz periods and their reflections on our diverse society as well as the biographies of integral jazz performers of each period and how their experiences were shaped and reflected in their unique performance characteristics.

**APPLIED INSTRUMENT:TRUMPET**

MUSCA135

1 Credits

11 hours of lecture

Private trumpet lessons. Continuation of MUSCA 105. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

## **APPLIED INSTRUMENT:GUITAR**

MUSCA136

1 Credits

11 hours of lecture

Private guitar lessons. Continuation of MUSCA 106. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

## **APPLIED INSTRUMENT:CLARINET**

MUSCA137

1 Credits

11 hours of lecture

Private clarinet lessons. Continuation of MUSCA 107. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

## **CLARK COLLEGE CHORALE**

MUSC 137

1 - 2 Credits

11 hours of lecture - 22 hours of lab

The Clark College Chorale performs a wide variety of choral literature including classical masterworks and non-classical genres for both male and female as well as mixed-voicing choral music. Open to all students and community members, the Chorale performs a minimum of one concert per term with possible additional performances. Prerequisite: Audition or consent of Instructional Unit. [HB, SE] [PNP]

### **Course Outcomes:**

- Demonstrate improvement in individual singing (body alignment, breath management, vowel formation, vibrant tone, clear diction, and accurate intonation) as it relates to choral music.
- Apply appropriate articulation and diction to various choral styles, utilizing the IPA when appropriate.
- Study, rehearse, and perform a variety of choral repertoire.
- Contribute to the campus and general communities through artistic and meaningful musical expression, effectively communicating the music and the emotions of the texts in rehearsal

and performance.

- Demonstrate knowledge of the diversity of musical styles of different historical and cultural origins through academic discourse and effective performances.
- Participate thoughtfully and actively in the choral rehearsal, working as a team to achieve excellence in all performances.

### **CLARK COLLEGE CHORALE**

MUSC 138

1 - 2 Credits

11 hours of lecture - 22 hours of lab

The Clark College Chorale performs a wide variety of choral literature including classical masterworks and non-classical genres for both male and female as well as mixed-voicing choral music. Open to all students and community members, the Chorale performs a minimum of one concert per term with possible additional performances. Prerequisite: Audition or consent of Instructional Unit. [HB, SE] [PNP]

#### **Course Outcomes:**

- Apply appropriate articulation and diction to various choral styles, utilizing the IPA when appropriate.
- Demonstrate improvement in individual singing (body alignment, breath management, vowel formation, vibrant tone, clear diction, and accurate intonation) as it relates to choral music.
- Study, rehearse, and perform a variety of choral repertoire.
- Contribute to the campus and general communities through artistic and meaningful musical expression, effectively communicating the music and the emotions of the texts in rehearsal and performance.
- Demonstrate knowledge of the diversity of musical styles of different historical and cultural origins through academic discourse and effective performances.
- Participate thoughtfully and actively in the choral rehearsal, working as a team to achieve excellence in all performances.

### **APPLIED INSTRUMENT:BASS**

MUSCA138

1 Credits

11 hours of lecture

Private bass lessons. Continuation of MUSCA 108. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED INSTRUMENT:HORN**

MUSCA139

1 Credits

11 hours of lecture

Private horn lessons. Continuation of MUSCA 109. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**CLARK COLLEGE CHORALE**

MUSC 139

1 - 2 Credits

11 hours of lecture - 22 hours of lab

The Clark College Chorale performs a wide variety of choral literature including classical masterworks and non-classical genres for both male and female as well as mixed-voicing choral music. Open to all students and community members, the Chorale performs a minimum of one concert per term with possible additional performances. Prerequisite: Audition or consent of Instructional Unit. [HB, SE] [PNP]

**Course Outcomes:**

- Apply appropriate articulation and diction to various choral styles, utilizing the IPA when appropriate.
- Demonstrate improvement in individual singing (body alignment, breath management, vowel formation, vibrant tone, clear diction, and accurate intonation) as it relates to choral music.
- Study, rehearse, and perform a variety of choral repertoire.
- Contribute to the campus and general communities through artistic and meaningful musical expression, effectively communicating the music and the emotions of the texts in rehearsal and performance.
- Demonstrate knowledge of the diversity of musical styles of different historical and cultural origins through academic discourse and effective performances.
- Participate thoughtfully and actively in the choral rehearsal, working as a team to achieve excellence in all performances.

**APPLIED INSTRUMENT: BASSOON**

MUSCA140

1 Credits

11 hours of lecture

Private bassoon lessons. Continuation of MUSCA 110. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury. .



- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors

### **APPLIED INSTRUMENT:TROMBONE**

MUSCA141

1 Credits

11 hours of lecture

Private trombone lessons. Continuation of MUSCA 111. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **MUSIC THEORY I**

MUSC&141

5 Credits

55 hours of lecture

First-year musicianship. Sound sources and nature of sound. Writing skills and use of musical symbol-notation. Basic vocabulary of music. Introduction to forms, composition, and analysis. Open to all students. Concurrent enrollment in MUSC& 121 required. [HA, SE]

#### **Course Outcomes:**

- Notating symbols of pitch and rhythm, in multiple clefs.
- Applying appropriate common-practice methods to design and classify primary scales and key signatures in multiple clefs.
- Notating, distinguishing, and inverting simple and compound intervals.
- Classifying and designing triads, dominant-seventh chords, and associated inversions through analyzing with Roman Numeral Analysis and Macro Analysis.
- Transforming figured-bass symbols and classifying cadences and non-harmonic tones within the context of common-practice music.
- Designing and classifying melodic motives, sequences and phrasing.

### **MUSIC THEORY II**

MUSC&142

5 Credits

55 hours of lecture

Continuation of MUSC& 141. Addition to the I 6-4, II, VI, III chords to harmonic tones, ear training in melodic and rhythmic concepts. Intervals and introduction to the keyboard. Concurrent enrollment in MUSC& 122 required. Prerequisite: MUSC& 141 or consent of Instructional Unit. [HA, SE]

#### **Course Outcomes:**

- Distinguishing each texture component of a work through analyzing and reducing the overall

texture.

- Applying appropriate counterpoint methods in creating simultaneous melodies.
- Articulating and applying basic, common-practice four-part voice-leading.
- Harmonizing melodies.
- Evaluating, and appropriately resolving, dominant and leading-tone seventh chords.

### **APPLIED INSTRUMENT:SAX**

MUSCA142

1 Credits

11 hours of lecture

Private sax lessons. Continuation of MUSCA 112. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED INSTRUMENT:PERCUSSION**

MUSCA143

1 Credits

11 hours of lecture

Private percussion lessons. Continuation of MUSCA 113. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **MUSIC THEORY III**

MUSC&143

5 Credits

55 hours of lecture

Continuation of MUSC& 142. Chromatic chords, popular song forms and jazz-related harmonies and forms. Concurrent enrollment in MUSC& 123 required. Prerequisite: MUSC& 142 or consent of Instructional Unit. [HA, SE]

#### **Course Outcomes:**

- Contextualizing, analyzing and designing non-dominant seventh chords and secondary

chords.

- Distinguishing and classifying modulation points, methodology and relationships of keys.
- Synthesizing organization analysis of common-practice music in binary and ternary forms.
- Assimilating, and appropriately applying in analysis, background knowledge of major composers and their works.

### **APPLIED INSTRUMENT:OBOE**

MUSCA144

1 Credits

11 hours of lecture

Private oboe lessons. Continuation of MUSCA 114. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED INSTRUMENT:EUPHONIUM**

MUSCA145

1 Credits

11 hours of lecture

Private euphonium lessons. Continuation of MUSCA 115. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED INSTRUMENT:TUBA**

MUSCA146

1 Credits

11 hours of lecture

Private tuba lessons. Continuation of MUSCA 116. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of

assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.

- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

## **ORCHESTRA**

MUSC 150

1 - 2 Credits

11 hours of lecture - 22 hours of lab

Performance of orchestral literature from a variety of periods and styles. [HB, SE]

### **Course Outcomes:**

- Develop greater aesthetic understanding of music performance through active participation and development of technical proficiency.
- Appreciate and understand compositional techniques for orchestra literature and interpretation of style, rhythm, articulation and harmonic structure.
- Develop an understanding of orchestra performance pedagogy encouraging further study and interest in conducting and performing.
- Retain an understanding and appreciation for the music and composers of orchestra literature encouraging further study and interest.
- Work with professional quality string and brass coaches to build technical and musical skills.
- Work with professional quality guest artists who inspire excellence.
- Develop and exercise principles of group team-building and leadership.

## **ORCHESTRA**

MUSC 151

1 - 2 Credits

11 hours of lecture - 22 hours of lab

Performance of orchestral literature from a variety of periods and styles. [HB, SE]

### **Course Outcomes:**

- Develop greater aesthetic understanding of music performance through active participation and development of technical proficiency.
- Appreciate and understand compositional techniques for orchestra literature and interpretation of style, rhythm, articulation and harmonic structure.
- Develop an understanding of orchestra performance pedagogy encouraging further study and interest in conducting and performing.
- Retain an understanding and appreciation for the music and composers of orchestra literature encouraging further study and interest.
- Work with professional quality string and brass coaches to build technical and musical skills.
- Work with professional quality guest artists who inspire excellence.
- Develop and exercise principles of group team-building and leadership.

## **ORCHESTRA**

MUSC 152

1 - 2 Credits

11 hours of lecture - 22 hours of lab

Performance of orchestral literature from a variety of periods and styles. [HB, SE]

**Course Outcomes:**

- Develop greater aesthetic understanding of music performance through active participation and development of technical proficiency.
- Appreciate and understand compositional techniques for orchestra literature and interpretation of style, rhythm, articulation and harmonic structure.
- Develop an understanding of orchestra performance pedagogy encouraging further study and interest in conducting and performing.
- Retain an understanding and appreciation for the music and composers of orchestra literature encouraging further study and interest.
- Work with professional quality string and brass coaches to build technical and musical skills.
- Work with professional quality guest artists who inspire excellence.
- Develop and exercise principles of group team-building and leadership.

**WOMEN'S CHORAL ENSEMBLE**

MUSC 153

1 - 2 Credits

11 hours of lecture - 22 hours of lab

Performance of choral music from a variety of periods and styles written for women's voices.

Prerequisite: Audition or consent of Instructional Unit. [HB, SE] [PNP]

**Course Outcomes:**

- Demonstrate improvement in individual singing (body alignment, breath management, vowel formation, vibrant tone, clear diction, and accurate intonation) as it relates to choral music.
- Demonstrate improvement in aural skills and musicianship, using solfeggio syllables and Kodály hand signs for pitch and singing on the counting accurately and as needed.
- Apply appropriate articulation and diction to various choral styles, utilizing the IPA when appropriate.
- Study, rehearse, and perform a variety of choral repertoire.
- Contribute to the campus and general communities through artistic and meaningful musical expression, effectively communicating the music and the emotions of the texts in rehearsal and performance.
- Demonstrate knowledge of the diversity of musical styles of different historical and cultural origins through academic discourse and effective performances.
- Participate thoughtfully and actively in the choral rehearsal, working as a team to achieve excellence in all performances.

**WOMEN'S CHORAL ENSEMBLE**

MUSC 154

1 - 2 Credits

11 hours of lecture - 22 hours of lab

Performance of choral music from a variety of periods and styles written for women's voices.

Prerequisite: Audition or consent of Instructional Unit. [HB, SE] [PNP]

**Course Outcomes:**

- Demonstrate improvement in individual singing (body alignment, breath management, vowel formation, vibrant tone, clear diction, and accurate intonation) as it relates to choral music.
- Demonstrate improvement in aural skills and musicianship, using solfeggio syllables and Kodály hand signs for pitch and singing on the counting accurately and as needed.
- Apply appropriate articulation and diction to various choral styles, utilizing the IPA when appropriate.
- Study, rehearse, and perform a variety of choral repertoire.

- Contribute to the campus and general communities through artistic and meaningful musical expression, effectively communicating the music and the emotions of the texts in rehearsal and performance.
- Demonstrate knowledge of the diversity of musical styles of different historical and cultural origins through academic discourse and effective performances.
- Participate thoughtfully and actively in the choral rehearsal, working as a team to achieve excellence in all performances.

## **WOMEN'S CHORAL ENSEMBLE**

MUSC 155

1 - 2 Credits

11 hours of lecture - 22 hours of lab

Performance of choral music from a variety of periods and styles written for women's voices.

Prerequisite: Audition or consent of Instructional Unit. [HB, SE] [PNP]

### **Course Outcomes:**

- Demonstrate improvement in individual singing (body alignment, breath management, vowel formation, vibrant tone, clear diction, and accurate intonation) as it relates to choral music.
- Demonstrate improvement in aural skills and musicianship, using solfeggio syllables and Kodály hand signs for pitch and singing on the counting accurately and as needed.
- Apply appropriate articulation and diction to various choral styles, utilizing the IPA when appropriate.
- Study, rehearse, and perform a variety of choral repertoire.
- Contribute to the campus and general communities through artistic and meaningful musical expression, effectively communicating the music and the emotions of the texts in rehearsal and performance.
- Demonstrate knowledge of the diversity of musical styles of different historical and cultural origins through academic discourse and effective performances.
- Participate thoughtfully and actively in the choral rehearsal, working as a team to achieve excellence in all performances.

## **APPLIED VOICE**

MUSC 170

1 Credits

11 hours of lecture

Private voice lessons with a college-approved teacher. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

### **Course Outcomes:**

- Demonstrate proficiency in awareness, ability, and use of their voice/instrument including improved breath management, tone and resonance.
- Demonstrate proficiency in skill, artistry, and knowledge of appropriate repertoire.
- Demonstrate knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term.
- Demonstrate proficiency in accessing information and skills needed to translate song lyrics in required foreign languages and utilize the International Phonetic Alphabet (IPA) in learning assigned repertoire.
- Demonstrate proficiency in researching the composer of each assigned song and the time in which the song was composed.
- Demonstrate proficiency in performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury. Cope with performance anxiety, post performance discussion, jury evaluations and demonstra

## **APPLIED VOICE**

MUSC 171

1 Credits

11 hours of lecture

Private voice lessons with a college-approved teacher. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

### **Course Outcomes:**

- Demonstrate proficiency in awareness, ability, and use of their voice/instrument including improved breath management, tone and resonance.
- Demonstrate proficiency in skill, artistry, and knowledge of appropriate repertoire.
- Demonstrate knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term.
- Demonstrate proficiency in accessing information and skills needed to translate song lyrics in required foreign languages and utilize the International Phonetic Alphabet (IPA) in learning assigned repertoire.
- Demonstrate proficiency in researching the composer of each assigned song and the time in which the song was composed.
- Demonstrate proficiency in performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury. Cope with performance anxiety, post performance discussion, jury evaluations and demonstra

## **APPLIED INSTRUMENT:FLUTE**

MUSCA171

1 Credits

11 hours of lecture

Private flute lessons. Continuation of MUSCA 131. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

## **APPLIED INSTRUMENT:VIOLIN**

MUSCA172

1 Credits

11 hours of lecture

Private violin lessons. Continuation of MUSCA 132. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as

completing all sight-reading assignments.

- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED VOICE**

MUSC 172

1 Credits

11 hours of lecture

Private voice lessons with a college-approved teacher. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Demonstrate proficiency in awareness, ability, and use of their voice/instrument including improved breath management, tone and resonance.
- Demonstrate proficiency in skill, artistry, and knowledge of appropriate repertoire.
- Demonstrate knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term.
- Demonstrate proficiency in accessing information and skills needed to translate song lyrics in required foreign languages and utilize the International Phonetic Alphabet (IPA) in learning assigned repertoire.
- Demonstrate proficiency in researching the composer of each assigned song and the time in which the song was composed.
- Demonstrate proficiency in performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury. Cope with performance anxiety, post performance discussion, jury evaluations and demonstra

### **APPLIED PIANO**

MUSC 173

1 Credits

11 hours of lecture

For students with some previous keyboard experience. Prerequisite: MUS 201 and written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED INSTRUMENT:CELLO**

MUSCA173

1 Credits

11 hours of lecture

Private cello lessons. Continuation of MUSCA 133. Prerequisite: Written consent of Instructional



Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:VIOLA**

MUSCA174

1 Credits

11 hours of lecture

Private viola lessons. Continuation of MUSCA 134. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED PIANO**

MUSC 174

1 Credits

11 hours of lecture

For students with some previous keyboard experience. Prerequisite: MUSC 201 and written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED PIANO**

MUSC 175

1 Credits

11 hours of lecture

For students with some previous keyboard experience. Prerequisite: MUSC 201 and consent of Instructional Unit. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:TRUMPET**

MUSCA175

1 Credits

11 hours of lecture

Private trumpet lessons. Continuation of MUSCA 135. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:GUITAR**

MUSCA176

1 Credits

11 hours of lecture

Private guitar lessons. Continuation of MUSCA 136. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:CLARINET**

MUSCA177

1 Credits

11 hours of lecture

Private clarinet lessons. Continuation of MUSCA 137. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:BASS**

MUSCA178

1 Credits

11 hours of lecture

Private bass lessons. Continuation of MUSCA 138. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:HORN**

MUSCA179

1 Credits

11 hours of lecture

Private horn lessons. Continuation of MUSCA 139. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:BASSOON**

MUSCA180

1 Credits

11 hours of lecture

Private bassoon lessons. Continuation of MUSCA 140. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**CONCERT BAND**

MUSC 180

1 - 2 Credits

11 hours of lecture - 22 hours of lab

Open to all students with experience performing on brass, woodwind, and percussion instruments. The Clark College Concert Band performs a wide spectrum of standard concert band and contemporary wind ensemble literature in at least one concert per quarter. Topics include musical excellence, and skills for teamwork and leadership. No auditions necessary to enroll but the ability to read music on your respective instrument is required. [HB, SE]

**Course Outcomes:**

- Develop greater aesthetic understanding of music performance through active participation and development of technical proficiency.
- Appreciate and understand compositional techniques for wind literature and interpretation of style, rhythm, articulation and harmonic structure.
- Develop an understanding of band performance pedagogy encouraging further study and interest in conducting and performing.
- Retain an understanding and appreciation for the music and composers of wind literature encouraging further study and interest.
- Develop and exercise principles of group team-building and leadership.

**CONCERT BAND**

MUSC 181

1 - 2 Credits

11 hours of lecture - 22 hours of lab

Open to all students with experience performing on brass, woodwind, and percussion instruments. The Clark College Concert Band performs a wide spectrum of standard concert band and contemporary wind ensemble literature in at least one concert per quarter. Topics include musical excellence, and skills for teamwork and leadership. No auditions necessary to enroll but the ability to read music on your respective instrument is required. [HB, SE]

**Course Outcomes:**

- Develop greater aesthetic understanding of music performance through active participation and development of technical proficiency.
- Appreciate and understand compositional techniques for wind literature and interpretation of style, rhythm, articulation and harmonic structure.

- Develop an understanding of band performance pedagogy encouraging further study and interest in conducting and performing.
- Retain an understanding and appreciation for the music and composers of wind literature encouraging further study and interest.
- Develop and exercise principles of group team-building and leadership.

### **APPLIED INSTRUMENT:TROMBONE**

MUSCA181

1 Credits

11 hours of lecture

Private trombone lessons. Continuation of MUSCA 141. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED INSTRUMENT:SAX**

MUSCA182

1 Credits

11 hours of lecture

Private sax lessons. Continuation of MUSCA 142. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **CONCERT BAND**

MUSC 182

1 - 2 Credits

11 hours of lecture - 22 hours of lab

Open to all students with experience performing on brass, woodwind, and percussion instruments. The Clark College Concert Band performs a wide spectrum of standard concert band and contemporary wind ensemble literature in at least one concert per quarter. Topics include musical excellence, and skills for teamwork and leadership. No auditions necessary to enroll but the ability to read music on your respective instrument is required. [HB, SE]

#### **Course Outcomes:**

- Develop greater aesthetic understanding of music performance through active participation and development of technical proficiency.
- Appreciate and understand compositional techniques for wind literature and interpretation of style, rhythm, articulation and harmonic structure.
- Develop an understanding of band performance pedagogy encouraging further study and interest in conducting and performing.
- Retain an understanding and appreciation for the music and composers of wind literature encouraging further study and interest.
- Develop and exercise principles of group team-building and leadership.

## **CONCERT CHOIR**

MUSC 183

1 - 2 Credits

11 hours of lecture - 22 hours of lab

The concert choir performs a wide variety of choral music in at least one public concert per quarter. Music notation, vocal technique, and effective interpretation of music literature. Open to all students interested in improving their vocal skills. Prerequisite: Audition or consent of Instructional Unit. [HB, SE]

### **Course Outcomes:**

- Demonstrate improvement in individual singing (body alignment, breath management, vowel formation, vibrant tone, clear diction, and accurate intonation) as it relates to choral music.
- Demonstrate improvement in aural skills and musicianship, using solfeggio syllables and Kodály hand signs for pitch and singing on the counting accurately and as needed.
- Apply appropriate articulation and diction to various choral styles, utilizing the IPA when appropriate.
- Study, rehearse, and perform a variety of choral repertoire.
- Contribute to the campus and general communities through artistic and meaningful musical expression, effectively communicating the music and the emotions of the texts in rehearsal and performance.
- Demonstrate knowledge of the diversity of musical styles of different historical and cultural origins through academic discourse and effective performances.
- Participate thoughtfully and actively in the choral rehearsal, working as a team to achieve excellence in all performances.

## **APPLIED INSTRUMENT:PERCUSSION**

MUSCA183

1 Credits

11 hours of lecture

Private percussion lessons. Continuation of MUSCA 143. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

## **APPLIED INSTRUMENT:OBOE**

MUSCA184

1 Credits

11 hours of lecture

Private oboe lessons. Continuation of MUSCA 144. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

## **CONCERT CHOIR**

MUSC 184

1 - 2 Credits

11 hours of lecture - 22 hours of lab

The concert choir performs a wide variety of choral music in at least one public concert per quarter. Music notation, vocal technique, and effective interpretation of music literature. Open to all students interested in improving their vocal skills. Prerequisite: Audition or consent of Instructional Unit. [HB, SE]

### **Course Outcomes:**

- Demonstrate improvement in individual singing (body alignment, breath management, vowel formation, vibrant tone, clear diction, and accurate intonation) as it relates to choral music.
- Demonstrate improvement in aural skills and musicianship, using solfeggio syllables and Kodály hand signs for pitch and singing on the counting accurately and as needed.
- Apply appropriate articulation and diction to various choral styles, utilizing the IPA when appropriate.
- Study, rehearse, and perform a variety of choral repertoire.
- Contribute to the campus and general communities through artistic and meaningful musical expression, effectively communicating the music and the emotions of the texts in rehearsal and performance.
- Demonstrate knowledge of the diversity of musical styles of different historical and cultural origins through academic discourse and effective performances.
- Participate thoughtfully and actively in the choral rehearsal, working as a team to achieve excellence in all performances.

## **CONCERT CHOIR**

MUSC 185

1 - 2 Credits

11 hours of lecture - 22 hours of lab

The concert choir performs a wide variety of choral music in at least one public concert per quarter. Music notation, vocal technique, and effective interpretation of music literature. Open to all students interested in improving their vocal skills. Prerequisite: Audition or consent of Instructional Unit. [HB, SE]

### **Course Outcomes:**

- Demonstrate improvement in individual singing (body alignment, breath management, vowel formation, vibrant tone, clear diction, and accurate intonation) as it relates to choral music.
- Demonstrate improvement in aural skills and musicianship, using solfeggio syllables and Kodály hand signs for pitch and singing on the counting accurately and as needed.
- Apply appropriate articulation and diction to various choral styles, utilizing the IPA when appropriate.
- Study, rehearse, and perform a variety of choral repertoire.
- Contribute to the campus and general communities through artistic and meaningful musical expression, effectively communicating the music and the emotions of the texts in rehearsal and performance.
- Demonstrate knowledge of the diversity of musical styles of different historical and cultural origins through academic discourse and effective performances.
- Participate thoughtfully and actively in the choral rehearsal, working as a team to achieve excellence in all performances.

### **APPLIED INSTRUMENT:EUPHONIUM**

MUSCA185

1 Credits

11 hours of lecture

Private euphonium lessons. Continuation of MUSCA 145. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED INSTRUMENT:TUBA**

MUSCA186

1 Credits

11 hours of lecture

Private tuba lessons. Continuation of MUSCA 146. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.



## **JAZZ IMPROVISATION**

MUSC 186

2 Credits

11 hours of lecture - 22 hours of lab

Improvisation on one or more of the traditional jazz band instruments or through vocal interpretation. [HB, SE]

### **Course Outcomes:**

- Students will retain basic skills in jazz scale and chord theory, standard jazz chord progressions, jazz song forms, jazz rhythm, jazz nomenclature and aural skills to facilitate independent study of jazz composition and improvisation.
- Students will be able to recognize chord symbols and chord progressions from a lead sheet, transpose them to their instrument (if appropriate), draft a bass line and provide appropriate chords and scales for harmony and improvisation on paper and their pr
- Students will be able to perform chord progressions on piano with rudimentary piano voicings.

## **INSTRUMENTAL ENSEMBLE**

MUSC 193

2 Credits

11 hours of lecture - 22 hours of lab

Combination of woodwinds and brasses organized as performing groups. Experience in ensemble playing. Familiarization with literature for ensembles. [HB, SE]

### **Course Outcomes:**

- Prepare instrumental music for small ensembles for public performance.

## **JAZZ ENSEMBLE**

MUSC 195

1 - 2 Credits

11 hours of lecture - 22 hours of lab

Open to all students who perform on saxophone, trumpet, trombone, guitar, piano, bass, and drum set. Topics include performance techniques of jazz styles and repertoire and introduction to a wide variety of jazz subjects from improvisation and jazz history to understanding Latin/Afro-Cuban jazz rhythm. Additional topics include musical excellence and skills for teamwork and leadership. Jazz improvisation skills not required, but strong music reading skills are required, to be assessed at the beginning of the term. [HB, SE]

### **Course Outcomes:**

- Develop greater aesthetic understanding of music performance through active participation and development of technical proficiency.
- Appreciate and understand compositional techniques for jazz ensemble and interpretation of style, rhythm, articulation and harmonic structure.
- Develop an understanding of the performance and pedagogy of jazz encouraging further study and interest in performing and teaching jazz.
- Retain an understanding and appreciation for the music and composers of big band jazz encouraging further interest and study.
- Develop and exercise principles of group team-building and leadership.

## **JAZZ ENSEMBLE**

MUSC 196

1 - 2 Credits

11 hours of lecture - 22 hours of lab

Open to all students who perform on saxophone, trumpet, trombone, guitar, piano, bass, and drum set. Topics include performance techniques of jazz styles and repertoire and introduction to a wide variety of jazz subjects from improvisation and jazz history to understanding Latin/Afro-Cuban jazz rhythm. Additional topics include musical excellence and skills for teamwork and leadership. Jazz improvisation skills not required, but strong music reading skills are required, to be assessed at the beginning of the term. [HB, SE]

### **Course Outcomes:**

- Develop greater aesthetic understanding of music performance through active participation and development of technical proficiency.
- Appreciate and understand compositional techniques for jazz ensemble and interpretation of style, rhythm, articulation and harmonic structure.
- Develop an understanding of the performance and pedagogy of jazz encouraging further study and interest in performing and teaching jazz.
- Retain an understanding and appreciation for the music and composers of big band jazz encouraging further interest and study.
- Develop and exercise principles of group team-building and leadership.

## **JAZZ ENSEMBLE**

MUSC 197

1 - 2 Credits

11 hours of lecture - 22 hours of lab

Open to all students who perform on saxophone, trumpet, trombone, guitar, piano, bass, and drum set. Topics include performance techniques of jazz styles and repertoire and introduction to a wide variety of jazz subjects from improvisation and jazz history to understanding Latin/Afro-Cuban jazz rhythm. Additional topics include musical excellence and skills for teamwork and leadership. Jazz improvisation skills not required, but strong music reading skills are required, to be assessed at the beginning of the term. [HB, SE]

### **Course Outcomes:**

- Develop greater aesthetic understanding of music performance through active participation and development of technical proficiency.
- Appreciate and understand compositional techniques for jazz ensemble and interpretation of style, rhythm, articulation and harmonic structure.
- Develop an understanding of the performance and pedagogy of jazz encouraging further study and interest in performing and teaching jazz.
- Retain an understanding and appreciation for the music and composers of big band jazz encouraging further interest and study.
- Develop and exercise principles of group team-building and leadership.

## **INTERMEDIATE PIANO CLASS**

MUSC 201

2 Credits

22 hours of lecture

Intermediate-level study of the piano. Prerequisite: MUSC 101 or consent of Instructional Unit. [HB, SE]

### **Course Outcomes:**

- Gain an understanding of each of four the eras in music history. Play pieces correctly according to historical dictations.
- Understand ornaments of each era of music history and be able to implement them in your music.
- Perform musical selections in front of a small audience of your peers, demonstrating a method of communication with your listeners.
- Demonstrate ability to read music in both treble and bass clefs along with more advanced rhythms.

### **APPLIED INSTRUMENT:FLUTE**

MUSCA201

1 Credits

11 hours of lecture

Private flute lessons. Continuation of MUSCA 171. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED INSTRUMENT:VIOLIN**

MUSCA202

1 Credits

11 hours of lecture

Private violin lessons. Continuation of MUSCA 172. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **ADVANCED PIANO CLASS**

MUSC 202

2 Credits

22 hours of lecture

A continuation of instruction from Intermediate Piano. Baroque, classic, romantic, and contemporary repertoire, jazz stylings and fake books. Prerequisite: MUSC 201 or consent of Instructional Unit. [HB, SE]

**Course Outcomes:**

- Gain an understanding of each of four the eras in music history. Play pieces correctly according to historical dictations.
- Understand ornaments of each era of music history and be able to implement them in your music.
- Perform musical selections in front of a small audience of your peers, demonstrating a method of communication with your listeners.
- Demonstrate ability to read music in both treble and bass clefs along with more advanced rhythms.

**APPLIED INSTRUMENT:CELLO**

MUSCA203

1 Credits

11 hours of lecture

Private cello lessons. Continuation of MUSCA 173. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:VIOLA**

MUSCA204

1 Credits

11 hours of lecture

Private viola lessons. Continuation of MUSCA 174. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:TRUMPET**

MUSCA205

1 Credits

11 hours of lecture

Private trumpet lessons. Continuation of MUSCA 175. Prerequisite: Written consent of Instructional

Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:GUITAR**

MUSCA206

1 Credits

11 hours of lecture

Private guitar lessons. Continuation of MUSCA 176. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:CLARINET**

MUSCA207

1 Credits

11 hours of lecture

Private clarinet lessons. Continuation of MUSCA 177. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:BASS**

MUSCA208

1 Credits

11 hours of lecture

Private bass lessons. Continuation of MUSCA 178. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:HORN**

MUSCA209

1 Credits

11 hours of lecture

Private horn lessons. Continuation of MUSCA 179. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:BASSOON**

MUSCA210

1 Credits

11 hours of lecture

Private bassoon lessons. Continuation of MUSCA 180. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**INTERMEDIATE GUITAR CLASS**

MUSC 210

2 Credits

22 hours of lecture

Intermediate-level study of the guitar. Prerequisite: MUSC 110 or consent of Instructional Unit. [HB, SE]

**Course Outcomes:**

- Demonstrate understanding of chord theory and keys for the guitar.
- Learn all natural notes in first position.
- Learn simple harmonic progression using the sharp keys.
- Learn to use Bar shapes down the finger board with progressions.
- Learn to play major, minor scales.

**APPLIED INSTRUMENT:TROMBONE**

MUSCA211

1 Credits

11 hours of lecture

Private trombone lessons. Continuation of MUSCA 181. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:SAX**

MUSCA212

1 Credits

11 hours of lecture

Private sax lessons. Continuation of MUSCA 182. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:PERCUSSION**

MUSCA213

1 Credits

11 hours of lecture

Private percussion lessons. Continuation of MUSCA 183. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:OBOE**

MUSCA214

1 Credits

11 hours of lecture

Private oboe lessons. Continuation of MUSCA 184. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:EUPHONIUM**

MUSCA215

1 Credits

11 hours of lecture

Private euphonium lessons. Continuation of MUSCA 185. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:TUBA**

MUSCA216

1 Credits



11 hours of lecture

Private tuba lessons. Continuation of MUSCA 186. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**EAR TRAINING 4**

MUSC&221

2 Credits

22 hours of lecture

Trains students to write what they hear in harmonic and polyphonic textures. Examples coordinated with theory classes. [HB, SE]

**Course Outcomes:**

- Evaluating and notating more complicated rhythmic subdivisions of the beat using quarter-beat values and triplets.
- Classifying and notating all diatonic intervals.
- Distinguishing and notating all diatonic chords (both in major and minor keys) in harmonic progressions with inversions.
- Synthesizing rhythmic proficiency with evaluating and notating melodies with two phrases as well as those with larger leaps.
- Performing sight-singing of more challenging melodies (in major and minor keys) with larger jumps using the moveable-do solfeggio system.

**EAR TRAINING 5**

MUSC&222

2 Credits

22 hours of lecture

Trains students to write what they hear in harmonic and polyphonic textures. Examples coordinated with theory classes. Prerequisite: MUSC& 221. [HB, SE]

**Course Outcomes:**

- Evaluating and notating rhythms in compound meters, using triplets, and in two voices.
- Classifying and notating all intervals heard harmonically.
- Distinguishing and notating harmonic progressions with inversions using 6-4 chords and dominant seventh chords.
- Synthesizing rhythmic proficiency with evaluating and notating melodies from music literature and also in two voices at once.
- Performing sight-singing of significant melodies of the common-practice period in major and minor keys, including modulations, applying the moveable-do solfeggio system.
- Synthesizing all aspects of ear training in notating 4-part chorales with simple melodies, a few non-harmonic tones, and root position chords.

## **EAR TRAINING 6**

MUSC&223

2 Credits

22 hours of lecture

Trains students to write what they hear in harmonic and polyphonic textures. Examples coordinated with theory classes. Prerequisite: MUSC& 222. [HB, SE]

### **Course Outcomes:**

- Classifying and notating all intervals heard harmonically.
- Synthesizing rhythmic proficiency with evaluating and notating melodies that modulate.
- Synthesizing all aspects of ear training in notating more difficult 4-part chorales that modulate, utilize nonharmonic tones, and have inversions.
- Distinguishing and notating harmonic progressions with inversions focusing on the use of the leading tone seventh chord and non-dominant seventh chords.
- Performing more difficult sight-singing of melodies by significant composers in major and minor keys (with modulation) applying the moveable-do solfeggio system.

## **MUSIC THEORY IV**

MUSC&231

3 Credits

33 hours of lecture

Extended chromatic chords, borrowed chords, Neapolitan 6th chords, augmented 6th chords, altered dominants, and chromatic mediants. Concurrent enrollment in MUSC& 221 required. Prerequisite: MUSC& 123 or consent of division. [HA,SE]

### **Course Outcomes:**

- Contextualizing, analyzing and designing borrowed chords, Neapolitan 6th chords, and augmented 6th chords.
- Distinguishing and classifying the compositional techniques of 18th century counterpoint as demonstrated in the music of J.S. Bach (two- part inventions and the fugue) .
- Synthesizing organization analysis of 18th century contrapuntal music.
- Assimilating, and appropriately applying in composition (with a predetermined subject) , the characteristics of the 3-voice fugue exposition.

## **APPLIED INSTRUMENT:FLUTE**

MUSCA231

1 Credits

11 hours of lecture

Private flute lessons. Continuation of MUSCA 201. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

## **APPLIED INSTRUMENT:VIOLIN**

MUSCA232

1 Credits

11 hours of lecture

Private violin lessons. Continuation of MUSCA 202. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

## **MUSIC THEORY V**

MUSC&232

3 Credits

33 hours of lecture

Study of variation form, sonata form, rondo form and fugue. Concurrent enrollment in MUSC& 222 Required. Prerequisite: MUSC& 231 or consent of division. [HA,SE]

### **Course Outcomes:**

- Contextualizing, analyzing and designing altered dominants, chromatic mediants, 9th, 11th, and 13th chords.
- Distinguishing and classifying characteristics of variation form, sonata form, and rondo form.
- Synthesizing organization analysis of common-practice music of the 18th and 19th centuries in variation, sonata, and rondo forms.
- Assimilating, and appropriately applying in an original composition, the characteristics of a sonata exposition.

## **MUSIC THEORY VI**

MUSC&233

3 Credits

33 hours of lecture

Invention and two-voice counterpoint. Extensions of harmonic language and compositional styles in the 20th/21st century, including atonal forms. Concurrent enrollment in MUS 245 required. Prerequisite: MUS 242 or consent of division. [HA, SE]

### **Course Outcomes:**

- Contextualizing, analyzing and designing modes, nondiatonic scales, nontertial harmony, 12-tone rows in all their forms.
- Distinguishing and classifying modal compositions and serial compositions.
- Synthesizing organization analysis of 20th century compositional techniques.
- Assimilating, and appropriately applying in two original compositions, the characteristics of modal music and serial music.

**APPLIED INSTRUMENT:CELLO**

MUSCA233

1 Credits

11 hours of lecture

Private cello lessons. Continuation of MUSCA 203. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:VIOLA**

MUSCA234

1 Credits

11 hours of lecture

Private viola lessons. Continuation of MUSCA 204. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:TRUMPET**

MUSCA235

1 Credits

11 hours of lecture

Private trumpet lessons. Continuation of MUSCA 205. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED INSTRUMENT:GUITAR**

MUSCA236

1 Credits

11 hours of lecture

Private guitar lessons. Continuation of MUSCA 206. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED INSTRUMENT:CLARINET**

MUSCA237

1 Credits

11 hours of lecture

Private clarinet lessons. Continuation of MUSCA 207. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **CLARK COLLEGE CHORALE**

MUSC 237

1 - 2 Credits

11 hours of lecture - 22 hours of lab

The Clark College Chorale performs a wide variety of choral literature including classical masterworks and non-classical genres for both male and female as well as mixed-voicing choral music. Open to all students and community members, the Chorale performs a minimum of one concert per term with possible additional performances. Prerequisite: Audition or consent of Instructional Unit. [HB, SE] [PNP]

#### **Course Outcomes:**

- Demonstrate improvement in individual singing (body alignment, breath management, vowel formation, vibrant tone, clear diction, and accurate intonation) as it relates to choral music.
- Apply appropriate articulation and diction to various choral styles, utilizing the IPA when appropriate.
- Study, rehearse, and perform a variety of choral repertoire.
- Contribute to the campus and general communities through artistic and meaningful musical expression, effectively communicating the music and the emotions of the texts in rehearsal

and performance.

- Demonstrate knowledge of the diversity of musical styles of different historical and cultural origins through academic discourse and effective performances.
- Participate thoughtfully and actively in the choral rehearsal, working as a team to achieve excellence in all performances.

### **APPLIED INSTRUMENT: BASS**

MUSCA238

1 Credits

11 hours of lecture

Private clarinet lessons. Continuation of MUSCA 208. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **CLARK COLLEGE CHORALE**

MUSC 238

1 - 2 Credits

11 hours of lecture - 22 hours of lab

The Clark College Chorale performs a wide variety of choral literature including classical masterworks and non-classical genres for both male and female as well as mixed-voicing choral music. Open to all students and community members, the Chorale performs a minimum of one concert per term with possible additional performances. Prerequisite: Audition or consent of Instructional Unit. [HB, SE] [PNP]

#### **Course Outcomes:**

- Demonstrate improvement in individual singing (body alignment, breath management, vowel formation, vibrant tone, clear diction, and accurate intonation) as it relates to choral music.
- Apply appropriate articulation and diction to various choral styles, utilizing the IPA when appropriate.
- Study, rehearse, and perform a variety of choral repertoire.
- Contribute to the campus and general communities through artistic and meaningful musical expression, effectively communicating the music and the emotions of the texts in rehearsal and performance.
- Demonstrate knowledge of the diversity of musical styles of different historical and cultural origins through academic discourse and effective performances.
- Participate thoughtfully and actively in the choral rehearsal, working as a team to achieve excellence in all performances.

### **CLARK COLLEGE CHORALE**

MUSC 239

1 - 2 Credits

11 hours of lecture - 22 hours of lab

The Clark College Chorale performs a wide variety of choral literature including classical masterworks and non-classical genres for both male and female as well as mixed-voicing choral music. Open to all students and community members, the Chorale performs a minimum of one concert per term with possible additional performances. Prerequisite: Audition or consent of Instructional Unit. [HB, SE] [PNP]

**Course Outcomes:**

- Demonstrate improvement in individual singing (body alignment, breath management, vowel formation, vibrant tone, clear diction, and accurate intonation) as it relates to choral music.
- Apply appropriate articulation and diction to various choral styles, utilizing the IPA when appropriate.
- Study, rehearse, and perform a variety of choral repertoire.
- Contribute to the campus and general communities through artistic and meaningful musical expression, effectively communicating the music and the emotions of the texts in rehearsal and performance.
- Demonstrate knowledge of the diversity of musical styles of different historical and cultural origins through academic discourse and effective performances.
- Participate thoughtfully and actively in the choral rehearsal, working as a team to achieve excellence in all performances.

**APPLIED INSTRUMENT:HORN**

MUSCA239

1 Credits

11 hours of lecture

Private horn lessons. Continuation of MUSCA 209. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:BASSOON**

MUSCA240

1 Credits

11 hours of lecture

Private bassoon lessons. Continuation of MUSCA 210. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of

such by performing at the required end-of-term jury.

- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED INSTRUMENT:TROMBONE**

MUSCA241

1 Credits

11 hours of lecture

Private trombone lessons. Continuation of MUSCA 211. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED INSTRUMENT:SAX**

MUSCA242

1 Credits

11 hours of lecture

Private sax lessons. Continuation of MUSCA 212. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED INSTRUMENT:PERCUSSION**

MUSCA243

1 Credits

11 hours of lecture

Private percussion lessons. Continuation of MUSCA 213. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.



- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED INSTRUMENT:OBOE**

MUSCA244

1 Credits

11 hours of lecture

Private oboe lessons. Continuation of MUSCA 214. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED INSTRUMENT:EUPHONIUM**

MUSCA245

1 Credits

11 hours of lecture

Private euphonium lessons. Continuation of MUSCA 215. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED INSTRUMENT:TUBA**

MUSCA246

1 Credits

11 hours of lecture

Private tuba lessons. Continuation of MUSCA 216. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as

completing all sight-reading assignments.

- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

## **ORCHESTRA**

MUSC 250

1 - 2 Credits

11 hours of lecture - 22 hours of lab

Performance of orchestral literature from a variety of periods and styles. [HB, SE]

### **Course Outcomes:**

- Develop greater aesthetic understanding of music performance through active participation and development of technical proficiency.
- Appreciate and understand compositional techniques for orchestra literature and interpretation of style, rhythm, articulation and harmonic structure.
- Develop an understanding of orchestra performance pedagogy encouraging further study and interest in conducting and performing.
- Retain an understanding and appreciation for the music and composers of orchestra literature encouraging further study and interest.
- Work with professional quality string and brass coaches to build technical and musical skills.
- Work with professional quality guest artists who inspire excellence.
- Develop and exercise principles of group team-building and leadership.

## **ORCHESTRA**

MUSC 251

1 - 2 Credits

11 hours of lecture - 22 hours of lab

Performance of orchestral literature from a variety of periods and styles. [HB, SE]

### **Course Outcomes:**

- Develop greater aesthetic understanding of music performance through active participation and development of technical proficiency.
- Appreciate and understand compositional techniques for orchestra literature and interpretation of style, rhythm, articulation and harmonic structure.
- Develop an understanding of orchestra performance pedagogy encouraging further study and interest in conducting and performing.
- Retain an understanding and appreciation for the music and composers of orchestra literature encouraging further study and interest.
- Work with professional quality string and brass coaches to build technical and musical skills.
- Work with professional quality guest artists who inspire excellence.
- Develop and exercise principles of group team-building and leadership.

## **ORCHESTRA**

MUSC 252

1 - 2 Credits

11 hours of lecture - 22 hours of lab

Performance of orchestral literature from a variety of periods and styles. [HB, SE]

### **Course Outcomes:**

- Develop greater aesthetic understanding of music performance through active participation and development of technical proficiency.
- Appreciate and understand compositional techniques for orchestra literature and interpretation of style, rhythm, articulation and harmonic structure.
- Develop an understanding of orchestra performance pedagogy encouraging further study and interest in conducting and performing.
- Retain an understanding and appreciation for the music and composers of orchestra literature encouraging further study and interest.
- Work with professional quality string and brass coaches to build technical and musical skills.
- Work with professional quality guest artists who inspire excellence.
- Develop and exercise principles of group team-building and leadership.

## **WOMEN'S CHORAL ENSEMBLE**

MUSC 253

1 - 2 Credits

11 hours of lecture - 22 hours of lab

Performance of choral music from a variety of periods and styles written for women's voices.

Prerequisite: Audition or consent of Instructional Unit. [HB, SE] [PNP]

### **Course Outcomes:**

- Demonstrate improvement in individual singing (body alignment, breath management, vowel formation, vibrant tone, clear diction, and accurate intonation) as it relates to choral music.
- Demonstrate improvement in aural skills and musicianship, using solfeggio syllables and Kodály hand signs for pitch and singing on the counting accurately and as needed.
- Apply appropriate articulation and diction to various choral styles, utilizing the IPA when appropriate. .
- Study, rehearse, and perform a variety of choral repertoire.
- Contribute to the campus and general communities through artistic and meaningful musical expression, effectively communicating the music and the emotions of the texts in rehearsal and performance.
- Demonstrate knowledge of the diversity of musical styles of different historical and cultural origins through academic discourse and effective performances.
- Participate thoughtfully and actively in the choral rehearsal, working as a team to achieve excellence in all performances.

## **WOMEN'S CHORAL ENSEMBLE**

MUSC 254

1 - 2 Credits

11 hours of lecture - 22 hours of lab

Performance of choral music from a variety of periods and styles written for women's voices.

Prerequisite: Audition or consent of Instructional Unit. [HB, SE] [PNP]

### **Course Outcomes:**

- Demonstrate improvement in individual singing (body alignment, breath management, vowel formation, vibrant tone, clear diction, and accurate intonation) as it relates to choral music.
- Demonstrate improvement in aural skills and musicianship, using solfeggio syllables and Kodály hand signs for pitch and singing on the counting accurately and as needed.
- Apply appropriate articulation and diction to various choral styles, utilizing the IPA when appropriate. .
- Study, rehearse, and perform a variety of choral repertoire.
- Contribute to the campus and general communities through artistic and meaningful musical expression, effectively communicating the music and the emotions of the texts in rehearsal

and performance.

- Demonstrate knowledge of the diversity of musical styles of different historical and cultural origins through academic discourse and effective performances.
- Participate thoughtfully and actively in the choral rehearsal, working as a team to achieve excellence in all performances.

## **WOMEN'S CHORAL ENSEMBLE**

MUSC 255

1 - 2 Credits

11 hours of lecture - 22 hours of lab

Performance of choral music from a variety of periods and styles written for women's voices.

Prerequisite: Audition or consent of Instructional Unit. [HB, SE] [PNP]

### **Course Outcomes:**

- Demonstrate improvement in individual singing (body alignment, breath management, vowel formation, vibrant tone, clear diction, and accurate intonation) as it relates to choral music.
- Demonstrate improvement in aural skills and musicianship, using solfeggio syllables and Kodály hand signs for pitch and singing on the counting accurately and as needed.
- Apply appropriate articulation and diction to various choral styles, utilizing the IPA when appropriate.
- Study, rehearse, and perform a variety of choral repertoire.
- Contribute to the campus and general communities through artistic and meaningful musical expression, effectively communicating the music and the emotions of the texts in rehearsal and performance.
- Demonstrate knowledge of the diversity of musical styles of different historical and cultural origins through academic discourse and effective performances.
- Participate thoughtfully and actively in the choral rehearsal, working as a team to achieve excellence in all performances.

## **APPLIED VOICE**

MUSC 270

1 Credits

11 hours of lecture

Private voice lessons with a college-approved teacher. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

### **Course Outcomes:**

- Demonstrate proficiency in awareness, ability, and use of their voice/instrument including improved breath management, tone and resonance.
- Demonstrate proficiency in skill, artistry, and knowledge of appropriate repertoire.
- Demonstrate knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term.
- Demonstrate proficiency in accessing information and skills needed to translate song lyrics in required foreign languages and utilize the International Phonetic Alphabet (IPA) in learning assigned repertoire.
- Demonstrate proficiency in researching the composer of each assigned song and the time in which the song was composed.
- Demonstrate proficiency in performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury. Cope with performance anxiety, post performance discussion, jury evaluations and demonstra

## **APPLIED VOICE**

MUSC 271

1 Credits

11 hours of lecture

Private voice lessons with a college-approved teacher. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

### **Course Outcomes:**

- Demonstrate proficiency in awareness, ability, and use of their voice/instrument including improved breath management, tone and resonance.
- Demonstrate proficiency in skill, artistry, and knowledge of appropriate repertoire.
- Demonstrate knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term.
- Demonstrate proficiency in accessing information and skills needed to translate song lyrics in required foreign languages and utilize the International Phonetic Alphabet (IPA) in learning assigned repertoire.
- Demonstrate proficiency in researching the composer of each assigned song and the time in which the song was composed.
- Demonstrate proficiency in performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury. Cope with performance anxiety, post performance discussion, jury evaluations and demonstra

## **APPLIED INSTRUMENT:FLUTE**

MUSCA271

1 Credits

11 hours of lecture

Private flute lessons. Continuation of MUSCA 231. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

## **APPLIED INSTRUMENT:VIOLIN**

MUSCA272

1 Credits

11 hours of lecture

Private violin lessons. Continuation of MUSCA 232. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of

such by performing at the required end-of-term jury.

- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

## **APPLIED VOICE**

MUSC 272

1 Credits

11 hours of lecture

Private voice lessons with a college-approved teacher. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

### **Course Outcomes:**

- Demonstrate proficiency in awareness, ability, and use of their voice/instrument including improved breath management, tone and resonance.
- Demonstrate proficiency in skill, artistry, and knowledge of appropriate repertoire.
- Demonstrate knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term.
- Demonstrate proficiency in accessing information and skills needed to translate song lyrics in required foreign languages and utilize the International Phonetic Alphabet (IPA) in learning assigned repertoire.
- Demonstrate proficiency in researching the composer of each assigned song and the time in which the song was composed.
- Demonstrate proficiency in performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury. Cope with performance anxiety, post performance discussion, jury evaluations and demonstra

## **APPLIED PIANO**

MUSC 273

1 Credits

11 hours of lecture

Private lessons with a college-approved teacher. Prerequisite: MUSC 201 and consent of Instructional Unit. [HB, SE]

### **Course Outcomes:**

- Study representative works from Baroque, Classical (Sonata movement), Romantic, or Contemporary stylistic periods and prepare two memorized pieces for jury examination.
- Be able to perform All major and all forms of minor scales, MM 88.
- Perform all major and minor arpeggios including dominant-7th and diminished 7th, root position only, at MM 60.
- Be able to sight-read from the following: Selections from the Music for Millions Vol. 17, four part chorales and hymns, easier sonatinas.
- Be able to perform extended chord progressions.

## **APPLIED INSTRUMENT:CELLO**

MUSCA273

1 Credits

11 hours of lecture

Private cello lessons. Continuation of MUSCA 233. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED INSTRUMENT:VIOLA**

MUSCA274

1 Credits

11 hours of lecture

Private viola lessons. Continuation of MUSCA 234. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED PIANO**

MUSC 274

1 Credits

11 hours of lecture

Private lessons with a college-approved teacher. Prerequisite: MUSC 201 and consent of Instructional Unit. [HB, SE]

#### **Course Outcomes:**

- Study representative works from Baroque, Classical (Sonata movement), Romantic, or Contemporary stylistic periods and prepare two memorized pieces for jury examination.
- Be able to perform All major and all forms of minor scales, MM 88.
- Be able to perform All major and minor arpeggios including dominant-7th and diminished 7th, root position only, at MM 60.
- Be able to Sight-read from the following: Selections from the Music for Millions Vol. 17, four part chorales and hymns, easier sonatinas.
- Be able to perform Extended chord progressions.

### **APPLIED PIANO**

MUSC 275

1 Credits

11 hours of lecture

Private lessons with a college-approved teacher. Prerequisite: MUSC 201 and consent of Instructional Unit. [HB, SE]

#### **Course Outcomes:**

- Study representative works from Baroque, Classical (Sonata movement), Romantic, or Contemporary stylistic periods and prepare two memorized pieces for jury examination.
- Be able to perform All major and all forms of minor scales, MM 88.
- Be able to perform All major and minor arpeggios including dominant-7th and diminished 7th, root position only, at MM 60.
- Be able to Sight-read from the following: Selections from the Music for Millions Vol. 17, four part chorales and hymns, easier sonatinas.
- Be able to perform Extended chord progressions.

### **APPLIED INSTRUMENT:TRUMPET**

MUSCA275

1 Credits

11 hours of lecture

Private trumpet lessons. Continuation of MUSCA 235. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED INSTRUMENT:GUITAR**

MUSCA276

1 Credits

11 hours of lecture

Private guitar lessons. Continuation of MUSCA 236. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED INSTRUMENT:CLARINET**

MUSCA277

1 Credits

11 hours of lecture

Private clarinet lessons. Continuation of MUSCA 237. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**



- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED INSTRUMENT:BASS**

MUSCA278

1 Credits

11 hours of lecture

Private clarinet lessons. Continuation of MUSCA 238. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED INSTRUMENT:HORN**

MUSCA279

1 Credits

11 hours of lecture

Private horn lessons. Continuation of MUSCA 239. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED INSTRUMENT:BASSOON**

MUSCA280

1 Credits

11 hours of lecture

Private bassoon lessons. Continuation of MUSCA 240. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

## **CONCERT BAND**

MUSC 280

1 - 2 Credits

11 hours of lecture - 22 hours of lab

Open to all students with experience performing on brass, woodwind, and percussion instruments. The Clark College Concert Band performs a wide spectrum of standard concert band and contemporary wind ensemble literature in at least one concert per quarter. Topics include musical excellence, and skills for teamwork and leadership. No auditions necessary to enroll but the ability to read music on your respective instrument is required. [HB, SE]

### **Course Outcomes:**

- Develop greater aesthetic understanding of music performance through active participation and development of technical proficiency.
- Appreciate and understand compositional techniques for wind literature and interpretation of style, rhythm, articulation and harmonic structure.
- Develop an understanding of band performance pedagogy encouraging further study and interest in conducting and performing.
- Retain an understanding and appreciation for the music and composers of wind literature encouraging further study and interest.

## **CONCERT BAND**

MUSC 281

1 - 2 Credits

11 hours of lecture - 22 hours of lab

Open to all students with experience performing on brass, woodwind, and percussion instruments. The Clark College Concert Band performs a wide spectrum of standard concert band and contemporary wind ensemble literature in at least one concert per quarter. Topics include musical excellence, and skills for teamwork and leadership. No auditions necessary to enroll but the ability to read music on your respective instrument is required. [HB, SE]

### **Course Outcomes:**

- Develop greater aesthetic understanding of music performance through active participation and development of technical proficiency.
- Appreciate and understand compositional techniques for wind literature and interpretation of style, rhythm, articulation and harmonic structure.
- Develop an understanding of band performance pedagogy encouraging further study and interest in conducting and performing.
- Retain an understanding and appreciation for the music and composers of wind literature encouraging further study and interest.

## **APPLIED INSTRUMENT:TROMBONE**

MUSCA281

1 Credits

11 hours of lecture

Private trombone lessons. Continuation of MUSCA 241. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**APPLIED INSTRUMENT:SAX**

MUSCA282

1 Credits

11 hours of lecture

Private sax lessons. Continuation of MUSCA 242. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

**Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

**CONCERT BAND**

MUSC 282

1 - 2 Credits

11 hours of lecture - 22 hours of lab

Open to all students with experience performing on brass, woodwind, and percussion instruments. The Clark College Concert Band performs a wide spectrum of standard concert band and contemporary wind ensemble literature in at least one concert per quarter. Topics include musical excellence, and skills for teamwork and leadership. No auditions necessary to enroll but the ability to read music on your respective instrument is required. [HB, SE]

**Course Outcomes:**

- Develop greater aesthetic understanding of music performance through active participation and development of technical proficiency.
- Appreciate and understand compositional techniques for wind literature and interpretation of style, rhythm, articulation and harmonic structure.
- Develop an understanding of band performance pedagogy encouraging further study and interest in conducting and performing.
- Retain an understanding and appreciation for the music and composers of wind literature encouraging further study and interest.

## **CONCERT CHOIR**

MUSC 283

1 - 2 Credits

11 hours of lecture - 22 hours of lab

The concert choir performs a wide variety of choral music in at least one public concert per quarter. Music notation, vocal technique, and effective interpretation of music literature. Open to all students interested in improving their vocal skills. Prerequisite: Audition or consent of Instructional Unit. [HB, SE]

### **Course Outcomes:**

- Demonstrate improvement in individual singing (body alignment, breath management, vowel formation, vibrant tone, clear diction, and accurate intonation) as it relates to choral music.
- Demonstrate improvement in aural skills and musicianship, using solfeggio syllables and Kodály hand signs for pitch and singing on the counting accurately and as needed.
- Apply appropriate articulation and diction to various choral styles, utilizing the IPA when appropriate.
- Study, rehearse, and perform a variety of choral repertoire.
- Contribute to the campus and general communities through artistic and meaningful musical expression, effectively communicating the music and the emotions of the texts in rehearsal and performance.
- Demonstrate knowledge of the diversity of musical styles of different historical and cultural origins through academic discourse and effective performances.
- Participate thoughtfully and actively in the choral rehearsal, working as a team to achieve excellence in all performances.

## **APPLIED INSTRUMENT:PERCUSSION**

MUSCA283

1 Credits

11 hours of lecture

Private percussion lessons. Continuation of MUSCA 243. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

## **APPLIED INSTRUMENT:OBOE**

MUSCA284

1 Credits

11 hours of lecture

Private oboe lessons. Continuation of MUSCA 244. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

## **CONCERT CHOIR**

MUSC 284

1 - 2 Credits

11 hours of lecture - 22 hours of lab

The concert choir performs a wide variety of choral music in at least one public concert per quarter. Music notation, vocal technique, and effective interpretation of music literature. Open to all students interested in improving their vocal skills. Prerequisite: Audition or consent of Instructional Unit. [HB, SE]

### **Course Outcomes:**

- Demonstrate improvement in individual singing (body alignment, breath management, vowel formation, vibrant tone, clear diction, and accurate intonation) as it relates to choral music.
- Demonstrate improvement in aural skills and musicianship, using solfeggio syllables and Kodály hand signs for pitch and singing on the counting accurately and as needed.
- Apply appropriate articulation and diction to various choral styles, utilizing the IPA when appropriate.
- Study, rehearse, and perform a variety of choral repertoire.
- Contribute to the campus and general communities through artistic and meaningful musical expression, effectively communicating the music and the emotions of the texts in rehearsal and performance.
- Demonstrate knowledge of the diversity of musical styles of different historical and cultural origins through academic discourse and effective performances.
- Participate thoughtfully and actively in the choral rehearsal, working as a team to achieve excellence in all performances.

## **CONCERT CHOIR**

MUSC 285

1 - 2 Credits

11 hours of lecture - 22 hours of lab

The concert choir performs a wide variety of choral music in at least one public concert per quarter. Music notation, vocal technique, and effective interpretation of music literature. Open to all students interested in improving their vocal skills. Prerequisite: Audition or consent of Instructional Unit. [HB, SE]

### **Course Outcomes:**

- Demonstrate improvement in individual singing (body alignment, breath management, vowel formation, vibrant tone, clear diction, and accurate intonation) as it relates to choral music.
- Demonstrate improvement in aural skills and musicianship, using solfeggio syllables and Kodály hand signs for pitch and singing on the counting accurately and as needed.
- Apply appropriate articulation and diction to various choral styles, utilizing the IPA when appropriate.
- Study, rehearse, and perform a variety of choral repertoire.
- Contribute to the campus and general communities through artistic and meaningful musical

expression, effectively communicating the music and the emotions of the texts in rehearsal and performance.

- Demonstrate knowledge of the diversity of musical styles of different historical and cultural origins through academic discourse and effective performances.
- Participate thoughtfully and actively in the choral rehearsal, working as a team to achieve excellence in all performances.

### **APPLIED INSTRUMENT:EUPHONIUM**

MUSCA285

1 Credits

11 hours of lecture

Private euphonium lessons. Continuation of MUSCA 245. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **APPLIED INSTRUMENT:TUBA**

MUSCA286

1 Credits

11 hours of lecture

Private tuba lessons. Continuation of MUSCA 246. Prerequisite: Written consent of Instructional Unit required. [HB, SE]

#### **Course Outcomes:**

- Increase skill, artistry, and knowledge of appropriate repertoire.
- Increase knowledge of music theory and aural skills in the learning and memorizing of assigned songs each term by studying the notation of assigned repertoire as well as completing all sight-reading assignments.
- Learn performance practice techniques and etiquette and demonstrate their understanding of such by performing at the required end-of-term jury.
- Cope with performance anxiety, post-performance discussion, jury evaluations and demonstrate a willingness to correct perceived errors.

### **SPECIAL PROJECTS**

MUSC 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the department. Prerequisite: Consent of Instructional Unit. [HB, GE]

#### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## **JAZZ ENSEMBLE**

MUSC 295

1 - 2 Credits

11 hours of lecture - 22 hours of lab

Open to all students who perform on saxophone, trumpet, trombone, guitar, piano, bass, and drum set. Topics include performance techniques of jazz styles and repertoire and introduction to a wide variety of jazz subjects from improvisation and jazz history to understanding Latin/Afro-Cuban jazz rhythm. Additional topics include musical excellence and skills for teamwork and leadership. Jazz improvisation skills not required, but strong music reading skills are required, to be assessed at the beginning of the term. [HB, SE]

### **Course Outcomes:**

- Develop greater aesthetic understanding of music performance through active participation and development of technical proficiency.
- Appreciate and understand compositional techniques for jazz ensemble and interpretation of style, rhythm, articulation and harmonic structure.
- Develop an understanding of the performance and pedagogy of jazz encouraging further study and interest in performing and teaching jazz.
- Retain an understanding and appreciation for the music and composers of big band jazz encouraging further interest and study.
- Develop and exercise principles of group team-building and leadership.

## **JAZZ ENSEMBLE**

MUSC 296

1 - 2 Credits

11 hours of lecture - 22 hours of lab

Open to all students who perform on saxophone, trumpet, trombone, guitar, piano, bass, and drum set. Topics include performance techniques of jazz styles and repertoire and introduction to a wide variety of jazz subjects from improvisation and jazz history to understanding Latin/Afro-Cuban jazz rhythm. Additional topics include musical excellence and skills for teamwork and leadership. Jazz improvisation skills not required, but strong music reading skills are required, to be assessed at the beginning of the term. [HB, SE]

### **Course Outcomes:**

- Develop greater aesthetic understanding of music performance through active participation and development of technical proficiency.
- Appreciate and understand compositional techniques for jazz ensemble and interpretation of style, rhythm, articulation and harmonic structure.
- Develop an understanding of the performance and pedagogy of jazz encouraging further study and interest in performing and teaching jazz.
- Retain an understanding and appreciation for the music and composers of big band jazz encouraging further interest and study.
- Develop and exercise principles of group team-building and leadership.

## **JAZZ ENSEMBLE**

MUSC 297

1 - 2 Credits

11 hours of lecture - 22 hours of lab

Open to all students who perform on saxophone, trumpet, trombone, guitar, piano, bass, and drum set. Topics include performance techniques of jazz styles and repertoire and introduction to

a wide variety of jazz subjects from improvisation and jazz history to understanding Latin/Afro-Cuban jazz rhythm. Additional topics include musical excellence and skills for teamwork and leadership. Jazz improvisation skills not required, but strong music reading skills are required, to be assessed at the beginning of the term. [HB, SE]

**Course Outcomes:**

- Develop greater aesthetic understanding of music performance through active participation and development of technical proficiency.
- Appreciate and understand compositional techniques for jazz ensemble and interpretation of style, rhythm, articulation and harmonic structure.
- Develop an understanding of the performance and pedagogy of jazz encouraging further study and interest in performing and teaching jazz.
- Retain an understanding and appreciation for the music and composers of big band jazz encouraging further interest and study.
- Develop and exercise principles of group team-building and leadership.

**Nursing Assistant Certified**

**NURSING ASSISTANT FOUNDATIONS/CLINICAL**

NAC 103

9 Credits

66 hours of lecture - 66 hours of lab

Study and practice in preparation for the Washington state certification examination as a nursing assistant. Topics include anatomy and physiology, resident rights, concepts of death and dying, dementia care, legal aspects of care, scope of practice of the nursing assistant, function of the health care team, communication skills, infection control, safety and emergency procedures, and restorative care. Includes supervised clinical experience for Nursing Assistants in long term care settings. Prerequisite: Successful completion of, or concurrent enrollment in FACPR 032, or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate a basic understanding of health care, the role of the nursing assistant and the roles of the various members of the health care team.
- Exhibit effective communication skills with clients, family, and other health care team members; demonstrate knowledge of HIPAA confidentiality and mandatory reporting; demonstrate English language competence for workplace communication.
- Demonstrate basic nursing assistant techniques needed for general health assessment and daily care of clients.
- Apply cultural awareness in all aspects of care, building on their own cultural strengths.
- Use professional and ethical behavior.

**SELECTED TOPICS**

NAC 280

1 - 10 Credits

110 hours of lecture

Varying topics in the Nursing Assistant Certified program, as listed in the quarterly class schedule. May be repeated for credit. Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this course.



## Network Technology

### IP SUBNETTING

NTEC 103

2 Credits

11 hours of lecture - 22 hours of lab

Covers the Internet Protocol (IP) numbering systems IPv4 and IPv6. Includes the following concepts: calculation and converting numbers between DECimal, BINary, and HEXadecimal number systems; understanding the meaning of IP numbers, the purpose/role of the various parts of the number, types/classes of numbers; understanding how to subnet these number ranges using both traditional and VLSM approaches; create supernets, summary routes, and hierachical addressing schemes. No prior computer or network knowledge or experience is required. Prerequisite: MATH 030 eligibility, or consent of Instructional Unit. [GE]

#### Course Outcomes:

- Demonstrate ability to design a hierarchical addressing scheme for given network scenarios.
- Demonstrate ability to subdivide network ranges for a given criteria.
- Demonstrate ability to determine proper network addressing settings, ranges, and usage for a given criteria.
- Select the correct network addressing scheme for a given IPv4 network
- Select the correct network addressing scheme for a given IPv6 network

### INFORMATION SECURITY FUNDAMENTALS

NTEC 125

3 Credits

22 hours of lecture - 22 hours of lab

Builds an understanding of network security topics including how hacker attacks are carried out and how to select the right security solutions for each type of risk. Students learn to create clear and enforceable security policies and to keep them up to date; to establish reliable processes for responding to security advisories; to use encryption effectively and recognize its limitations; to secure networks with firewalls, routers, and other devices; and to prevent attacks aimed at wireless networks. Prerequisite: A grade of "C" or better in NTEC 103, or consent of Instructional Unit.

#### Course Outcomes:

- Describe the types of security threats and how to mitigate them
- Describe information security best practices
- Describe types of encryption technology and appropriate application of each
- Describe the types of network monitoring technology

### WINDOWS MTA SERVER ADMINISTRATION FUNDAMENTALS

NTEC 132

3 Credits

22 hours of lecture - 22 hours of lab

Help students prepare for the Microsoft Technology Associate (MTA) Exam 98-365 by building an understanding of server installation, server roles, active directory, storage, server performance management, and server maintenance. Prerequisite: A grade of "C" or better in either NTEC 103 or consent of Instructional Unit. [GE]

#### Course Outcomes:

- Understand Microsoft Server Installation
- Understand Microsoft Server Roles
- Understand Active Directory
- Understand Storage
- Understand Microsoft Server Performance Management

## **CLOUD COMPUTING FUNDAMENTALS**

NTEC 142

3 Credits

22 hours of lecture - 22 hours of lab

Helps students prepare for the CompTIA Cloud Essentials certification by building an understanding of the following Cloud Computing topics: technical understanding of the foundations of Cloud Computing as compared to traditional IT; integrating Cloud Computing into IT infrastructure; creating economic value by implementing Cloud innovations; and integrating Cloud Computing into an organization's existing compliance, risk and regulatory framework. Prerequisite: A grade of "C" or better in NTEC 103, or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Describe the characteristics of cloud services
- Understand the types of clouds
- Understand cloud management and administration
- Understand the risks and consequences of cloud computing
- Describe the steps to successful cloud adoption

## **COOPERATIVE WORK EXPERIENCE**

NTEC 199

1 - 6 Credits

198 hours of clinical

Supervised work experience in an approved job. Completion of specific learning objectives and employee evaluation. Prerequisite: Completion of or concurrent enrollment in HDEV 195 and 198 or 200 and consent of Instructional Unit. [GE] [PNP]

### **Course Outcomes:**

- Fulfill the job requirements of the internship provider.

## **INTRODUCTION TO LINUX SERVERS**

NTEC 220

5 Credits

22 hours of lecture - 66 hours of lab

Knowledge and skills for using LINUX Server OS to setup LAN/WAN connections and authentication; and to explore features of the network operating systems, such as FTP, email, web server, file server, print server, remote desktop, DNS, DHCP, and users and groups. Prerequisite: A grade of "C" or better in NTEC 103, or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Install Linux and Windows network servers.
- Manage Linux and Windows network servers.
- Configure Linux and Windows core network services.

## **CISCO CCNA 1:INTRODUCTION TO NETWORKS**

NTEC 221

6 Credits

44 hours of lecture - 44 hours of lab

Introduction to the architecture, structure, functions, components, and models of the Internet, and other computer networks. Covers the principles and structure of IP addressing. The fundamentals of Ethernet concepts, media, and operations are introduced to provide foundation for the basics of network administration. Students will learn to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes. Part one of a two-course sequence that helps prepare students for the CCENT (Cisco Certified Entry Networking Technician) industry certification, and part one of a four-course sequence that helps prepare students for the CCNA Routing & Switching industry certification. Prerequisite: A grade "C" or better in NTEC 103, or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Understand the media, devices and services used to support network communications.
- Design and apply network addresses to fulfill given requirements in IPv4 and IPv6 networks.
- Build a simple network using routers and switches.
- Use commands to perform basic router and switch configurations.

## **CISCO CCNA 2: ROUTING & SWITCHING ESSENTIALS**

NTEC 222

6 Credits

44 hours of lecture - 44 hours of lab

Learn the architecture, components, and operations of routers and switches in a small network, how to configure a router and a switch for basic functionality; troubleshoot routers and switches; resolve common issues with RIPv1, RIPv2, single-area and multi-area OSPF, virtual LANs, and inter-Vlan routing in both IPv4 and IPv6 networks. Part two of a two-course sequence that helps prepare students for the CCENT (Cisco Certified Entry Networking Technician) industry certification, and part two of a four-course sequence that helps prepare students for the CCNA Routing & Switching industry certification. Prerequisite: A grade of "C" or better in NTEC 221, or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Understand and describe basic routing and switching concepts and the operation of Cisco routers and switches
- Understand and describe enhanced switching technologies such as VLANs, VLAN Trunking Protocol (VTP), Rapid Spanning Tree Protocol (RSTP), Per VLAN Spanning Tree Protocol (PVSTP), and 802.1q
- Configure and troubleshoot basic operations of a small switched network
- Configure and troubleshoot basic operations of routers in a small routed network

## **CISCO CCNA 3: SCALING NETWORKS**

NTEC 223

6 Credits

44 hours of lecture - 44 hours of lab

Describes the architecture, components, and operations of routers and switches in a larger and more complex network. Students learn the following: how to configure routers and switches for advanced functionality; to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, STP, and VTP in both IPv4 and IPv6 networks. Students will also develop the knowledge and skills needed to implement DHCP and DNS operations in a network. This course is part-three of a four-course sequence that helps prepare students for the CCNA

Routing & Switching industry certification. Prerequisite: A grade of "C" or better in NTEC 222, or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Configure and troubleshoot DHCP and DNS operations for IPv4 and IPv6
- Configure and troubleshoot advanced switching operation (STP, VTP, RSTP)
- Configure and troubleshoot advanced operations of routers and implement RIP, OSPF, and EIGRP routing protocols for IPv4 and IPv6

**CISCO CCNA 4: CONNECTING NETWORKS**

NTEC 224

6 Credits

44 hours of lecture - 44 hours of lab

Discusses the WAN technologies and network services required by converged applications in a complex network. Enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Students learn the following: how to configure and troubleshoot network devices, resolve common issues with data link protocols; develop the knowledge and skills needed to implement IPsec and virtual private network (VPN) operations in a complex network. This course is part-four of a four-course sequence that helps prepare students for the CCNA Routing & Switching industry certification. Prerequisite: A grade of "C" or better in NTEC 223, or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Describe the operations and benefits of virtual private networks (VPNs) and tunneling
- Describe the different WAN technologies and their benefits
- Configure and troubleshoot serial connections
- Configure and troubleshoot VPNs
- Demonstrate network monitoring with syslog, SNMP, and NetFlow

**CISCO CCNA SECURITY**

NTEC 225

6 Credits

44 hours of lecture - 44 hours of lab

Preparation to obtain CCNA Security Certification. Course meets the needs of IT professionals responsible for network security. Developing skills for job roles such as Network Security Specialists, Security Administrators, and Network Security Support Engineers. Skills include installation, troubleshooting and monitoring of network devices to maintain integrity, confidentiality and availability of data and devices. Competency in the technologies that Cisco uses in its security structure. Introduction to core security technologies as well as how to develop security policies and mitigate risks. Prerequisite: A grade of "C" or better in NTEC 222, or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrates the skills required to develop a security infrastructure, recognize threats and vulnerabilities to networks, and mitigate security threats
- Demonstrate the ability to install, troubleshoot and monitor network devices to maintain integrity, confidentiality and availability of data and devices

**CISCO CCNA VOICE**

NTEC 226

6 Credits

44 hours of lecture - 44 hours of lab

Preparation to obtain Cisco CCNA Voice certification. Required skill set for specialized job roles in voice technologies such as voice technologies administrator, voice engineer, and voice manager; in-demand skills in VoIP technologies such as IP PBX, IP telephony, handset, call control, and voicemail solutions; and exposure to the Cisco Unified Communications architecture and design covering mobility, presence, and TelePresence applications. Prerequisite: A grade of "C" or better in NTEC 222, or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate the knowledge and skills required to administer a voice network.
- Identify the architecture, components, functionalities, and features of Cisco Unified Communications solutions
- Perform tasks such as system monitoring, moves, additions and changes on Cisco Unified Communications Manager, and Cisco Unified Communications Manager Express

**CISCO CCNP ROUTER: IMPLEMENTING IP ROUTING**

NTEC 227

6 Credits

44 hours of lecture - 44 hours of lab

Helps students prepare for the Cisco CCNP Router certification exam. Students learn how to implement, monitor, and maintain routing services in an enterprise network; to plan, configure, and verify the implementation of complex enterprise LAN and WAN routing solutions; and to use a range of routing protocols in IPv4 and IPv6 environments. The course also covers the configuration of secure routing solutions to support branch offices and mobile workers and emphasizes hands-on learning and practice to reinforce configuration skills. Prerequisite: A grade of "C" or better in NTEC 224, or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Implement an EIGRP based solution, given a network design and a set of requirements
- Implement a multi-area OSPF Network, given a network design and a set of requirements
- Implement an eBGP based solution, given a network design and a set of requirements
- Implement an IPv6 based solution, given a network design and a set of requirements
- Implement an IPv4 or IPv6 based redistribution solution, given a network design and a set of requirements
- Implement Layer 3 Path Control Solution

**CISCO CCNP SWITCH: IMPLEMENTING IP SWITCHING**

NTEC 228

6 Credits

44 hours of lecture - 44 hours of lab

Helps students prepare for the Cisco CCNP SWITCH certification exam by teaching how to implement, monitor and maintain switching in converged enterprise campus networks; to plan, configure and verify the implementation of complex enterprise switching solutions; and to secure integration of VLANs, WLANs, voice and video into campus networks. Emphasizes hands-on learning and practice to reinforce configuration skills. Prerequisite: A grade of "C" or better in NTEC 227, or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Implement VLAN based solution, given a network design and a set of requirements
- Implement a Security Extension of a Layer 2 solution, given a network design and a set of

requirements

- Implement Switch based Layer 3 services, given a network design and a set of requirements
- Prepare infrastructure to support advanced services
- Implement High Availability, given a network design and a set of requirements

### **CISCO CCNP TSHOOT: MAINTAINING IP NETWORKS**

NTEC 229

6 Credits

44 hours of lecture - 44 hours of lab

Helps students prepare for the Cisco CCNP TSHOOT certification exam by teaching how to monitor and maintain complex, enterprise routed and switched IP networks; plan and execute regular network maintenance and support and troubleshoot using technology-based processes and best practices based on systematic and industry-recognized approaches. Extensive labs emphasize hands-on learning and practice to reinforce troubleshooting techniques. Prerequisite: A grade of "C" or better in NTEC 228, or consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Maintain and monitor network performance
- Troubleshoot Multi Protocol system networks

### **MICROSOFT SERVER ADMINISTRATOR 1**

NTEC 234

6 Credits

44 hours of lecture - 44 hours of lab

Covers installing and configuring Windows Server 2012. Introduction to Active Directory Domain Services, Managing Active Directory Domain Services Objects, Automating Active Directory Domain Services Administrative, Implementing Networking Services, Implementing Local Storage, Implementing File and Print Services, Implementing Group Policy, Implementing Server Virtualization with Hyper-V. This course is part-one of a three-course sequence that helps prepare students for the MCSA (Microsoft Certified Solutions Associate) industry certification. Prerequisite: A grade of "C" or better in NTEC 132 and NTEC 103, or consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Implement Windows server roles in a Microsoft network environment.
- Implement local storage, network share, and printers.
- Demonstrate a basic understanding of Microsoft server roles and features.
- Demonstrate basic proficiency with PowerShell environment.

### **MICROSOFT SERVER ADMINISTRATOR 2**

NTEC 235

6 Credits

44 hours of lecture - 44 hours of lab

Covers the following: administration of Windows Server 2012; Implementing a Group Policy infrastructure; managing User and Service Accounts; maintaining Active Directory Domain Services; configuring and troubleshooting DNS; configuring and troubleshooting Remote Access; installing, configuring and troubleshooting the Network Policy Server role; optimizing File Services; increasing File System Security; implementing Update Management. This course is part-two of a three-course sequence that helps prepare students for the MCSA (Microsoft Certified Solutions Associate) industry certification. Prerequisite: A grade of "C" or better in NTEC 234, or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate a basic understanding of groups and policies.
- Configure core network services.
- Maintain a Windows server environment.
- Demonstrate a basic understanding of Microsoft network security features.

**MICROSOFT SERVER ADMINISTRATOR 3**

NTEC 236

6 Credits

44 hours of lecture - 44 hours of lab

Covers configuration of advanced Windows Server 2012 services. Focus on implementing the following: Advanced Network Service, Advanced File Services, Dynamic Access Control, Network Load Balancing, Failover Clustering, Disaster Recovery, AD CS and AD FS. This course is part-three of a three-course sequence that helps prepare students for the MCSA ( Microsoft Certified Solutions Associate) industry certification. Prerequisite: A grade of "C" or better in NTEC 235, or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate a basic understanding of an enterprise network.
- Understand business continuity and disaster recovery best practices.
- Configure and manage high availability of data.
- Implement advanced configuration of Microsoft server roles and features.

**DATACENTER VIRTUALIZATION TECHNOLOGY**

NTEC 242

6 Credits

44 hours of lecture - 44 hours of lab

Fundamentals of server and desktop virtualization. Topics include practical and conceptual skills for understanding basic virtualization concepts, comparison of physical servers and virtualized servers, skills for planning and implementing datacenter virtualization, the virtualized approach to datacenters with functions and services of their components, plus the various components, concepts and skill-sets associated with virtualization. Prerequisite: A grade of "C" or better in NTEC 142, or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Design a cloud computing and storage solution
- Manage cloud resources to satisfy small private cloud business needs.
- Configure cloud storage.
- Configure networking for cloud computing.

**SELECTED TOPICS**

NTEC 280

1 - 5 Credits

Topics vary. May be repeated for credit. Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this course.

## **SPECIAL PROJECTS**

NTEC 290

1 - 5 Credits

Opportunity to plan, organize, and complete special projects approved by the department.  
Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## **CAPSTONE EXPERIENCE**

NTEC 299

3 Credits

11 hours of lecture - 44 hours of lab

CAPSTONE course in the DNET AAS and AAT degree programs at Clark College, normally taken during the final quarter of the program. Application of many topics covered in the other program courses in a simulated employee team or small group setting. Introduction to the experience of designing an enterprise network using required documentation of design and implementation. Topics include all aspects of network planning, design, and troubleshooting. Prerequisite: Microsoft MTA Server Admin Fundamentals certification or Cisco CCENT certification required, completion of all required core coursework related to degree, and consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Fulfill the job requirements of the internship provider.

## **Nursing**

### **FOUNDATIONS OF NURSING CONCEPTS**

NURS 110

3 Credits

33 hours of lecture

Introduction to professional nursing; topics include health promotion and health care delivery systems, professional roles and standards, nurse-client relationships, and theoretical basis for nursing practice. Concurrent enrollment in NURS 111, 113, 114, and 115. These courses are linked; failure in one course requires repeat of all concurrent courses. Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Define and describe methods of evaluating the patient's spiritual and biopsychosocial health using the nursing process.
- Discuss the physiological changes common to older adults and identify treatments prescribed for clients with chronic illness.
- Describe nursing care of clients in a variety of settings including acute, chronic, rehabilitation, hospice palliative and community settings.
- Describe and apply the nursing process to the care of the client.
- Accurately obtain and report client data utilizing a variety of formats and following HIPAA and college guidelines regarding appropriate sharing of client information.
- Discuss and apply the principles of safe pharmacological management of the client.
- Describe and apply key elements of the professional nursing role including: therapeutic



communication, evidence based practice and collaboration with a multidisciplinary health care team.

- Describe the concept of cultural competency and accept differences of diverse populations.

## **FOUNDATIONS OF CLINICAL NURSING**

NURS 111

4 Credits

88 hours of lab

Introduction to nursing practice in the community setting with emphasis on direct patient care of the older adult. Concurrent enrollment is required in NURS 110, 113, 114, and 115. These courses are linked; failure in one course requires repeat of all concurrent courses. Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Identify the role and responsibilities of the professional nurse.
- Integrate holistic nursing concepts when providing care to the client, family, and community.
- Participate in carrying out the legal and ethical responsibilities of the nurse, including HIPAA and Nursing Program outcomes.
- Recognize, articulate and perform basic clinical decisions based upon critical thinking abilities, the nursing process and principles of evidence-based practice.
- Effectively communicates as a member of the health care team.

## **LIFESPAN ASSESSMENT CONCEPTS**

NURS 113

2 Credits

22 hours of lecture

Introduction to health assessment and physical examination throughout the lifespan, and an introduction to nursing skills. Concurrent enrollment in NURS 110, 111, 114 and 115. These courses are linked; failure in one course requires repeat of all concurrent courses. Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Discuss and demonstrate the role of the professional nurse in obtaining a health history and in performing a physical assessment of clients throughout the lifespan.
- Discuss and demonstrate the principles that guide the health assessment and introductory nursing skills in the nursing process and management of patient care throughout the lifespan.
- Discuss the role of assessment in recognizing normal and abnormal body system indicators and identify psychosocial barriers impeding the physical examination and health assessment process throughout the lifespan.
- Discuss the importance of confidentiality in communicating patient assessment findings and accurately obtain and report client data utilizing a variety of formats while following HIPAA and college guidelines regarding appropriate sharing of client information.
- Identify and classify assessment findings utilizing client appropriate tools such as databases, risk scales, chart notes and verbal reports.

## **NURSING SKILLS APPLICATION I**

NURS 114

1 Credits

22 hours of lab

Practice and nursing skill achievement on NURS 113 competencies. Concurrent enrollment in NURS 110, 111, 113 and 115. These courses are linked; failure in one course requires repeat of all concurrent courses. Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Identify normal and abnormal findings as indicators of the patient's biopsychosocial health.
- Demonstrate appropriate health assessment techniques and communication of data utilizing HIPAA and Clark College Nursing Program guidelines.
- Identify and demonstrate the principles of safe medication administration by various routes including correct dosage calculation.
- Identify cultural and racial variations in the health and physical assessment and health promotion of individual clients
- Practice the role of the professional nurse in the performance of physical assessment and nursing skills
- Safely demonstrate nursing skills including: subcutaneous injection, mixing of insulin, intramuscular injection, and foley catheter insertion.

**NURSING SKILLS LAB I**

NURS 115

2 Credits

44 hours of lab

Supervised skills practice and competency achievement in the nursing skills lab. Prerequisite: Concurrent enrollment in NURS 110, 111, 113, and 114. These courses are linked; failure in one course requires repeat of all concurrent courses. [GE]

**Course Outcomes:**

- Practice and apply knowledge in selected nursing skills utilized in the management of patients.
- Recommend methods of health maintenance and health promotion for individual patients and identify potential patient complications related to nursing interventions introduced in the first quarter of the nursing program.
- Practice the professional role of the nurse by maintaining competency in learned nursing interventions for patients.

**FAMILY-CENTERED NURSING**

NURS 122

2 Credits

22 hours of lecture

Theory and the nursing process related to the care of healthy children and their families. Physiologic and psychological adaption during the childbearing and childrearing years, emphasis on the nurse's role in health promotion and education in the care of culturally diverse families in the community. Concurrent enrollment in NURS 123, 124, 127, and 128. These courses are linked; failure in one course requires repeat of all concurrent courses. Prerequisite: A grade of "C" or above in NURS 110, 111, 113, 114, and 115, or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Evaluate the patient's biophysical health as it relates to normal and abnormal Pathophysiology for the maternity, neonatal, pediatric and women's health patient.
- Describe the appropriate management options for the maternity, neonatal, pediatric and women's health patient.
- Explain pharmacologic management of the care of the maternity, neonatal, pediatric and women's health patient.

- Recommend methods of health maintenance and promotion for individual clients and their families.
- Determine the role of the professional nurse in the community in relation to the maternity, neonatal, pediatric and women's health patient.

### **FAMILY-CENTERED CLINICAL NURSING**

NURS 123

5 Credits

110 hours of lab

Application of theoretical, assessment, and practice concepts for nursing care of the family prenatally through the child years. Concurrent enrollment in NURS 122, 124, 127, and 128. These courses are linked; failure in one course requires repeat of all concurrent courses. Prerequisite: A grade of "C" or above in NURS 110, 111, 113, 114, and 115, or consent of Instructional Unit.

[GE]

#### **Course Outcomes:**

- Assimilate the role of the professional nurse for the neonate, mother, woman, pediatric patient and family.
- Formulate clinical decisions based upon critical thinking, nursing process, and evidence-based practice for the neonate, mother, woman and pediatric patient, and family.
- Communicate effectively as a member of the health care team.
- Integrate holistic nursing concepts in the care of the patient and family.

### **INTRODUCTION TO MENTAL HEALTH NURSING**

NURS 124

1 Credits

11 hours of lecture

Introduction to mental health concepts including verbal and non-verbal communication techniques, boundary setting, and basic mental health assessment. Students will develop the skills needed to manage behavioral challenges in the healthcare setting. Concurrent enrollment in NURS 122, 123, 127, and 128. These courses are linked; failure in one course requires repeat of all concurrent courses. Prerequisite: A grade of "C" or better in NURS 110, 111, 113, 114, and 115, or consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Describe methods used to manage care of patients with mental health co-morbidities.
- Apply appropriate communication techniques to patient care scenarios.
- Demonstrate basic mental health assessment techniques.
- Determine appropriate boundary setting in patient care situations.

### **NURSING SKILLS APPLICATION II**

NURS 127

1 Credits

22 hours of lab

Practice and nursing skill achievement on NURS 126 competencies. Concurrent enrollment in NURS 122, 123, 124 and 128. These courses are linked; failure in one course requires repeat of all concurrent courses. Prerequisite: A grade of "C" or above in NURS 110 or consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Demonstrate competency of selected nursing skills utilized in the management of medical-surgical patients.
- Evaluate pharmacological management of the medical-surgical patient and demonstrate mathematical calculations appropriate to IV medication administration.
- Recommend methods of health maintenance and health promotion for individual patients and identify potential patient complications related to nursing interventions introduced this quarter.
- Practice the professional role of the nurse in providing selected nursing interventions to medical-surgical patients.

## **NURSING SKILLS LAB II**

NURS 128

2 Credits

44 hours of lab

Practice and nursing skill achievement of NURS 127 competencies. Concurrent enrollment in NURS 122, 123, 124, and 127. These courses are linked, failure in one course requires repeat of all concurrent courses. Prerequisite: A grade of "C" or better in NURS 110 or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Practice and apply knowledge in selected nursing skills utilized in the management of medical/surgical patients
- Evaluate pharmacological management of the medical/surgical patient and demonstrate mathematical calculations appropriate to IV medication administration.
- Practice the professional role of the nurse by maintaining competency in learned nursing interventions for medical/surgical patients.
- Recommend methods of health maintenance and health promotion for individual patients and identify potential patient complications related to nursing interventions introduced in first and second quarter of the nursing program.

## **MEDICAL SURGICAL NURSING CONCEPTS 1**

NURS 135

3 Credits

33 hours of lecture

Introductory nursing management of medical-surgical health issues. Topics include but are not limited to: patient teaching/discharge planning, rehabilitation of medical-surgical patients, fluid and electrolytes, shock management, the immune response, infectious diseases, diabetes (including pediatric, adult and gestational), musculoskeletal disorders and the care of patients in the peri-operative setting. All topics address patients throughout the lifespan, and include obstetric patients in a medical-surgical setting. Concurrent enrollment in NURS 136, 137, and 138. These courses are linked; failure in one course requires repeat of all concurrent courses. Prerequisite: A grade of "C" or better in NURS 122, 123, 124, 127, and 128, or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Evaluate the patient's biopsychosocial health as it relates to the perioperative period, fluid and electrolytes, infectious disease, the immune system, the musculoskeletal system, and diabetes in the acute care or community setting.
- Describe nursing management of patient care as it relates to the perioperative period, fluid and electrolytes, infectious disease, the immune system, the musculoskeletal system, and diabetes in the acute care or community setting.
- Evaluate the pharmacological management of the patient as it relates to perioperative care,

immunizations, fluid and electrolyte replacement, antimicrobials, immune suppressants and diabetic agents in the acute care setting.

- Recommend methods of health maintenance and promotion of patients with fluid and electrolyte disorders, infectious disease, immune disorders, musculoskeletal disorders, and diabetes.
- Determine the role of the professional nurse and recommend appropriate patient and family teaching in the acute care, perioperative or community setting.

### **MEDICAL-SURGICAL CLINICAL NURSING I**

NURS 136

6 Credits

132 hours of lab

Introductory medical/surgical concepts applied to the clinical nursing management of the patient in the acute care and community setting. Concurrent enrollment in NURS 135, 137, and 138. These courses are linked; failure in one course requires repeat of all concurrent courses. Prerequisite: A grade of "C" or better in NURS 122, 123, 124, 127, and 128, or consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Implement theoretical and practical knowledge in the care of the medical/surgical population.
- Develop and implement appropriate clinical decisions based upon critical thinking, the nursing process and principles of evidence-based practice in the medical/surgical population.
- Utilize holistic nursing concepts while providing care in the acute care or community setting.
- Effectively demonstrate teamwork, communication and collaboration as a member of the health care team.
- Demonstrate professionalism in the clinical setting for the medical/surgical patient and family
- Minimize risk of harm to patients and providers through both clinical system effectiveness and individual performance
- Demonstrate the Expected Knowledge, Attitudes and Behaviors as described on the Nursing 121 Clinical Evaluation form.

### **NURSING SKILLS APPLICATION III**

NURS 137

1 Credits

22 hours of lab

Instruction and practice of nursing skills related to the care of the medical-surgical patient. Concurrent enrollment in NURS 135, 136, and 138. These courses are linked; failure in one course requires repeat of all concurrent courses. Prerequisite: A grade of "C" or better in NURS 122 or consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Demonstrate competency of selected nursing skills.
- Evaluate Pharmacologic management of the medical-surgical patient.
- Recommend methods of health maintenance and health promotion for individual patients .
- Practice the professional role of the nurse.

### **NURSING SKILLS LAB III**

NURS 138

2 Credits

44 hours of lab

Practice and nursing skill achievement of NURS 137 competencies. Concurrent enrollment in NURS 135, 136, and 137. These courses are linked; failure in one course requires repeat of all concurrent courses. Prerequisite: A grade of "C" or better in NURS 122 or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Practice and apply knowledge in selected nursing skills
- Evaluate pharmacological management of the medical/surgical patient
- Recommend and teach health maintenance and health promotion for individual patients and families.
- Practice the professional role of the nurse

**SELECTED TOPICS-LEVEL II**

NURS 150

1 - 15 Credits

Independent study modules to meet needs of the student. Course contents may be drawn from any of the Level I and II nursing courses. Credit will be based upon contracted work in keeping with college policies. Credit is not applicable toward a nursing major at Clark College.

Prerequisite: Consent of nursing director. [GE]

**Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of nursing.

**LPN TO RN BRIDGE**

NURS 200

7 Credits

66 hours of lecture - 22 hours of lab

Overview of nursing with emphasis on professional foundations, nursing process, pathophysiology, medication administration and review of principles and techniques of nursing care common to all clients. A scope of practice focus for LPN to RN role transition is included in this bridge course. Review of maternity and pediatric content as well as computer research as it relates to pathophysiology. Instructional methods include two weeks of classroom sessions, group discussions, group learning activities, nursing skills lab activities, eLearning projects, written assignments, oral presentation, and independent study. Students enrolled in the Clark College Nursing program are building a sound base of knowledge and developing critical thinking skills needed to effectively use that knowledge in their daily lives as well as in their clinical practice. Instructional methods include; two weeks of classroom sessions, group discussions, group learning activities, nursing skills lab activities. E-learning projects, written assignments, oral presentation, and independent study.

**Course Outcomes:**

- This course no longer exists

**NURSING SKILLS PRACTICE II**

NURS 225

1 - 10 Credits

220 hours of lab

Practice in the nursing skills lab under supervision at the second year nursing level. [GE]

**Course Outcomes:**

- This course no longer exists

**MEDICAL-SURGICAL NURSING CONCEPTS II**

NURS 241

3 Credits

33 hours of lecture

Nursing management of medical-surgical health issues involving cardiac, respiratory, renal and gastrointestinal systems in the acute care or community setting. Planning nursing interventions to include prevention of disease and promotion of wellness. Emphasis on the biopsychosocial effects of acute and chronic illness. All topics address patients throughout the lifespan, and includes obstetric patients in a medical-surgical setting. Concurrent enrollment in NURS 242. These courses are linked; failure in one course requires repeat of all concurrent courses. Prerequisite: A grade of "C" or above in BIOL& 260, ENGL& 102, NUTR 103, PSYC& 200, and NURS 135 or consent of the Instructional Unit. [GE]

**Course Outcomes:**

- Evaluate patients' bio-psychosocial health issues related to fluid balance, acid-base balance, Hematologic function, urine production and elimination, respiration, circulation and nutrient assimilation.
- Problem solve the common, health related issues of those with fluid and acid-base balance, hematologic function, urine production and elimination, respiration, circulation and nutrient assimilation problems.
- Recommend methods of health maintenance and promotion for patients with health issues related to fluid balance, acid-base balance, hematologic function, urine production and elimination, respiration, circulation and nutrient assimilation.
- Effectively communicate in writing and in speech.

**MEDICAL/SURGICAL CLINICAL NURSING II**

NURS 242

8 Credits

176 hours of lab

Application of advanced medical-surgical concepts with emphasis on the management of the acutely ill client. Concurrent enrollment in NURS 241. These courses are linked; failure in one course requires repeat of all concurrent courses. Prerequisite: A grade of "C" or above in BIOL& 260, ENGL& 102, NUTR 103, PSYC& 200, and NURS 135 or consent of the Instructional Unit. [GE]

**Course Outcomes:**

- The student will: 1. Holistically manage the care of three acute-care patients.
- Provide care at the fourth-quarter level of practice.
- Effectively interact with all members of the health care team.
- Demonstrate progression in nursing knowledge and problem solving.

**SELECTED TOPICS**

NURS 250

1 - 15 Credits

Independent study modules to meet needs of the student. Course contents may be drawn from any of the Level I and II nursing courses. Credit will be based upon contracted work in keeping with college policies. Credit is not applicable toward a nursing major at Clark College.

Prerequisite: Consent of nursing director. [GE]

**Course Outcomes:**

- Apply the core concepts of the selected topic to the foundational principle of this course.
- Complete objectives as determined by the course instructor.

**MEDICAL-SURGICAL NURSING CONCEPTS III**

NURS 251

2 Credits

22 hours of lecture

The study of common medical-surgical issues related to hormonal control, sensory perception, movement and coordination, and cancer. Emphasis is placed on the nurse's role as primary caregiver, manager and educator for a group of patients. The student will learn to plan and organize care for a group of patients with emphasis on the nursing process, rehabilitation, education, and the patient care delivery system. All topics address patients throughout the lifespan, and includes obstetric patients in a medical-surgical setting. Concurrent enrollment in NURS 252. These courses are linked; failure in one course requires repeat of all concurrent courses. Prerequisite: A grade of "C" or better in NURS 241, or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Analyze patients' biopsychosocial health related to problems with hormonal control, sensory perception, movement and co-ordination, and cancer.
- Determine the impact of the above health problems on the individual and the family and identify appropriate evidence-based nursing interventions.
- Determine the pharmacologic treatment of the above health problems.
- Determine strategies for health promotion and illness prevention for the above health problems including cultural implications.
- Identify professional responsibilities of the registered nurse.

**ADVANCED HOLISTIC CLINICAL NURSING**

NURS 252

8 Credits

176 hours of lab

Emphasis is placed on the nurse's role as caregiver, manager and educator for a group of patients across medical-surgical and mental health settings. In the med/surg setting, the student will plan and organize care for a group of patients with emphasis on the nursing process, rehabilitation, education, and the patient care delivery system. In the mental health setting, the student will experience caring for patients in both inpatient and outpatient environments. Patient problems relate to functional impairment within acute and chronic phases of mental illness. Concurrent enrollment in NURS 251 and 253 is required. These courses are linked; failure in one course requires repeat of all concurrent courses. Prerequisite: A grade of "C" or better in NURS 241, or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Perform in the role of the registered nurse.
- Demonstrate sound clinical decision making based upon critical thinking abilities, the nursing process, and principles of evidence-based practice.
- Communicate effectively as a member of the health care team.
- Incorporate holistic nursing concepts when providing care to the patient, family, and community.



## **MENTAL HEALTH NURSING CONCEPTS ADVANCED**

NURS 253

2 Credits

22 hours of lecture

Mental health concepts spanning childhood through adulthood. Focus is on building a foundation of knowledge of mental illness, exploration of the interplay of genetic and environmental factors and identifying viable treatment options for the patient and family, with emphasis on the nurse's role in assessment and use of realistic interventions. Concurrent enrollment in NURS 254. These courses are linked; failure in one course requires repeat of both courses. Prerequisite: A grade of "C" or better in NURS 241, or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Evaluate the patient's biophysical and mental health as it relates to normal and abnormal pathophysiology for the mental health client.
- Evaluate pharmacologic management of the care of the mental health client.
- Recommend methods of health maintenance and promotion for individual clients and their families.
- Determine the role of the professional nurse in the community in relation to the mental health client. Demonstrate effective interpersonal/human relations skills appropriate to the occupation.

## **PROFESSIONAL LEADERSHIP TRANSITION TO PRACTICE**

NURS 261

2 Credits

22 hours of lecture

Theory of leadership and management principles applied by the professional nurse in the clinical setting. Topics include professional ethics, the Nurse Practice Act, change theory, evidence-based practice, quality control, fiscal management and nursing delegation in the clinical area. Concurrent enrollment in NURS 262, 263, and 264. These courses are linked; failure in one course requires repeat of all concurrent courses. Prerequisite: A grade of "C" or better in NURS 251 and 253, or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Comprehend the content and evaluate the quality of current research
- Integrate principles of leadership and management and assimilate professional conduct and ethical behavior into your daily nursing practice, describe the legal and ethical rights and responsibilities inherent in nursing practice
- Integrate principles of diversity, holism, stewardship, dignity, and respect to reflect a caring environment
- Analyze their role as the professional nurse in disaster situations
- Analyze and objectively critique unit staffing assuring that quality care is maintained at a high level

## **PROFESSIONAL LEADERSHIP SENIOR PRACTICUM**

NURS 262

8 Credits

176 hours of lab

Advanced client care in a specialty of the student's interest. Clinical areas include acute care, critical care and care of clients in the community setting. Emphasis is on developing leadership skills and independent practice as a professional nurse. Concurrent enrollment in NURS 261, 263, and 264. These courses are linked; failure in one course requires repeat of all concurrent courses. Prerequisite: A grade of "C" or better in NURS 251 and 253, or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Synthesizes all previous skills and theoretical knowledge into the management and care of groups of patients.
- Synthesizes all previous knowledge using critical thinking, the Nursing Process, and evidence based practice into the clinical decision making process and functions as a graduate nurse
- Incorporates holistic nursing concepts when providing care to the patient, family and community
- Is proficient and functions as a team member when communicating and collaborating with patients, families and all members of the health care team
- Role Models professionalism in the clinical setting. Practices ethically and is accountable for own practice and demonstrates continuing competency in nursing.
- Performs safe patient care and promotes the safety of the staff as well as the entire nursing unit.

**PROFESSIONAL ROLE IN COMMUNITY SERVICE**

NURS 263

1 Credits

22 hours of lab

Emphasis is on the role of the nurse serving her/his community as a volunteer and client advocate. The student will perform community service and work with agencies that provide services in our community for our at risk populations. The student also will have the opportunity to mentor novice peers in the nursing program. Concurrent enrollment in NURS 261, 262, and 264. These courses are linked; failure in one course requires repeat of all concurrent courses. Prerequisite: A grade of "C" or better in NURS 251 and 253, or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Synthesize all previous skills and theoretical knowledge when partnering with others to effect change and produce positive outcomes.
- Integrates effective problem solving and decision making skills during the completion of service learning hours.
- Incorporates principles of diversity, Holism, stewardship, dignity and respect to reflect an environment of care.
- Proficient in adhering to nursing codes of conduct that govern behavior among peers and colleagues
- Role models professionalism in the Community setting as well as the clinical arena.
- Promotes the safety of self and others.

**CAPSTONE NCLEX PREPARATION**

NURS 264

1 Credits

11 hours of lecture

A ten-hour course geared toward helping the student prepare for the NCLEX test. This course will include strategies for success, key critical-thinking strategies, as well as review of content, questions and rationales. Concurrent enrollment in NURS 261, 262, and 263. These courses are linked; failure in one course requires repeat of all concurrent courses. Prerequisite: A grade of "C" or above in NURS 251 and 253, or consent of Instructional Unit. [GE]

**Course Outcomes:**

- Knowledge: Integrate relevant theoretical knowledge.
- Clinical Judgment: Demonstrate effective problem solving and decision making.
- Caring: Integrate principles of diversity, holism, stewardship, dignity, and respect to reflect

an environment of caring.

- Teamwork and Inter-professional Collaboration: Model open communication, mutual respect, and shared decision making.
- Professionalism: Demonstrate personal accountability, ethical practices, and continuing competence in nursing.
- Patient safety: Minimize risk of harm to patients and providers through both clinical system effectiveness and individual performance.

## **SPECIAL PROJECTS**

NURS 290

1 - 15 Credits

Opportunity to plan, organize and complete special projects approved by the faculty of the department. Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Demonstrate learning outcomes as determined by the supervising instructor.

## **Nutrition**

### **GENERAL NUTRITION**

NUTR 103

3 Credits

33 hours of lecture

Nutrition of healthy human beings. Principles of balanced nutrition, physiology and metabolism of nutrients, and changing nutritional needs throughout the human life span. Prerequisite: A grade of "C" or better in CHEM 111 or higher. [NS, SE]

### **Course Outcomes:**

- Demonstrate comprehension of the chemical structures of the different nutrient classes.
- Identify the roles of different nutrients in normal metabolism, anatomy, and physiology.
- Identify abnormal conditions arising from under- or over-consumption of nutrients.
- Critically analyze of the quality of a personal diet.
- Evaluate of the validity of information provided in the popular media and the scientific literature.
- Communicate effective nutritional information to others.

## **Oceanography**

### **INTRO TO OCEANOGRAPHY W/LAB**

OCEA&101

5 Credits

44 hours of lecture - 22 hours of lab

Introduction to physical oceanography and current topics in the ocean sciences for non-science students. Earth's oceans as an integral component of the global climate system will be highlighted. Topics include oceanic structure and composition, global circulation and ocean currents and their connection with atmospheric motions, hurricanes, waves, tides, tsunamis, the importance of oceans to understanding climate change, coastal processes, pollution, El Nino/La Nina, and the influence of the physical environment on life. [NS]

### **Course Outcomes:**

- Recall and explain scientific facts, concepts, and examples of ocean science (and its branches: physical, geologic, chemical, and biological) and how these relate to our everyday experiences.
- Distinguish between pseudoscience and the testable and falsifiable predictions of science.
- Describe and use the methods of ocean science: data acquisition and observations, pattern recognition, analysis and modeling that contribute to the understanding of facts, concepts, processes, and theories of ocean science.

## Physical Education

### **CARDIO CONDITIONING**

PE 100

1 Credits

22 hours of lab

Basic group exercise to music, primarily targeting cardiovascular conditioning. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop cardiovascular fitness.

### **FITNESS WALKING**

PE 102

1 - 2 Credits

44 hours of lab

Emphasis on walking programs, including interval training, power walking, and race walking. Walking technique and health benefits also discussed. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate proper fitness walking technique.
- Develop cardiovascular endurance.
- Apply fitness walking programming to meet personal goals.

### **BENCH STEP AEROBICS**

PE 103

1 Credits

22 hours of lab

Introduction to high-intensity/low impact exercise promoting overall body strength and cardiovascular fitness that involves stepping up and down on a bench step platform to music. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate bench step fundamentals.
- Develop cardiovascular fitness.

### **CIRCUIT FITNESS**

PE 104

1 Credits

22 hours of lab

An individualized systematic approach to cardiovascular fitness through the use of multiple weight machines and aerobic equipment. Pre and post fitness assessments conducted. Students must earn 2 credits of PE 104 before advancing to PE 105. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate proper technique on resistance machines and cardio equipment.
- Develop various components of fitness.
- Create and perform a balanced exercise circuit.

**CIRCUIT FITNESS**

PE 105

1 - 2 Credits

44 hours of lab

An individualized systematic approach to cardiovascular fitness through the use of multiple weight machines and aerobic equipment. Pre and post fitness assessments conducted. Prerequisite: Two credits of PE 104. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate proper technique on resistance machines and cardio equipment.
- Develop various components of fitness.
- Create and perform a balanced exercise circuit.

**CIRCUIT FITNESS**

PE 106

1 - 2 Credits

44 hours of lab

An individualized systematic approach to cardiovascular fitness through the use of multiple weight machines and aerobic equipment. Pre and post fitness assessments conducted. Prerequisite: 2 credits of PE 105. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate proper technique on resistance machines and cardio equipment.
- Develop various components of fitness.
- Create and perform a balanced exercise circuit.

**SPEED, AGILITY, AND QUICKNESS**

PE 107

1 Credits

22 hours of lab

Focuses on biomechanics of running, development of speed, agility and personal quickness. Learning of drills and enhancement of skills to improve personal performance. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.

- Develop SAQ performance skills (running, jumping and sprinting) .
- Develop muscular strength and endurance, cardiovascular endurance, flexibility, coordination, agility, speed, quickness and reaction time.
- Identify principals of biomechanical and plyometric movement.

### **INDEPENDENT FITNESS PROGRAM**

PE 108

1 - 2 Credits

44 hours of lab

A self-paced conditioning course for the motivated, self-directed student. Design, implement and document a goal-oriented fitness program with instructor advice and approval. Areas of concentration will be the three components of fitness: Cardiovascular endurance, muscular strength and muscular flexibility training. [PE, SE]

#### **Course Outcomes:**

- Consistently participates in physical activity.
- Develop behavior change strategies (e.g. research, information gathering, motivational strategies, benefits and barriers, goal setting, plan development, back-up plans, rewards, logging/documentation, practice, reflection).
- Develop physical fitness.

### **MARTIAL ARTS: TAE KWON DO**

PE 109A

1 Credits

22 hours of lab

Tae Kwon Do is a Korean martial art that predominately focuses on kicking. Students must purchase a uniform for this class. [PE, SE]

### **MARTIAL ARTS: KUNG FU**

PE 109B

1 Credits

22 hours of lab

Kung Fu is a Chinese method of self-defense. Covers history and philosophy, basic strikes, blocks, and escapes from various attacks and grabs. Students must purchase a uniform for this class. [PE, SE]

### **MARTIAL ARTS: JUDO**

PE 109D

1 Credits

22 hours of lab

Judo is a Japanese martial art focused on throwing, where students learning falling techniques, basic takedowns, escapes, and joint locks. Students must purchase a uniform for this class. [PE, SE]

### **MARTIAL ARTS: BRAZILIAN JIU-JITSU**

PE 109E

1 Credits

22 hours of lab

Jiu-Jitsu is a Brazilian sport of self-defense that uses grappling, wrestling, and locking techniques. Students must purchase a uniform for this class. [PE, SE]

## **SELF DEFENSE**

PE 110

1 Credits

22 hours of lab

This course is designed to teach the student basic self-defense techniques as well as situational awareness through class participation and discussion. [PE, SE]

### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop fundamental striking and defensive skills.
- Develop situational awareness with or without improvised tools

## **CORE CONDITIONING**

PE 111

1 Credits

22 hours of lab

Focus on engaging the core area to improve posture and muscular endurance for everyday movement. [PE, SE]

### **Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate core stability.
- Demonstrate proper exercise technique.

## **TONE AND TRIM**

PE 112

1 Credits

22 hours of lab

Stretching and strengthening exercise class to improve muscular strength, tone, posture and flexibility with an emphasis on abdominal and back strength. [PE, SE]

### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop flexibility, muscular strength, and muscular endurance.
- Demonstrate proper exercise technique.

## **TOTAL BODY CONDITIONING**

PE 113

2 Credits

44 hours of lab

Students will use fitness center equipment and a variety of conditioning activities to develop cardiovascular endurance, muscular strength, and flexibility. Course will emphasize how to structure an exercise plan to meet individualized goals. [PE, SE]

### **Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate proper exercise form and technique.
- Develop cardiovascular endurance, muscular endurance, muscular strength, and flexibility.
- Develop a personal exercise workout.

## **WEIGHT TRAINING-GENERAL I**

PE 115

1 Credits

22 hours of lab

Strength development through basic exercise and lift techniques. Beginning theories and techniques in fitness conditioning, body building, and power lifting. [PE, SE]

### **Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate basic weight training techniques.
- Develop muscular fitness.
- Apply weight training programming to meet personal goals.
- Recall weight training principles.

## **FITNESS CENTER BASICS**

PE 116

1 Credits

22 hours of lab

Introduction to the fundamental skills necessary to implement a physical activity program in a fitness center setting. Students develop and implement an exercise program appropriate to their fitness level and individual needs using a variety of cardiovascular and resistance machines. [PE, SE]

### **Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate proper technique on resistance machines and cardio equipment.
- Develop various components of fitness.

## **WEIGHT TRAINING-POWER LIFTING I**

PE 117

2 Credits

44 hours of lab

Conditioning class for students interested in strength improvement through heavy resistance training. The Olympic lifts along with numerous power/speed lifts will be performed for personal improvement in various fitness parameters. [PE, SE]

### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop power lifting techniques.
- Develop muscular strength and endurance.
- Identify principals of power lifting.

## **CROSS TRAINING**

PE 118

2 Credits

44 hours of lab

Introduction to cross-training utilizing strength and conditioning principles and activities including: calisthenics, basic gymnastics, weightlifting and mobility. Cardio endurance and functional



movement will also be covered and developed.

**Course Outcomes:**

- Consistently participate in physical activity.
- Develop muscular and respiratory strength and endurance.
- Develop joint mobility and muscular flexibility.
- Differentiate between the three different energy systems.
- Develop motor skills in functional movement utilizing weightlifting and resistance training techniques.
- Establish a personal benchmark upon which future physical fitness can be measured.

**CARDIO KICKBOXING-BEGINNING**

PE 120

1 Credits

22 hours of lab

Combination of aerobic dance and martial arts, including American Kickboxing and Thai Boxing, in a format that increases cardiovascular endurance, sharpens reflexes and enhances power. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Develop cardiovascular fitness.
- Demonstrate proper basic combinations of kickboxing technique using striking targets.

**YOGA**

PE 121

1 Credits

22 hours of lab

Introduction to hatha yoga (physical yoga) with an emphasis on postures, breathing and body-mind centering. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate basic skills that would allow the student to utilize yoga for participation in lifelong physical activity.
- Reflect on experience practicing yoga.

**T'AI CHI**

PE 122

1 Credits

22 hours of lab

T'ai Chi is an ancient form of mental and spiritual discipline developed in China. The movements of the t'ai chi form are slow and deliberate, helping with relaxation, focus, strengthening, and balance. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Practice Yang Style T'ai Chi exercises.
- Demonstrate Yang Style T'ai Chi meditation form. Perform First Paragraph Form.

### **HEALTHY HEART-BEGINNING**

PE 123

1 Credits

22 hours of lab

Cardiac prevention and rehabilitation exercise: designed to promote awareness and practice of exercise, nutrition, and stress. Skills in dealing with pre- and post-cardiac trauma. [GE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop cardiovascular fitness.
- Demonstrate proper technique on fitness equipment.

### **PILATES-BEGINNING**

PE 124

1 Credits

22 hours of lab

Methods of conditioning covers the basic principles and exercise technique needed to increase core strength and stabilization, improve coordination, balance, postural awareness, and increase muscular flexibility and stamina. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Practice Pilates exercises.
- Recall the Five Basic Pilates Principles.

### **ROCK CLIMBING**

PE 125

1 Credits

22 hours of lab

Basics of rock climbing. Focus on belay techniques and knot tying skills along with the essential styles of climbing safety and efficiently.

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop basic rock climbing techniques including knot tying, belay safety, and climbing skills (hand and foot holds).
- Apply climbing skills and strategies to climbs.

### **BOOT CAMP-BEGINNING**

PE 129

2 Credits

44 hours of lab

Introduction to physical fitness for military purposes; emphasis on basic conditioning and discipline. This course is open to all students. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.

- Demonstrate proper exercise form and technique.
- Develop cardiovascular endurance, muscular endurance, muscular strength, and flexibility.
- Develop behavior change strategies (e.g. research, information gathering, motivational strategies, benefits and barriers, goal setting, plan development, back-up plans, rewards, logging/documentation, practice, reflection).

### **BALLET-BEGINNING**

PE 130

1 Credits

22 hours of lab

Beginning ballet technique including barre and centre work. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop basic Russian Classical Ballet techniques/steps.
- Develop muscular strength, cardiovascular endurance, flexibility and coordination.
- Recall ballet steps terminology.

### **BALLROOM DANCE: LATIN OR SMOOTH**

PE 131

1 - 3 Credits

66 hours of lab

Fundamentals, forms and pattern of ballroom dance. Develop confidence through practice with a variety of partners. SMOOTH style dances include waltz, tango, fox trot, quick step and Viennese waltz. LATIN Dance sections will include: mambo, cha cha, rhumba, samba, salsa.

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Latin: Demonstrate the five Latin Ballroom dance basics. Smooth: Demonstrate the five Smooth Ballroom dance basics.
- Perform Lead or Follow role in partnership dancing.

### **BALLROOM DANCE: SMOOTH**

PE 131A

1 Credits

22 hours of lab

Fundamentals, forms and pattern of ballroom dance. Develop confidence through practice with a variety of partners. Smooth style dances include waltz, tango, fox trot, quick step and Viennese waltz. [PE, SE]

### **BALLROOM DANCE: LATIN**

PE 131B

1 Credits

22 hours of lab

Fundamentals, forms and pattern of ballroom dance. Develop confidence through practice with a variety of partners. Latin dance sections will include: mambo, cha cha, rhumba, samba, and salsa. [PE, SE]

## **BALLROOM DANCE: LATIN OR SMOOTH**

PE 131D

1 Credits

22 hours of lab

Fundamentals, forms and pattern of ballroom dance. Develop confidence through practice with a variety of partners. Smooth style dances include waltz, tango, fox trot, quick step and Viennese waltz. Latin dances include: mambo, cha cha, rhumba, samba, salsa. [PE, SE]

## **CONTEMPORARY DANCE**

PE 133

1 Credits

22 hours of lab

Fundamentals and techniques of modern dance and rhythmic self-expression. [PE, SE]

### **Course Outcomes:**

- Have a general understanding of the basic concepts of Contemporary Dance: Time, Space, Energy.
- Know and be able to demonstrate basic dance technique and codified movements.
- Be able to manipulate movement and use movement qualities.
- Be able to Choreograph beginning level movement phrases independently.

## **MODERN JAZZ**

PE 134

1 Credits

22 hours of lab

Beginning Modern Jazz technique. Students will study fundamental moves and learn a routine. [PE, SE]

### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop basic modern jazz techniques.
- Develop muscular strength, cardiovascular endurance, flexibility and coordination.
- Choreograph and perform a modern jazz routine.

## **SWING DANCE-BEGINNING**

PE 135

1 Credits

22 hours of lab

Basic patterns and partnering skills for East Coast Swing (jive), West Coast Swing (hustle), and Lindy Hop. Course covers dance technique, partnering skills, patterns and music identification. [PE, SE]

### **Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate swing dance fundamentals (Lindy-Hop East and Coast Swing basics).
- Perform Lead or Follow role in partnership dancing.

## **HIP-HOP DANCE**

PE 137

1 Credits

22 hours of lab

Introduction to basic dance techniques, floor combinations, balance, and longer dance routines of hip hop dance. Develop confidence and skill through practice. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate hip-hop combinations.
- Develop cardiovascular fitness.
- Create and perform a choreographed routine.

**BELLY DANCE**

PE 139

1 Credits

22 hours of lab

Gain knowledge of movement and dance steps, culture and history, various rhythms, country of origin and related movements. Egyptian music is the predominant focus. [PE, SE]

**Course Outcomes:**

- Consistently participates in physical activity.
- Demonstrate basic skills that would allow the student to utilize Belly Dance for participation in lifelong physical activity.
- Demonstrate a basic understanding of how to apply Belly Dance fitness principles.
- Make a connection between physical activity and wellness through Belly Dance.

**BASKETBALL**

PE 140

1 Credits

22 hours of lab

Ball handling, shooting, passing, offensive and defensive techniques, rules, strategy and competitive play. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Develop individual basketball fundamentals (dribbling, passing, shooting).
- Develop offensive and defensive strategies specific to a team setting.
- Recognize basketball fundamentals and team strategies.

**BOWLING**

PE 143

1 Credits

22 hours of lab

Techniques, styles of play, rules of courtesy, scoring and competitive games. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Develop bowling approach (4 or 5 steps) with proper timing and release.
- Identify bowling terms.
- Score a bowling game.

## **FENCING-FOIL**

PE 147

1 Credits

22 hours of lab

Movement of fencing plus defense, offense, rules of bouting, officiating, and competition. [PE, SE]

### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop defensive abilities (parries, retreat, and evasion).
- Develop footwork (advance, retreat, lunge, and recover).

## **GOLF**

PE 148

1 Credits

22 hours of lab

Fundamentals and practice of golf. Focuses on full-swing fundamentals, chipping, pitching, putting, golf strategies, and rules of the game. [PE, SE]

### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop golf swing fundamentals.
- Recall golf game rules and etiquette.

## **SOCCER**

PE 150

1 Credits

22 hours of lab

Focus on individual offensive and defensive skills, game strategy, rules, and team tactics through the use of small-sided games and individual drills. [PE, SE]

### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop fundamental soccer skills.
- Develop cardiovascular fitness and agility.
- Apply soccer rules and demonstrate positive sportsmanship.

## **SPORTS CONDITIONING**

PE 152

1 - 30 Credits

660 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate sports.

### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop fundamental sport skills (specific for sport: soccer, baseball, track and field, volleyball or basketball).
- Develop offensive and defensive tactical skills.

- Develop sport-specific fitness.
- Apply sport-specific skills and strategies.
- Demonstrate positive communication and good sportsmanship.

**SPORTS CONDITIONING: SOCCER-WOMEN**

PE 152A

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate women's soccer. [PE, SE]

**SPORTS CONDITIONING: SOCCER-MEN'S**

PE 152B

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate men's soccer. [PE, SE]

**SPORTS CONDITIONING: VOLLEYBALL**

PE 152D

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in women's intercollegiate volleyball. [PE, SE]

**SPORTS CONDITIONING: BASKETBALL-WOMEN'S**

PE 152E

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate women's basketball. [PE, SE]

**SPORTS CONDITIONING: BASKETBALL-MEN'S**

PE 152F

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate men's basketball. [PE, SE]

**SPORTS CONDITIONING: SOFTBALL**

PE 152G

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in women's intercollegiate softball. [PE, SE]

**SPORTS CONDITIONING: TRACK AND FIELD**

PE 152I

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate track and field. [PE, SE]

### **SPORTS CONDITIONING: CHEERLEADING**

PE 152J

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate cheerleading.

### **SPORTS CONDITIONING: CROSS COUNTRY**

PE 152K

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate cross country. [PE, SE]

### **SPORTS CONDITIONING: BASEBALL**

PE 152M

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate baseball. [PE, SE]

### **TENNIS**

PE 155

1 Credits

22 hours of lab

Basic tennis skills including grip, foot work, and strokes, such as backhand, forehand, volley and serve. The drop shot, lob, and overhead shots will be introduced, as will singles and doubles strategies, rules, scoring and court etiquette. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop basic tennis skills.
- Recall tennis skills, rules, and etiquette/safety.

### **VOLLEYBALL**

PE 158

1 Credits

22 hours of lab

Introduction to the fundamental skills and strategies of organized volleyball. Volleyball requires development of the following individual skills: forearm pass, set, spike, block, dig, and serve. In addition, students will gain an understanding of elementary team strategies. Students will learn to practice effective communication with teammates. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop basic volleyball skills.
- Recall volleyball skills, rules, etiquette, offenses and defenses.
- Develop positive communication and "sportsmanship" behavior (respecting, helping and



encouraging others).

- Develop behavior change strategies (e.g. research, information gathering, motivational strategies, benefits and barriers, goal setting, plan development, back-up plans, rewards, logging/documentation, practice, reflection).

### **ULTIMATE FRISBEE-BEGINNING**

PE 163

1 Credits

22 hours of lab

Ultimate Frisbee fundamentals: individual skill development, rules, game play, and strategies. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop basic disc skills.
- Recall skills, rules, etiquette, offenses and defenses of bocce ball and disc play.
- Develop positive communication and "sportsmanship" behavior (respecting, helping and encouraging others) .
- Develop behavior change strategies (e.g. research, information gathering, motivational strategies, benefits and barriers, goal setting, plan development, back-up plans, rewards, logging/documentation, practice, reflection).

### **AQUA EXERCISE**

PE 171

1 Credits

22 hours of lab

Conditioning through water exercises for students with or without swimming ability. Increased fitness with emphasis on stretching, flexibility, and abdominal and back strength. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop cardiovascular endurance, muscular endurance, muscular strength and flexibility.
- Demonstrate proper aqua exercise technique.

### **SCUBA-BEGINNING**

PE 173

2 Credits

11 hours of lecture - 22 hours of lab

Classroom lectures and discussion, swimming pool practice, and diving safety. Supervised experience in open water training optional at extra cost. Successful completion qualifies student for certification card. Prerequisite: Swimming ability. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop SCUBA diving skills.
- Practice water safety.
- Recall SCUBA principles.
- Demonstrate SCUBA diving skills.

## **BEGINNING SWIMMING**

PE 175

1 Credits

22 hours of lab

Learn and improve swimming, water survival, and safety skills. Introduction to Red Cross swimming strokes, while developing individual skill, endurance and comfort in the water.

### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop swimming strokes.
- Develop water survival skills.
- Demonstrate safe participation and positive sportsmanship.

## **SWIMMING-INTERMEDIATE**

PE 176

1 Credits

22 hours of lab

Continuation of PE 175 for students who need additional instruction and practice to improve and increase their swimming skill and confidence.

### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop swimming strokes.
- Develop water survival skills.
- Demonstrate safe participation and positive sportsmanship.

## **SWIMMING-ELEMENTARY**

PE 177

1 Credits

22 hours of lab

Designed for beginning swimming students who wish to further their confidence in the water. Focus is on improving swimming proficiency and water survival skills. Beginning swimming skills that are emphasized include the crawl, breast stroke, and diving. [PE, SE]

### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop swimming strokes.
- Develop water survival skills.
- Demonstrate safe participation and positive sportsmanship.

## **SWIM CONDITIONING-BEGINNING**

PE 179

1 Credits

22 hours of lab

Emphasizes swimming fitness through lap swimming. Students will participate in a workout designed to address their particular fitness and skill level. Prerequisite: Ability to swim comfortably in the deep end of pool. [PE, SE]

### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop the four competitive swimming strokes.
- Demonstrate safe participation and positive sportsmanship.

## **HIKING**

PE 182

1 Credits

22 hours of lab

Experience hiking off-campus on designated trails. Course emphasizes basic safety and survival skills and practices low-impact hiking methods. [PE, SE]

### **Course Outcomes:**

- Consistently participate in physical activity. 5-8 mile moderate to difficult hikes.
- Develop day-hiking skills including safety, leave no trace etiquette, and equipment use.
- Prepare for day-hiking.

## **ROWING-BEGINNING**

PE 183

1 Credits

22 hours of lab

Introduction to the sport of rowing. Includes basic technique and terminology, related water safety, development of strength, endurance and flexibility. Skills include rowing, strength training, cardiovascular training. Prerequisite: Must pass swimming test prior to first class. See Course Information Sheet outside OSC 206 for more information. [PE, SE]

### **Course Outcomes:**

- Develop physical fitness and motor skills.
- Do an ERG test three times during the quarter.
- Demonstrate safety and efficiency when handling equipment on land and on the water.
- Execute basic drills in the boat and recognize the technical reasons for doing those drills.

## **CARDIO CONDITIONING-INTERMEDIATE**

PE 200

1 Credits

22 hours of lab

Intermediate group exercise to music, primarily targeting cardiovascular conditioning. Prerequisite: PE 100. [PE, SE]

### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop cardiovascular fitness.

## **FITNESS WALKING-INTERMEDIATE**

PE 202

1 - 2 Credits

44 hours of lab

Intermediate fitness walking with emphasis on walking programs and technique. Prerequisite: PE 102. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate proper fitness walking technique.
- Develop cardiovascular endurance.
- Apply fitness walking programming to meet personal goals.

**BENCH STEP AEROBICS-INTERMEDIATE**

PE 203

1 Credits

22 hours of lab

Intermediate high-intensity/low impact exercise program using a bench step promoting overall body strength and cardiovascular fitness. Prerequisite: PE 103. [PE, SE]

**Course Outcomes:**

- Consistently participates in physical activity.
- Demonstrate bench step fundamentals.
- Develop cardiovascular fitness.
- Design a bench step routine.

**CIRCUIT FITNESS - INTERMEDIATE**

PE 204

1 Credits

22 hours of lab

An individualized systematic approach to cardiovascular fitness through the use of multiple weight machines and aerobic equipment. Pre and post fitness assessments conducted. Prerequisite: PE 104. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate proper technique on resistance machines and cardio equipment.
- Develop various components of fitness.
- Design and perform a balanced exercise circuit.

**SPEED, AGILITY, AND QUICKNESS**

PE 207

1 Credits

22 hours of lab

Additional drills to further advance personal ability in running, quickness, speed. Includes advanced plyometric training techniques. Prerequisite: PE 107. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Develop SAQ performance skills (running, jumping and sprinting) .
- Develop muscular strength and endurance, cardiovascular endurance, flexibility, coordination, agility, speed, quickness and reaction time.
- Identify principals of biomechanical and plyometric movement.

## **INDEPENDENT FITNESS - INTERMEDIATE**

PE 208

1 - 2 Credits

44 hours of lab

A continuation of the self-paced conditioning course, plus setting and implementing an additional personalized health related goal to be determined at the first individual meeting with instructor.

Prerequisite: PE 108. [PE, SE]

### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop behavior change strategies (e.g. research, information gathering, motivational strategies, benefits and barriers, goal setting, plan development, back-up plans, rewards, logging/documentation, practice, reflection).
- Develop physical fitness.

## **MARTIAL ARTS-INTERMEDIATE**

PE 209

1 - 4 Credits

88 hours of lab

A further examination into a specified martial art. Prerequisite: PE 109. [PE]

### **Course Outcomes:**

- Consistently participates in physical activity.
- Demonstrate tools or skills for this martial art.
- Develop behavior change strategies (e.g. research, information gathering, motivational strategies, benefits and barriers, goal setting, plan development, back-up plans, rewards, logging/documentation, practice, reflection).

## **MARTIAL ARTS-INTERMEDIATE:TAE KWON DO**

PE 209A

1 Credits

22 hours of lab

A further examination into Tae Kwon Do, a Korean martial art that predominately focuses on kicking. Students must purchase a uniform for this class. Prerequisite: PE 109A. [PE, SE]

## **MARTIAL ARTS-INTERMEDIATE:KUNG FU**

PE 209B

1 Credits

22 hours of lab

A further examination into Kung Fu, a Chinese method of self-defense. Covers history and philosophy, basic strikes, blocks, and escapes from various attacks and grabs. Students must purchase a uniform for this class. Prerequisite: PE 109B. [PE, SE]

## **MARTIAL ARTS-INTERMEDIATE:JUDO**

PE 209D

1 Credits

22 hours of lab

A further examination into Judo, a Japanese martial art focused on throwing, where students learn falling techniques, basic takedowns, escapes, and joint locks. Students must purchase a uniform for this class. Prerequisite: PE 109D. [PE, SE]

**MARTIAL ARTS-INTERMEDIATE:BRAZILIAN JIU-JITSU**

PE 209E

1 Credits

22 hours of lab

A further examination into Jiu-Jitsu, a Brazilian sport of self-defense that uses grappling, wrestling, and locking techniques. Students must purchase a uniform for this class. Prerequisite: PE 109C. [PE, SE]

**CORE CONDITIONING-INTERMEDIATE**

PE 211

1 Credits

22 hours of lab

Continuation of core conditioning techniques learned in PE 111. More advanced techniques introduced. Prerequisite: PE 111. [PE, SE]

**Course Outcomes:**

- Consistently participates in physical activity.
- Demonstrate core stability.
- Demonstrate proper exercise technique.

**TONE AND TRIM-INTERMEDIATE**

PE 212

1 Credits

22 hours of lab

Continuation of general fitness improvement through stretching, flexibility and toning exercise. Prerequisite: PE 112. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Develop flexibility, muscular strength, and muscular endurance.
- Demonstrate proper exercise technique.

**TOTAL BODY CONDITIONING-INT**

PE 213

2 Credits

44 hours of lab

Continuation of individualized conditioning program for developing the various components of fitness. Additional focus on learning principles of fitness to create personalized workouts.

Prerequisite: PE 113. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate proper exercise form and technique.
- Develop cardiovascular endurance, muscular endurance, muscular strength, and flexibility.
- Develop a personal exercise workout.

**TRIATHLON TRAINING**

PE 214

2 Credits

44 hours of lab

Theoretical basis and competencies needed to safely and effectively train to complete a small triathlon will be explored. Activities include swimming, cycling and running along with a self-contained mini triathlon at course conclusion. Students must know how to swim and have their own bicycle. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Develop triathlon skills (swimming, cycling, running) for participation in triathlon event.

**WEIGHT TRAINING-GENERAL II**

PE 215

1 Credits

22 hours of lab

Designed for the student who is interested in a more in-depth approach to advanced weight training exercises, programs, and systems.

**Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate advanced weight training techniques.
- Develop muscular fitness.
- Apply weight training programming to meet personal goals.
- Recall weight training principles.

**FITNESS CENTER-INTERMEDIATE**

PE 216

1 Credits

22 hours of lab

Introduction to the fundamental skills necessary to implement a physical activity program in a fitness center setting. Students develop and implement an exercise program appropriate to their fitness level and individual needs using a variety of cardiovascular and resistance machines. [PE, SE]

**Course Outcomes:**

- Consistently participates in physical activity.
- Demonstrate proper technique on resistance machines and cardio equipment.
- Develop various components of fitness.

**WEIGHT TRAINING-POWER LIFTING II**

PE 217

2 Credits

44 hours of lab

Continued application of skill and conditioning level. Application of workout design and training theory will also be covered and applied. Assessment of personal fitness parameters. Prerequisite: PE 117. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Develop advanced powerlifting techniques.

- Develop muscular strength and endurance.
- Identify principals of power lifting.

### **CARDIO KICKBOXING-INT**

PE 220

1 Credits

22 hours of lab

Continuation of PE 120. Intermediate students will demonstrate more advanced techniques and perform moves that require greater conditioning. Combines aerobic dance and martial arts, including American Kickboxing and Thai Boxing, in a format that increases cardiovascular endurance, sharpens reflexes and enhances power. Prerequisite: PE 120. [PE, SE]

#### **Course Outcomes:**

- Consistently participates in physical activity.
- Develop cardiovascular fitness.
- Demonstrate more advanced combinations of proper kickboxing technique using striking targets.

### **YOGA-INTERMEDIATE**

PE 221

1 Credits

22 hours of lab

A continuation of Hatha yoga technique. Students will practice more advanced postures and a deeper exploration of body-mind centering. Prerequisite: PE 121. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate basic skills that would allow the student to utilize yoga for participation in lifelong physical activity.
- Reflect on experience practicing yoga.
- Advance personal yoga skills.

### **T'AI CHI - INTERMEDIATE**

PE 222

1 Credits

22 hours of lab

T'ai Chi is an ancient form of mental and spiritual discipline developed in China. The movements of the T'ai Chi form are slow, deliberate and focused. Intermediate T'ai Chi will introduce additional movements of the Yang Family Short Form, as well as encourage a deeper exploration of the principles introduced in Beginning T'ai Chi. Prerequisite: PE 122. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Practice Yang Style T'ai Chi exercises.
- Demonstrate Yang Style T'ai Chi meditation form. Perform First and Second Paragraph Form.

### **HEALTHY HEART-INTERMEDIATE**



PE 223

1 Credits

22 hours of lab

Continuation of exercise designed to lower risk for heart disease or to promote cardiac recovery. Study of healthy nutrition and stress reduction in the prevention of heart disease. Prerequisite: PE 123. [GE, PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Develop cardiovascular fitness.
- Demonstrate proper technique on fitness equipment.

**PILATES-INTERMEDIATE**

PE 224

1 Credits

22 hours of lab

Continuation of Pilates method of conditioning needed to increase core strength and stabilization, improve coordination, balance, postural awareness, and increase muscular flexibility and stamina. Prerequisite: PE 124. [PE, SE]

**Course Outcomes:**

- Consistently participates in physical activity.
- Practice Pilate's exercises.
- Recall the Five Basic Pilates Principles.

**ROCK CLIMBING-INTERMEDIATE**

PE 225

1 Credits

22 hours of lab

Learn advanced rock climbing methods. Bouldering technique and Lead Climbing skills will be taught, taking the student beyond the skills learned in PE 125. Prerequisite: Completion of PE 125 or consent of Instructional Unit.

**Course Outcomes:**

- Consistently participate in physical activity.
- Develop intermediate rock climbing techniques including knot tying, belay safety, and climbing skills (hand and foot holds).
- Apply climbing skills and strategies to more advanced climbs

**BOOT CAMP-INTERMEDIATE**

PE 229

2 Credits

44 hours of lab

Continuation of physical fitness for military purposes; emphasis on basic conditioning, discipline, and leadership. This course is open to all students. Prerequisite: PE 129. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate proper exercise form and technique.
- Develop cardiovascular endurance, muscular endurance, muscular strength, and flexibility.

- Develop behavior change strategies (e.g. research, information gathering, motivational strategies, benefits and barriers, goal setting, plan development, back-up plans, rewards, logging/documentation, practice, reflection).

### **BALLET-INTERMEDIATE**

PE 230

1 Credits

22 hours of lab

Stronger techniques with more advanced steps and combinations including toe. Prerequisite: PE 130. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop intermediate Russian Classical Ballet techniques/steps/combinations.
- Develop muscular strength, cardiovascular endurance, flexibility and coordination.
- Recall ballet steps terminology.

### **BALLROOM DANCE-INTERMEDIATE: LATIN OR SMOOTH**

PE 231

1 - 3 Credits

66 hours of lab

Fundamentals, forms and pattern of ballroom dance. Develop confidence through practice with a variety of partners. SMOOTH style dances include waltz, tango, fox trot, quick step and Viennese waltz. LATIN Dance sections will include: mambo, cha cha, rhumba, samba, salsa. Prerequisite: PE 131.

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Latin: Demonstrate the five Latin Ballroom dance basics. Smooth: Demonstrate the five Smooth Ballroom dance basics.
- Perform Lead or Follow role in partnership dancing.
- Develop muscular strength, cardiovascular endurance, flexibility and coordination.

### **BALLROOM DANCE-INTERMEDIATE: SMOOTH**

PE 231A

1 Credits

22 hours of lab

Fundamentals, forms and pattern of ballroom dance. Develop confidence through practice with a variety of partners. Smooth style dances include waltz, tango, fox trot, quick step and Viennese waltz. Prerequisite: PE 131A. [PE, SE]

### **BALLROOM DANCE-INTERMEDIATE: LATIN**

PE 231B

1 Credits

22 hours of lab

Fundamentals, forms and pattern of ballroom dance. Develop confidence through practice with a variety of partners. Latin dance sections will include: mambo, cha cha, rhumba, samba, and salsa. Prerequisite: PE 131B. [PE, SE]

### **BALLROOM DANCE-INTERMEDIATE: SMOOTH-LATIN**

PE 231D

1 Credits

22 hours of lab

Fundamentals, forms and pattern of ballroom dance. Develop confidence through practice with a variety of partners. Smooth style dances include waltz, tango, fox trot, quick step and Viennese waltz. Latin dances include: mambo, cha cha, rhumba, samba, salsa. Prerequisite: PE 131C. [PE, SE]

### **CONTEMPORARY DANCE-INTERMEDIATE**

PE 233

1 Credits

22 hours of lab

Intermediate techniques with opportunities for individual and group composition. Prerequisite: PE 133. [PE, SE]

#### **Course Outcomes:**

- Have a general understanding of the basic concepts of Contemporary Dance: Time, Space, Energy.
- Know and be able to demonstrate basic dance technique and codified movements.
- Be able to manipulate movement and use movement qualities.
- Be able to Choreograph beginning level movement phrases independently.

### **MODERN JAZZ-INTERMEDIATE**

PE 234

1 Credits

22 hours of lab

Refinement of jazz technique and skill improvement. Prerequisite: PE 134. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop intermediate modern jazz techniques.
- Develop muscular strength, cardiovascular endurance, flexibility and coordination.
- Choreograph and perform a modern jazz routine.

### **SWING DANCE-INTERMEDIATE**

PE 235

1 Credits

22 hours of lab

Continuation of PE 135. Includes partnering techniques such as leverage, posture, hovering, contrary body movement, rise and fall, and sway, and styling such as Cuban motion for Latin, spring action for East Coast Swing and heel leads for smooth. Introduction to opposite role as lead/follow. Prerequisite: PE 135. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate swing dance fundamentals (Lindy-Hop East and Coast Swing basics) .
- Perform Lead or Follow role in partnership dancing.

### **HIP-HOP DANCE-INTERMEDIATE**

PE 237

1 Credits

22 hours of lab

Intermediate study of dance techniques, floor combinations, balance, and longer dance routines of hip hop dance. Develop more confidence and skill through practice. Prerequisite: PE 137. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate hip-hop combinations.
- Develop cardiovascular fitness.
- Create and perform a choreographed routine.

### **BELLY DANCE-INTERMEDIATE**

PE 239

1 Credits

22 hours of lab

Continuation of the skills learned in PE 139, plus new variations and intermediate study of Middle Eastern Dance technique. Prerequisite: PE 139. [PE, SE]

#### **Course Outcomes:**

- Consistently participates in physical activity.
- Demonstrate intermediate skills that would allow the student to utilize Belly Dance for participation in lifelong physical activity.
- Apply Belly Dance Basics steps and choreography strategies in mock performance situations.
- Demonstrate an intermediate understanding of how to apply fitness principles of Belly Dance.

### **BASKETBALL-INTERMEDIATE**

PE 240

1 Credits

22 hours of lab

Continuation of skills, practice, and competitive play. Prerequisite: PE 140. [PE, SE]

#### **Course Outcomes:**

- Consistently participates in physical activity.
- Develop individual basketball fundamentals. (dribbling, passing, shooting) .
- Develop offensive and defensive strategies specific to a team setting.
- Recognize basketball fundamentals and team strategies.

### **BOWLING-INTERMEDIATE**

PE 243

1 Credits

22 hours of lab

Advanced instruction in all phases of bowling including league play and competition. Prerequisite: PE 143. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.

- Develop bowling approach (4 or 5 steps) with proper timing and release.
- Score a bowling game.
- Determine averages and handicaps.

### **FENCING-FOIL,SABRE/EPEE**

PE 246

1 Credits

22 hours of lab

Movements of all three weapons of fencing. Emphasizes defense, offense, rules, officiating and competition. [PE, SE]

#### **Course Outcomes:**

- Execute basic footwork & body positions: attention & salute, en garde, advance, retreat, thrust, cut, lunge, crossover advance/retreat, double lunge, and combinations.
- Understand distance and timing as it relates to fencing strategy.
- Identify terms associated with fencing: parts of the sabre/epee, skills, lines of attack, strip (piste), armes, right of way.
- Perform preparatory movements.
- Perform simple and compound attacks.
- Perform defensive parries.
- Demonstrate an ability to apply basic strategies of sabre and epee fencing.
- Understand, interpret, and apply rules of fencing when bouting, officiating, or scoring.
- Understand how to be an intelligent spectator of an ancient sport and art form.
- Improve, maintain or derive physical fitness benefits.

### **FENCING-FOIL INTERMEDIATE**

PE 247

1 Credits

22 hours of lab

Skill refinement and advanced technique for experienced foil fencers. Prerequisite: PE 147. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop defensive abilities (parries, retreat, and evasion) .
- Develop footwork (advance, retreat, lunge, and recover) .

### **GOLF-INTERMEDIATE**

PE 248

1 Credits

22 hours of lab

More advanced instruction on golf swing, short game, and golf strategies. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop golf swing fundamentals.
- Recall golf game rules and etiquette.

## **SOCCER-INTERMEDIATE**

PE 250

1 Credits

22 hours of lab

Focus on learning and applying more advanced individual skills utilizing small and large groups to demonstrate more advanced team tactics. Prerequisite: PE 150. [PE, SE]

### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop fundamental soccer skills.
- Develop cardiovascular fitness and agility.
- Apply soccer rules and demonstrate positive sportsmanship.

## **SPORTS CONDITIONING INTERMEDIATE**

PE 252

1 - 30 Credits

600 hours of lab

Continuation of strength and cardiovascular conditioning in preparation for competing in intercollegiate sports. Prerequisite: Students must earn 3 credits of PE 152 before enrolling in PE 252.

### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop fundamental sport skills (specific for sport: soccer, baseball, track and field, volleyball or basketball).
- Develop offensive and defensive tactical skills.
- Develop sport-specific fitness.
- Apply sport-specific skills and strategies.
- Demonstrate positive communication and good sportsmanship.

## **SPORTS CONDITIONING INTERMEDIATE: SOCCER-MEN**

PE 252B

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in men's intercollegiate soccer. Prerequisite: PE 152B. [PE, SE]

## **SPORTS CONDITIONING INTERMEDIATE: VOLLEYBALL**

PE 252D

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in women's intercollegiate volleyball. Prerequisite: PE 152D. [PE, SE]

## **SPORTS CONDITIONING INTER: BASKETBALL-WOMEN'**

PE 252E

1 - 3 Credits

66 hours of lab

Basketball-women's: Strength and cardiovascular conditioning in preparation for competing in intercollegiate basketball. Prerequisite: PE 152E. [PE, SE]

**SPORTS CONDITIONING INTER: BASKETBALL-MEN'S**

PE 252F

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate basketball. Prerequisite: PE 152F. [PE, SE]

**SPORTS CONDITIONING INTERMEDIATE: SOFTBALL**

PE 252G

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate softball. Prerequisite: PE 152G. [PE, SE]

**SPORTS CONDITIONING INTERMEDIATE: TRACK & FI**

PE 252I

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate track and field. Prerequisite: PE 152I. [PE, SE]

**SPORTS CONDITIONING INTERMEDIATE: CHEERLEADING**

PE 252J

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate cheerleading. Prerequisite: PE 152J.

**SPORTS CONDITIONING INTERMEDIATE: CROSS COUNTRY**

PE 252K

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate cross country. Prerequisite: PE 152C. [PE, SE]

**SPORTS CONDITIONING INTERMEDIATE: BASEBALL**

PE 252M

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in men's intercollegiate baseball. Prerequisite: PE 152H. [PE, SE]

**TENNIS-INTERMEDIATE**

PE 255

1 Credits

22 hours of lab

Refinement of tennis skills, advanced game strategies and strokes. Observe and assist 100 level students. Prerequisite: PE 155. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Develop basic tennis skills.

- Recall tennis skills, rules, and etiquette/safety.

### **VOLLEYBALL-INTERMEDIATE**

PE 258

1 Credits

22 hours of lab

Further development of individual skills, team offenses and defenses learned in the beginning level PE 158. Prerequisite: PE 158. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop intermediate volleyball skills.
- Recall volleyball skills, rules, etiquette, offenses and defenses.
- Develop positive communication and "sportsmanship" behavior (respecting, helping and encouraging others) .
- Develop behavior change strategies (e.g. research, information gathering, motivational strategies, benefits and barriers, goal setting, plan development, back-up plans, rewards, logging/documentation, practice, reflection).

### **VOLLEYBALL-POWER**

PE 260

1 Credits

22 hours of lab

Higher level of volleyball for the advanced player utilizing advanced skills and drills. Emphasis will be placed on advanced offensive and defensive strategies. Prerequisite: PE 158 and PE 258 or competitive experience. [PE, SE]

#### **Course Outcomes:**

- Consistently participates in physical activity.
- Develop volleyball skills.
- Recall volleyball skills, rules, etiquette, offenses and defenses.
- Develop positive communication and "sportsmanship" behavior (respecting, helping and encouraging others) .
- Develop behavior change strategies (e.g. research, information gathering, motivational strategies, benefits and barriers, goal setting, plan development, back-up plans, rewards, logging/documentation, practice, reflection).
- Demonstrate and teach advanced volleyball skills.

### **ULTIMATE FRISBEE-INTERMEDIATE**

PE 263

1 Credits

22 hours of lab

Continuation of individual skill development, rules, game play, and strategies for the intermediate level ultimate Frisbee player. Prerequisite: PE 163. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop advanced disc skills.
- Recall skills, rules, etiquette, offenses and defenses of bocce ball and disc play.
- Develop behavior change strategies (e.g. research, information gathering, motivational



strategies, benefits and barriers, goal setting, plan development, back-up plans, rewards, logging/documentation, practice, reflection).

### **AQUA EXERCISE-INTERMEDIATE**

PE 271

1 Credits

22 hours of lab

Continuation of water exercise conditioning through stretching, flexibility, abdominal and back strength. Prerequisite: PE 171. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop cardiovascular endurance, muscular endurance, muscular strength and flexibility.
- Demonstrate proper aqua exercise technique.

### **SWIMMING-INTERMEDIATE**

PE 274

1 Credits

22 hours of lab

For the elementary swimmer who is comfortable in deep water and can swim 25 yards. Review Red Cross swimming strokes and safety skills while increasing strength and endurance. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop swimming strokes.
- Develop water survival skills.
- Demonstrate safe participation and positive sportsmanship.

### **SWIMMING-STROKE IMPROVEMENT**

PE 275

1 Credits

20 hours of lab

Review Red Cross swimming strokes, water survival and safety skills. For the swimmer who is comfortable in deep water and can swim 25 yards. Prerequisite: PE 175.

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop swimming strokes.
- Develop water survival skills.
- Demonstrate safe participation and positive sportsmanship.

### **SWIM CONDITIONING-INTERMEDIATE**

PE 279

1 Credits

22 hours of lab

Continued practice of swimming fitness through lap swimming. Students will participate in a workout designed to address their particular fitness and skill level. Prerequisite: PE 179. [PE, SE, GE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Develop the four competitive swimming strokes.
- Demonstrate safe participation and positive sportsmanship.

**SELECTED TOPICS**

PE 280

1 - 5 Credits

55 hours of lecture

The course focuses on selected topics in Physical Education. Topics vary, and course theme and content change to reflect new topics. Because the course varies in content, it is repeatable for credit for different topics. Individual topics are listed in the quarterly class schedules. [PE, SE]

**Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this course.

**HIKING-INTERMEDIATE**

PE 282

1 Credits

22 hours of lab

Continuation of hiking skills with focus on advanced safety and survival skills. Explore local hiking options, practice low-impact hiking methods on longer, more challenging hikes, and plan a future hike. [PE, SE, GE]

**Course Outcomes:**

- Consistently participate in physical activity. 7-12 mile, difficult hikes.
- Develop day-hiking skills including safety, leave no trace etiquette, and equipment use.
- Prepare for day-hiking.

**ROWING-INTERMEDIATE**

PE 283

1 Credits

22 hours of lab

Further development of rowing technique, tactics and fitness development. Prerequisite: A grade of "S" in PE 183. [PE, SE]

**Course Outcomes:**

- Develop physical fitness and motor skills.
- Do an ERG test three times during the quarter.
- Demonstrate safety and efficiency when handling equipment on land and on the water.
- Execute basic drills in the boat and recognize the technical reasons for doing those drills.

**SPECIAL PROJECTS**

PE 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the department.

Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

**CARE AND PREVENTION OF ATHLETIC INJURIES**

PE 291

3 Credits

22 hours of lecture - 22 hours of lab

Injury prevention in sports through understanding of conditioning, bio-mechanics, taping, bandaging, nutrition, immediate post-injury care, and rehabilitation of sports injury. Prerequisite: A grade of "C" or better in FT 150, BIOL 164, or BIOL& 251, or consent of Instructional Unit. [SE] [PNP]

**Course Outcomes:**

- Access and evaluate valid and reliable sports injury-related information.
- Understand basic anatomy of the human body.
- Develop a working knowledge of basic first aid and the treatment of athletic injuries, diseases and conditions.
- Know and be able to demonstrate the basic techniques of taping and bandaging as related to athletic participation.
- Understand life threatening conditions and shock.
- Comprehend the use of therapeutic modalities in the care of athletic injuries.
- Understand basic psychology of the injured athlete.
- Design and implement an injury prevention or care plan.
- Demonstrate an understanding of basic injury prevention strategies.

**MENTAL PERFORMANCE IN SPORTS**

PE 293

3 Credits

33 hours of lecture

Theories and strategies of mental preparation for improvement in individual and team performances. Discussion topics include: personality, motivational model, time management/goal setting techniques. Coach profiles, team communication, steps to team building, stress management and performance anxiety and imagery will also be covered. A review of current literature and the case analysis method will provide opportunity for individual and group application of presented materials. [SE] [PNP]

**Course Outcomes:**

- Have a basic understanding of how the human body responds to exercise, stress, and performance.
- Recognize the differences between eustress and distress.
- Develop skills to control personal stress and use it to enhance performance.
- Identify coaches' critique of personal performance, and recognize the difference between performance and the performer.
- Be able to recognize different in personality type, motivation and stimulation among all the individual show may be involved in an athletic contest.
- Understand conflict and conflict resolution and be able to recognize how it affects individual athletes and other team members.
- Recognize the effects of positive mental outlook and its effects on conditioning, motivation and performance success.
- Learn to utilize the basic principles of mental practice on improving awareness,

concentration, focus and performance.

- Identify personal strengths and weaknesses in mental preparation and how that effects personal performance.
- Identify personal goals in measurable terms and set realistic timetables for achieving them.

## **SPORT IN SOCIETY**

PE 294

3 Credits

33 hours of lecture

Explores the relationship which exists between the multifaceted world of sport and society. Discussion topics include: racism, gender in equality, aggression, deviancy, media/commercialism, as well as youth sports. Discussion will also include the concept of play, competition and the rapid development of youth sport programs and their impact on the family unit. [PE, SE] [PNP]

### **Course Outcomes:**

- Recognize the social, cultural, and financial factors affecting sport and the sport experience.
- Develop a basic understanding of social organization, group behavior, and social interaction patterns, especially as they occur in sport.
- Recognize the connection between sport and other spheres of social life, including family life, education, the media, religion, and the economy.
- Understand the history of sport and the major social factors, which contributed and controlled its development and progress.

## **INTRODUCTION TO SPORTS OFFICIATING**

PE 295

2 Credits

22 hours of lecture

This is an introductory course to sports officiating, exploring basic officiating skills including but not limited to communication, conflict management, professionalism, and personal fitness. In addition, practical experience in sport-specific officials associations will prepare students for national and local certifications that will enhance employment opportunities.

### **Course Outcomes:**

- Demonstrate knowledge and basic skills related to sports officiating.
- Discover career and employment opportunities with local referee associations.
- Distinguish characteristics of good officiating versus mediocre officiating.
- Understand the importance of physical fitness for sports officials.
- Develop sport specific officiating skills such as, mechanics, rule interpretations, and management of games.
- Build upon knowledge from local professionals with guest lectures and questions and answers sessions.

## **Physical Education Dance**

### **BALLET-BEGINNING**

PEDNC130

1 Credits

22 hours of lab

Beginning ballet technique including barre and centre work. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Develop basic Russian Classical Ballet techniques/steps.
- Develop muscular strength, cardiovascular endurance, flexibility and coordination.
- Recall ballet steps terminology.

**BALLROOM DANCE: MIXED**

PEDNC131

1 - 3 Credits

66 hours of lab

Fundamentals, forms and pattern of ballroom dance. Develop confidence through practice with a variety of partners in both smooth and latin style dances to include: waltz, tango, fox trot, quick step and Viennese waltz, mambo, cha cha, rhumba, samba, salsa.

**Course Outcomes:**

- Consistently participate in physical activity.
- Perform Lead or Follow role in partnership dancing.
- Demonstrate Ballroom dance basics.

**BALLROOM DANCE: SMOOTH**

PEDNC132

1 Credits

22 hours of lab

Fundamentals, forms and pattern of ballroom dance. Develop confidence through practice with a variety of partners. Smooth style dances include waltz, tango, fox trot, quick step and Viennese waltz.

**Course Outcomes:**

- Consistently participate in physical activity.
- Perform Lead or Follow role in partnership dancing.
- Demonstrate the five Smooth Ballroom dance basics.

**BALLROOM DANCE: LATIN**

PEDNC133

1 Credits

22 hours of lab

Fundamentals, forms and pattern of ballroom dance. Develop confidence through practice with a variety of partners. Latin style dances include: mambo, cha cha, rhumba, samba, salsa.

**Course Outcomes:**

- Consistently participate in physical activity.
- Perform Lead or Follow role in partnership dancing.
- Demonstrate the five Latin Ballroom dance basics.

**CONTEMPORARY DANCE**

PEDNC134

1 Credits

22 hours of lab

Fundamentals and techniques of modern dance and rhythmic self-expression. [PE, SE]

**Course Outcomes:**

- Have a general understanding of the basic concepts of Contemporary Dance: Time, Space, Energy.
- Know and be able to demonstrate basic dance technique and codified movements.
- Be able to manipulate movement and use movement qualities.
- Be able to Choreograph beginning level movement phrases independently.

**SWING DANCE-BEGINNING**

PEDNC135

1 Credits

22 hours of lab

Basic patterns and partnering skills for East Coast Swing (jive), West Coast Swing (hustle), and Lindy Hop. Course covers dance technique, partnering skills, patterns and music identification. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate swing dance fundamentals (Lindy-Hop East and Coast Swing basics).
- Perform Lead or Follow role in partnership dancing.

**MODERN JAZZ**

PEDNC136

1 Credits

22 hours of lab

Beginning Modern Jazz technique. Students will study fundamental moves and learn a routine. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Develop basic modern jazz techniques.
- Develop muscular strength, cardiovascular endurance, flexibility and coordination.
- Choreograph and perform a modern jazz routine.

**HIP-HOP DANCE**

PEDNC137

1 Credits

22 hours of lab

Introduction to basic dance techniques, floor combinations, balance, and longer dance routines of hip hop dance. Develop confidence and skill through practice. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate hip-hop combinations.
- Develop cardiovascular fitness.
- Create and perform a choreographed routine.

**BELLY DANCE**

PEDNC145

1 Credits

22 hours of lab

Gain knowledge of movement and dance steps, culture and history, various rhythms, country of origin and related movements. Egyptian music is the predominant focus. [PE, SE]

**Course Outcomes:**

- Consistently participates in physical activity.
- Demonstrate basic skills that would allow the student to utilize Belly Dance for participation in lifelong physical activity.
- Demonstrate a basic understanding of how to apply Belly Dance fitness principles.
- Make a connection between physical activity and wellness through Belly Dance.

**BALLET-INTERMEDIATE**

PEDNC230

1 Credits

22 hours of lab

Stronger techniques with more advanced steps and combinations including toe. Prerequisite: PEDNC 130. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Develop intermediate Russian Classical Ballet techniques/steps/combinations.
- Develop muscular strength, cardiovascular endurance, flexibility and coordination.
- Recall ballet steps terminology.

**BALLROOM DANCE-INTERMEDIATE: MIXED**

PEDNC231

1 - 3 Credits

66 hours of lab

Fundamentals, forms and pattern of ballroom dance. Develop confidence through practice with a variety of partners in both smooth and latin style dances to include: waltz, tango, fox trot, quick step and Viennese waltz, mambo, cha cha, rhumba, samba, salsa. Prerequisite: PEDNC 131.

**Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate the mixed Ballroom dance basics.
- Perform Lead or Follow role in partnership dancing.
- Develop muscular strength, cardiovascular endurance, flexibility and coordination.

**BALLROOM DANCE-INTERMEDIATE: SMOOTH**

PEDNC232

1 Credits

22 hours of lab

Fundamentals, forms and pattern of ballroom dance. Develop confidence through practice with a variety of partners. Smooth style dances include waltz, tango, fox trot, quick step and Viennese waltz. Prerequisite: PEDNC 131 or PEDNC 132. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate the five Smooth Ballroom dance basics.
- Perform Lead or Follow role in partnership dancing.
- Develop muscular strength, cardiovascular endurance, flexibility and coordination.

**BALLROOM DANCE-INTERMEDIATE: LATIN**

PEDNC233

1 Credits

22 hours of lab

Fundamentals, forms and pattern of ballroom dance. Develop confidence through practice with a variety of partners. Latin dance sections will include: mambo, cha cha, rhumba, samba, and salsa. Prerequisite: PEDNC 131 or PEDNC 132. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate the five Latin Ballroom dance basics.
- Perform Lead or Follow role in partnership dancing.
- Develop muscular strength, cardiovascular endurance, flexibility and coordination.

**CONTEMPORARY DANCE-INTERMEDIATE**

PEDNC234

1 Credits

22 hours of lab

Intermediate techniques with opportunities for individual and group composition.

**Course Outcomes:**

- Have a general understanding of the basic concepts of Contemporary Dance: Time, Space, Energy.
- Know and be able to demonstrate basic dance technique and codified movements.
- Be able to manipulate movement and use movement qualities.
- Be able to Choreograph beginning level movement phrases independently.

**SWING DANCE-INTERMEDIATE**

PEDNC235

1 Credits

22 hours of lab

Includes partnering techniques such as leverage, posture, hovering, contrary body movement, rise and fall, and sway, and styling such as Cuban motion for Latin, spring action for East Coast Swing and heel leads for smooth. Introduction to opposite role as lead/follow. Prerequisite: PEDNC 135.

**Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate swing dance fundamentals (Lindy-Hop East and Coast Swing basics).
- Perform Lead or Follow role in partnership dancing.



### **MODERN JAZZ-INTERMEDIATE**

PEDNC236

1 Credits

22 hours of lab

Refinement of jazz technique and skill improvement.

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop intermediate modern jazz techniques.
- Develop muscular strength, cardiovascular endurance, flexibility and coordination.
- Choreograph and perform a modern jazz routine.

### **HIP-HOP DANCE-INTERMEDIATE**

PEDNC237

1 Credits

22 hours of lab

Intermediate study of dance techniques, floor combinations, balance, and longer dance routines of hip hop dance. Develop more confidence and skill through practice. Prerequisite: PEDNC 137.

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate hip-hop combinations.
- Develop cardiovascular fitness.
- Create and perform a choreographed routine.

### **BELLY DANCE-INTERMEDIATE**

PEDNC245

1 Credits

22 hours of lab

Continuation of the skills learned in PEDNC 139, plus new variations and intermediate study of Middle Eastern Dance techniques. Prerequisite: PEDNC 145.

#### **Course Outcomes:**

- Consistently participates in physical activity.
- Demonstrate basic skills that would allow the student to utilize Belly Dance for participation in lifelong physical activity.
- Demonstrate a basic understanding of how to apply Belly Dance fitness principles.
- Make a connection between physical activity and wellness through Belly Dance.

## **Physical Education Exercise Science**

### **CARE AND PREVENTION OF ATHLETIC INJURIES**

PEEXS291

3 Credits

22 hours of lecture - 22 hours of lab

Injury prevention in sports through understanding of conditioning, bio-mechanics, taping, bandaging, nutrition, immediate post-injury care, and rehabilitation of sports injury. Prerequisite: A grade of "C" or better in FT 150, BIOL 164, or BIOL& 251, or consent of Instructional Unit. [SE] [PNP]

## **Course Outcomes:**

- Access and evaluate valid and reliable sports injury-related information.
- Understand basic anatomy of the human body.
- Develop a working knowledge of basic first aid and the treatment of athletic injuries, diseases and conditions.
- Know and be able to demonstrate the basic techniques of taping and bandaging as related to athletic participation.
- Understand life threatening conditions and shock.
- Comprehend the use of therapeutic modalities in the care of athletic injuries.
- Understand basic psychology of the injured athlete.
- Design and implement an injury prevention or care plan.
- Demonstrate an understanding of basic injury prevention strategies.

## **MENTAL PERFORMANCE IN SPORTS**

PEEXS293

3 Credits

33 hours of lecture

Theories and strategies of mental preparation for improvement in individual and team performances. Discussion topics include: personality, motivational model, time management/goal setting techniques. Coach profiles, team communication, steps to team building, stress management and performance anxiety and imagery will also be covered. A review of current literature and the case analysis method will provide opportunity for individual and group application of presented materials. [SE] [PNP]

### **Course Outcomes:**

- Have a basic understanding of how the human body responds to exercise, stress, and performance.
- Recognize the differences between eustress and distress.
- Develop skills to control personal stress and use it to enhance performance.
- Identify coaches' critique of personal performance, and recognize the difference between performance and the performer.
- Be able to recognize different in personality type, motivation and stimulation among all the individual show may be involved in an athletic contest.
- Understand conflict and conflict resolution and be able to recognize how it affects individual athletes and other team members.
- Recognize the effects of positive mental outlook and its effects on conditioning, motivation and performance success.
- Learn to utilize the basic principles of mental practice on improving awareness, concentration, focus and performance.
- Identify personal strengths and weaknesses in mental preparation and how that effects personal performance.
- Identify personal goals in measurable terms and set realistic timetables for achieving them.

## **INTRODUCTION TO SPORTS OFFICIATING**

PEEXS295

2 Credits

22 hours of lecture

This is an introductory course to sports officiating, exploring basic officiating skills including but not limited to communication, conflict management, professionalism, and personal fitness. In addition, practical experience in sport-specific officials associations will prepare students for national and local certifications that will enhance employment opportunities.

**Course Outcomes:**

- Demonstrate knowledge and basic skills related to sports officiating.
- Discover career and employment opportunities with local referee associations.
- Distinguish characteristics of good officiating versus mediocre officiating.
- Understand the importance of physical fitness for sports officials.
- Develop sport specific officiating skills such as, mechanics, rule interpretations, and management of games.
- Build upon knowledge from local professionals with guest lectures and questions and answers sessions.

**Physical Education Martial Arts****T'AI CHI**

PEMAR150

1 Credits

22 hours of lab

T'ai Chi is an ancient form of mental and spiritual discipline developed in China. The movements of the t'ai chi form are slow and deliberate, helping with relaxation, focus, strengthening, and balance. [PE, SE]

**MARTIAL ARTS: TAE KWON DO**

PEMAR151

1 Credits

22 hours of lab

Tae Kwon Do is a Korean martial art that predominately focuses on kicking. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate tools or skills for this martial art.
- Develop behavior change strategies (e.g. research, information gathering, motivational strategies, benefits and barriers, goal setting, plan development, back-up plans, rewards, logging/documentation, practice, reflection).

**MARTIAL ARTS: KUNG FU**

PEMAR152

1 Credits

22 hours of lab

Kung-Fu is a Chinese method of self-defense. Students will learn history, philosophy, basic strikes, blocks, and escapes from various attacks and grabs. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Demonstrate tools or skills for this martial art.
- Develop behavior change strategies (e.g. research, information gathering, motivational strategies, benefits and barriers, goal setting, plan development, back-up plans, rewards, logging/documentation, practice, reflection).

**MARTIAL ARTS: BRAZILIAN JIU-JITSU**

PEMAR153

1 Credits

22 hours of lab

Brazilian Jiu-Jitsu is a Brazilian sport/self defense that uses grappling, wrestling, and locking techniques. A uniform is required. [PE, SE]

### **MARTIAL ARTS: JUDO**

PEMAR154

1 Credits

22 hours of lab

Judo is a close-quarter combat martial art where students learn falling techniques, basic takedowns, escapes, and joint locks. [PE, SE]

### **SELF DEFENSE**

PEMAR155

1 Credits

22 hours of lab

This course is designed to teach the student basic self-defense techniques as well as situational awareness through class participation and discussion. [PE, SE]

### **T'AI CHI - INTERMEDIATE**

PEMAR250

1 Credits

22 hours of lab

T'ai Chi is an ancient form of mental and spiritual discipline developed in China. The movements of the t'ai chi form are slow and deliberate, helping with relaxation, focus, strengthening, and balance. Prerequisite: PEAR 150. [PE, SE]

### **MARTIAL ARTS-INTERMEDIATE:TAE KWON DO**

PEMAR251

1 Credits

22 hours of lab

Tae Kwon Do is a Korean martial art that predominately focuses on kicking. Prerequisite: PEAR 151. [PE, SE]

#### **Course Outcomes:**

- Consistently participates in physical activity.
- Demonstrate tools or skills for this martial art.
- Develop behavior change strategies (e.g. research, information gathering, motivational strategies, benefits and barriers, goal setting, plan development, back-up plans, rewards, logging/documentation, practice, reflection).

### **MARTIAL ARTS-INTERMEDIATE:KUNG FU**

PEMAR252

1 Credits

22 hours of lab

Kung-Fu is a Chinese method of self-defense. Students will learn history, philosophy, basic strikes, blocks, and escapes from various attacks and grabs. Prerequisite: PEAR 152. [PE, SE]

#### **Course Outcomes:**

- Consistently participates in physical activity.
- Demonstrate tools or skills for this martial art.

- Develop behavior change strategies (e.g. research, information gathering, motivational strategies, benefits and barriers, goal setting, plan development, back-up plans, rewards, logging/documentation, practice, reflection).

### **MARTIAL ARTS-INTERMEDIATE:BRAZILIAN JIU-JITSU**

PEMAR253

1 Credits

22 hours of lab

Brazilian Jiu-Jitsu is a Brazilian sport/self defense that uses grappling, wrestling, and locking techniques. A uniform is required. Prerequisite: PEMAR 153. [PE, SE]

### **MARTIAL ARTS-INTERMEDIATE:JUDO**

PEMAR254

1 Credits

22 hours of lab

Judo is a close-quarter combat martial art where students learn falling techniques, basic takedowns, escapes, and joint locks. Prerequisite: PEMAR 154. [PE, SE]

## **Physical Education Sports Conditioning**

### **SPORTS CONDITIONING:SOCCER-WOMEN**

PESPC110

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate sports. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop fundamental sport skills (specific for sport: soccer)
- Develop offensive and defensive tactical skills.
- Develop sport-specific fitness.
- Apply sport-specific skills and strategies.
- Demonstrate positive communication and good sportsmanship.

### **SPORTS CONDITIONING:SOCCER-MEN**

PESPC111

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate sports. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop fundamental sport skills (specific for sport: soccer).
- Develop offensive and defensive tactical skills.
- Develop sport-specific fitness.
- Apply sport-specific skills and strategies.
- Demonstrate positive communication and good sportsmanship.

### **SPORTS CONDITIONING: CROSS COUNTRY**

PESPC112

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate sports.  
[PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop fundamental sport skills (specific for sport: cross country).
- Develop offensive and defensive tactical skills.
- Develop sport-specific fitness.
- Apply sport-specific skills and strategies.
- Demonstrate positive communication and good sportsmanship.

### **SPORTS CONDITIONING: VOLLEYBALL**

PESPC113

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate sports.  
[PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop fundamental sport skills (specific for sport: volleyball).
- Develop offensive and defensive tactical skills.
- Develop sport-specific fitness.
- Apply sport-specific skills and strategies.
- Demonstrate positive communication and good sportsmanship.

### **SPORTS CONDITIONING: BASKETBALL-WOMEN'S**

PESPC114

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate sports.  
[PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop fundamental sport skills (specific for sport: basketball).
- Develop offensive and defensive tactical skills.
- Develop sport-specific fitness.
- Apply sport-specific skills and strategies.
- Demonstrate positive communication and good sportsmanship.

### **SPORTS CONDITIONING: BASKETBALL-MEN'S**

PESPC115

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate sports.  
[PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Develop fundamental sport skills (specific for sport: basketball).
- Develop offensive and defensive tactical skills.
- Develop sport-specific fitness.
- Apply sport-specific skills and strategies.
- Demonstrate positive communication and good sportsmanship.

**SPORTS CONDITIONING: SOFTBALL**

PESPC116

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate sports.  
[PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Develop fundamental sport skills (specific for sport: softball).
- Develop offensive and defensive tactical skills.
- Develop sport-specific fitness.
- Apply sport-specific skills and strategies.
- Demonstrate positive communication and good sportsmanship.

**SPORTS CONDITIONING: BASEBALL**

PESPC117

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate sports.  
[PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Develop fundamental sport skills (specific for sport: baseball).
- Develop offensive and defensive tactical skills.
- Develop sport-specific fitness.
- Apply sport-specific skills and strategies.
- Demonstrate positive communication and good sportsmanship.

**SPORTS CONDITIONING: TRACK AND FIELD**

PESPC118

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate sports.  
[PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.

- Develop fundamental sport skills (specific for sport: track and field).
- Develop offensive and defensive tactical skills.
- Develop sport-specific fitness.
- Apply sport-specific skills and strategies.
- Demonstrate positive communication and good sportsmanship.

### **SPORTS CONDITIONING INTERMEDIATE: SOCCER-MEN**

PESPC211

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate sports.

Prerequisite: PESPC 111. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop fundamental sport skills (specific for sport: soccer).
- Develop offensive and defensive tactical skills.
- Develop sport-specific fitness.
- Apply sport-specific skills and strategies.
- Demonstrate positive communication and good sportsmanship.

### **SPORTS CONDITIONING INTERMEDIATE: CROSS COUNTRY**

PESPC212

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate sports.

Prerequisite: PESPC 112. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop fundamental sport skills (specific for sport: cross country).
- Develop offensive and defensive tactical skills.
- Develop sport-specific fitness.
- Apply sport-specific skills and strategies.
- Demonstrate positive communication and good sportsmanship.

### **SPORTS CONDITIONING INTERMEDIATE: VOLLEYBALL**

PESPC213

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate sports.

Prerequisite: PESPC 113. [PE, SE]

#### **Course Outcomes:**

- Consistently participate in physical activity.
- Develop fundamental sport skills (specific for sport: volleyball).
- Develop offensive and defensive tactical skills.
- Develop sport-specific fitness.
- Apply sport-specific skills and strategies.
- Demonstrate positive communication and good sportsmanship.



**SPORTS CONDITIONING INTER: BASKETBALL-WOMEN'**

PESPC214

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate sports.

Prerequisite: PESPC 114. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Develop fundamental sport skills (specific for sport: basketball).
- Develop offensive and defensive tactical skills.
- Develop sport-specific fitness.
- Apply sport-specific skills and strategies.
- Demonstrate positive communication and good sportsmanship.

**SPORTS CONDITIONING INTER: BASKETBALL-MEN'S**

PESPC215

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate sports.

Prerequisite: PESPC 115. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Develop fundamental sport skills (specific for sport: basketball).
- Develop offensive and defensive tactical skills.
- Develop sport-specific fitness.
- Apply sport-specific skills and strategies.
- Demonstrate positive communication and good sportsmanship.

**SPORTS CONDITIONING INTERMEDIATE: SOFTBALL**

PESPC216

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate sports.

Prerequisite: PESPC 116. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Develop fundamental sport skills (specific for sport: softball).
- Develop offensive and defensive tactical skills.
- Develop sport-specific fitness.
- Apply sport-specific skills and strategies.
- Demonstrate positive communication and good sportsmanship.

**SPORTS CONDITIONING INTERMEDIATE: BASEBALL**

PESPC217

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate sports.

Prerequisite: PESPC 117. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Develop fundamental sport skills (specific for sport: baseball).
- Develop offensive and defensive tactical skills.
- Develop sport-specific fitness.
- Apply sport-specific skills and strategies.
- Demonstrate positive communication and good sportsmanship.

**SPORTS CONDITIONING INTERMEDIATE: TRACK & FI**

PESPC218

1 - 3 Credits

66 hours of lab

Strength and cardiovascular conditioning in preparation for competing in intercollegiate sports.

Prerequisite: PESPC 118. [PE, SE]

**Course Outcomes:**

- Consistently participate in physical activity.
- Develop fundamental sport skills (specific for sport: track and field).
- Develop offensive and defensive tactical skills.
- Develop sport-specific fitness.
- Apply sport-specific skills and strategies.
- Demonstrate positive communication and good sportsmanship.

**Pharmacy Technician**

**OVERVIEW OF PHARMACY**

PHAR 100

2 Credits

22 hours of lecture

Overview of pharmacy with particular focus on the technician in pharmacy practice settings including job roles, resources and ethical standards of practice. [GE]

**Course Outcomes:**

- Describe the practice of pharmacy specifically as it relates to the role of the pharmacy technician by examining the legal requirements and limitations, and sample job duties.
- Translate, both verbally and in written form, medical terminology and pharmacy abbreviations into simple lay English sentences.
- Discuss pharmaceutical elegance and practice standards such as behavioral and work performance ethics, including professional self-development.
- Demonstrate the ability to use various references, both written and electronic, to retrieve drug information beyond the course handouts.
- Develop and deliver an oral presentation to peers on a pharmacy related topic.

**A MINI DOSE OF PHARMACY**

PHAR 101

1 Credits

11 hours of lecture

A preview of the practice of pharmacy. Identifies the role of the pharmacy tech, explores various pharmacy practice settings for employment, beginning basics of the language of pharmacy, both in written and oral forms. [GE]

**Course Outcomes:**

- Describe the practice of pharmacy in broad terms as it relates to the role of the pharmacy technician, by examining legal requirements and limitations, and sample job duties.
- Begin to translate (both verbally and in written form) medical terminology and pharmacy abbreviations into simple lay English sentences.
- Discuss pharmaceutical elegance and practice standards such as behavioral and work performance ethics, including professional self-development.
- Identify various references (both written and electronic) for drug information beyond course handouts. Write a paper on a drug product. Drug to be assigned by the instructor.

**INTRODUCTION TO PHARMACY**

PHAR 105

4 Credits

44 hours of lecture

Introduction to the role of the pharmacy technician in a variety of pharmacy practice settings including history, personnel, resources, and ethical standards of pharmacy practice. Prerequisite: A grade of "C" or better in BMED 110 and consent of Instructional Unit. [GE]

**Course Outcomes:**

- Describe the practice of pharmacy specifically as it relates to the role of the pharmacy technician.
- Identify multiple practice settings and personnel within various pharmacies as to their job duties, legal limitations and requirements.
- Translate medical terminology and pharmacy abbreviations.
- Demonstrate the ability to use various references, both written and electronic, to retrieve drug information beyond the course text and handouts.
- Develop and deliver an oral presentation to peers on a pharmacy related topic.
- Describe the Clark College Pharmacy Tech Program goals and requirements necessary to earn a Certificate of Proficiency.

**PHARMACY CALCULATIONS**

PHAR 110

3 Credits

33 hours of lecture

Basic math and arithmetic skills as they relate to pharmacy practice. Calculations and manipulations of metrics and related dosages. Pharmacy topics related to mathematical functions are emphasized. Prerequisite: Consent of HEOC advisor. [GE]

**Course Outcomes:**

- Apply math principles to prescriptions required in preparation and distribution of drugs.
- Solve prescription calculations that require common and decimal fractions, ratios and measurement systems.
- Calculate doses of drugs based on body weight, patient age, or BSA.

## **PHARMACOLOGY I**

PHAR 112

5 Credits

55 hours of lecture

First of 2-quarter sequence in pharmacology. Topics include pharmacokinetic and pharmacodynamic principles of drug therapy, with focus on absorption, distribution, metabolism, excretion, drug classification, indication for use, dose, and side effects of the most common drugs, including antibiotics, analgesics, autonomic system, cardiovascular and respiratory drugs. Prerequisite: A grade of "C" or better in PHAR 105. [GE]

### **Course Outcomes:**

- Correctly spell and/or identify brand and generic drug names of the "Top 200" drugs as well as those found within the text.
- Using case studies, individual lab assignments and drug monographs, determine FDA indications, contraindications, doses and side effects for common drugs.
- Develop and participate in a group teaching presentation on a pharmacologic topic of material outside the text.
- Demonstrate the ability to incorporate newly released drugs into appropriate classifications, as applicable.

## **PHARMACY PRACTICE AND TECHNOLOGY**

PHAR 114

4 Credits

33 hours of lecture - 22 hours of lab

Pharmacy skills and knowledge essentials to the practice of pharmacy at the work site. Topics include correlation of terminology, computer system manipulation, use of current and emerging technology, and practical application of pharmacy dispensing activities. Prerequisite: Consent of HEOC advisor. [GE]

### **Course Outcomes:**

- Accurately use pharmacy terminology and abbreviations.
- Read and follow directions to accurately fill and process prescriptions and/or medication orders.
- Demonstrate understanding of pharmacy computer software.
- Simulate pharmacy externship experience in the lab.
- Demonstrate effective patient/customer service skills.

## **PHARMACY EXTERNSHIP I**

PHAR 118

4 Credits

132 hours of clinical

Practical on-the-job instruction in the knowledge base required of a pharmacy assistant (technician) in the work force. Community pharmacies/facilities will be used for this course. Concurrent enrollment in PHAR 119 required. Prerequisite: A grade of "C" or better in PHAR 105 and consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Describe the practice of pharmacy in various settings, not only in the student's own externship but also of peers.
- Demonstrate habits conducive to employability, including attendance, professionalism, and respectful interactions with peers and site personnel.
- Identify sources of continuing education for professional development as well as legal

requirement of licensure.

- Examine common ethical or professional issues that may occur in various pharmacy settings.
- Communicate through oral and written expression on topics related to the student's practicum site experience.

### **PHARMACY EXTERNSHIP SEMINAR I**

PHAR 119

2 Credits

22 hours of lecture

First of 2-quarter sequence coordinating with PHAR 118 externship experience at work site. Topics include professionalism, productivity, handling challenging situations, and continuing education, with emphasis on success in the workplace. Group work, case study analysis, journal entries and a final written paper are required. Concurrent enrollment in PHAR 118 and written consent of Instructional Unit. [GE] [PNP]

#### **Course Outcomes:**

- Describe the practice of pharmacy in various settings, not only in the student's own externship but also of peers.
- Demonstrate habits conducive to employability, including attendance, professionalism, and respectful interactions with peers and site personnel.
- Identify sources of continuing education for professional development as well as legal requirement of licensure.
- Examine common ethical or professional issues that may occur in various pharmacy settings.
- Communicate through oral and written expression on topics related to the student's practicum site experience.

### **PHARMACOLOGY II**

PHAR 122

5 Credits

55 hours of lecture

Second of 2-quarter sequence in pharmacology. Topics include pharmacokinetic and pharmacodynamic principles of drug therapy. Focus on absorption, distribution, metabolism, excretion, drug classification, indication for use, dose, and side effects of the most common drugs, including antidepressants and anti-anxiety agents, antipsychotics, anticonvulsants and other CNS disorder agents, hormone therapy, chemotherapy, antiretrovirals, as well as topicals, ophthalmics and otics. Prerequisite: Completion of PHAR 112 and written consent of the Instructional Unit required. [GE]

#### **Course Outcomes:**

- Correctly spell and/or identify brand and generic drug names of the "Top 200" drugs as well as those found within the text.
- Identify FDA indications, contraindications, doses and side effects for common drugs using case studies, individual lab assignments and drug monographs.
- Develop and participate in a group teaching presentation on a pharmacologic topic of material outside the text.
- Incorporate newly released drugs into appropriate classifications, as applicable.

### **PHARMACY LAW**

PHAR 123

2 Credits

22 hours of lecture

State and federal laws and regulations that pertain to the duties of pharmacy technicians. Revised Code of Washington and Washington Administrative Codes will be reviewed. Prerequisite: written consent of Instructional Unit required. [GE]

**Course Outcomes:**

- Have a basic understanding of important federal laws governing the practice of pharmacy.
- Describe in writing the legal differences between a pharmacist and a pharmacy technician.
- Describe the differences between the controlled substance drugs from each other and from legend drugs.
- Identify and discuss the rationale for continuing education in the pharmacy workforce.
- Describe the ramifications of violating laws or administrative rules.

**PHARMACY COMPOUNDING**

PHAR 127

4 Credits

33 hours of lecture - 22 hours of lab

Overview of sterile products and aseptic technique for compounding of sterile products, intravenous (IV) drug delivery systems and equipment related to compounding and administration of IV products. Combination of lecture and lab projects. [GE]

**Course Outcomes:**

- Describe the basics of intravenous drug therapy.
- Perform basic pharmacy calculations as they apply to compounding.
- Describe the key elements of working in a laminar flow hood.
- Perform basic manipulations needed to prepare a sterile product using aseptic technique.
- Describe the risks and procedures of handling cytotoxic and hazardous drugs.
- Perform basic manipulations to prepare a non-sterile product.

**PHARMACY EXTERNSHIP II**

PHAR 128

4 Credits

132 hours of clinical

Continued practical, on-the-job instruction in the knowledge base required of a pharmacy (technician) in the work force. Concurrent enrollment in PHAR 129 required. Prerequisite: Completion of PHAR 105 and written consent of Instructional Unit required. [GE]

**Course Outcomes:**

- Demonstrate and document cooperative attitude and good work habits.
- Model patient and pharmacy confidentiality.
- Describe the skills and processes required for obtaining a job in the pharmacy field.
- Describe the practice of pharmacy as it relates to a specific site/setting.

**PHARMACY EXTERNSHIP SEMINAR II**

PHAR 129

2 Credits

22 hours of lecture

Second of 2-quarter sequence coordinating with PHAR 128 externship experience. Topics include work ethics, interpersonal communication, problem solving, and success in the work place

emphasized. Components include group work, case study analysis, journal entries and a final written and oral project. Concurrent enrollment in PHAR 128 and written consent of Instructional Unit required. [GE]

**Course Outcomes:**

- Demonstrate and document cooperative attitude and good work habits.
- Model patient and pharmacy confidentiality.
- Describe the skills and processes required for obtaining a job in the pharmacy field.
- Describe the practice of pharmacy as it relates to a specific site/setting.

## Philosophy

### INTRODUCTION TO PHILOSOPHY

PHIL&101

5 Credits

55 hours of lecture

Some of the great themes and major figures of Western philosophy. [HA, SE]

**Course Outcomes:**

- Demonstrate an understanding of what it means to think philosophically.
- Demonstrate the ability to understand and evaluate the basic ideas and methods of selected philosophers whose ideas are foundational to Western culture.
- Demonstrate an ability to use philosophical terms accurately.

### TRADITIONAL LOGIC

PHIL&117

5 Credits

55 hours of lecture

Focus on sentence logic with proofs and Aristotelian logic with Venn Diagrams. Includes formulation of propositions, logical inference, syllogisms (categorical, hypothetical, etc.), and fallacies. Prerequisite: Successful completion of MATH 093 or 095, eligibility for college level math, or equivalent placement demonstrated is required. [SE]

**Course Outcomes:**

- Discern errors in one's own and others' thinking.
- Avoid such errors in one's own thinking.
- Use logical methods in problem-solving.
- Demonstrate and appreciation for both the usefulness and the limits of logic as an analytical tool.
- Demonstrate an ability to use philosophical terms and attribute philosophical ideas accurately.
- Evaluate the basic ideas and methods of selected philosophers whose ideas are foundational to Western culture.
- Demonstrate a grasp of the continuity in the development of philosophical ideas.

### SYMBOLIC LOGIC

PHIL&120

5 Credits

55 hours of lecture

Rigorous examination of logical theory emphasizing modern symbolic or formal logic, including

truth-functional logic, propositional logic with proofs, predicate logic with quantifiers and proofs. Applications include computer science, cognitive science, artificial intelligence, linguistics, mathematics, and philosophy. Prerequisite: Successful completion of MATH 093, or 095, or eligibility for college level math, or equivalent placement demonstrated is required. Cannot receive credit for both PHIL& 106 and 120. [HA, SE]

**Course Outcomes:**

- Understand and employ the principles of logic and proper reasoning including implication and validity, necessity, sufficiency, contingency, contradiction, and tautology.
- Apply the processes of formalization and instance substitution.
- Identify the elements of formal languages and their relationships.
- Reduce natural language propositions and arguments into appropriate languages of logic.
- Recognize the limits and benefits of different languages of logic and their methods.
- Select and utilize appropriate methods of logical analysis including truth-tables, natural deduction, indirect proofs in order to evaluate arguments, establish the properties of single propositions, and determine the relationship between propositions.
- Model other formal languages using various linguist properties.
- Identify and avoid common fallacies and errors in reasoning.

**INTRODUCTION TO ANCIENT AND MEDIEVAL PHILOSOPHY**

PHIL 215

5 Credits

55 hours of lecture

Introduction to ancient Western philosophy from its Greek roots, through its development in Socrates, Plato, and Aristotle, and to its adaptations into Christian thought, with special emphasis of Augustine and Aquinas. [HA, SE]

**Course Outcomes:**

- Demonstrate an ability to use philosophical terms and attribute philosophical ideas accurately.
- Evaluate the basic ideas and methods of selected philosophers whose ideas are foundational to Western culture.
- Demonstrate a grasp of the continuity in the development of philosophical ideas.

**INTRODUCTION TO EARLY MODERN PHILOSOPHY**

PHIL 216

5 Credits

55 hours of lecture

Introduction to selected great thinkers and ideas of the sixteenth, seventeenth and eighteenth centuries, including the collapse of the medieval synthesis leading to the rise of the modern scientific mentality, followed by an examination of the philosophical struggle between the rationalism and the empiricism. [HA, SE]

**Course Outcomes:**

- Demonstrate an ability to use philosophical terms and attribute philosophical ideas accurately.
- Evaluate the basic ideas and methods of selected philosophers whose ideas are foundational to Western culture.
- Demonstrate a grasp of the continuity in the development of philosophical ideas.



## **INTRODUCTION TO LATE MODERN PHILOSOPHY**

PHIL 217

5 Credits

55 hours of lecture

Selected major thinkers and ideas of the nineteenth and twentieth century, including Kant and Hegel. Focus on various philosophical movements related to Kant and Hegel: existentialism, process philosophy, Marx, Schopenhauer, positivism, and the pragmatism. [HA, SE]

### **Course Outcomes:**

- Demonstrate an ability to use philosophical terms and attribute philosophical ideas accurately.
- Evaluate the basic ideas and methods of selected philosophers whose ideas are foundational to Western culture.
- Demonstrate a grasp of the continuity in the development of philosophical ideas.

## **ETHICS**

PHIL 240

5 Credits

55 hours of lecture

Theories of morality from ancient times to the present, with attention to both practical and theoretical issues. The relationship between ethics and other areas of philosophy. [HA, SE]

### **Course Outcomes:**

- Demonstrate in written work an understanding of the questions raised by ethics as they have been answered from various points of view throughout history.
- Evaluate answers given to those questions, using the analytical tools provided, to determine whether the answers are rationally worthy of the designation "rational."
- Demonstrate an ability to apply ethical theory to ethical cases.

## **PHILOSOPHY OF RELIGION**

PHIL 251

5 Credits

55 hours of lecture

Exploration of the nature of the religious experience, the difficulties inherent in the use of religious language, the classical proofs for the existence of God, the relationship between faith and reason, and the problem of evil. [HA, SE]

### **Course Outcomes:**

- Demonstrate in written assignments an understanding of the nature of the religious experience.
- Demonstrate in written assignments an understanding of the differences between faith and religion and between philosophy and theology.
- Demonstrate in written assignments an understanding of how philosophy approaches religious questions.
- Demonstrate an ability to analyze how the religious experience gets translated into communicable, symbolic form and, ultimately, into religions.

## **SELECTED TOPICS**

PHIL 280

1 - 3 Credits

33 hours of lecture

Varying topics in philosophy, as listed in the quarterly class schedule. May be repeated for credit. [HA, SE]

**Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of Philosophy.

**SPECIAL PROJECTS**

PHIL 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the department.

Prerequisite: Completion of two philosophy courses and consent of Instructional Unit. [HA, GE]

**Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

**Phlebotomy**

**PHLEBOTOMY EDUCATION W/LAB**

PHLE 115

3 Credits

22 hours of lecture - 22 hours of lab

Training in basic venipuncture and skin puncture techniques as well as proper specimen-handling procedures as dictated by the Clinical and Laboratory Standards Institute (CLSI); (formerly NCCLS), and to function as an internal member of the clinical laboratory team. Cannot receive credit for both PHLE 115 and HEOC 115. Completion of or concurrent enrollment in BMED 111, 138, CMST& 210. Concurrent enrollment in PHLE 116 and PHLE 115L required. Prerequisite: High School completion or GED (or higher); READ 087 or higher (or COMPASS score of 74); ENGL 098 or higher (or COMPASS score of 78), BMED 110; FACPR 032; HEOC 100 or BIOL 164/165; HEOC 102, HEOC 120 and written consent from the Credentials Office. [GE]

**Course Outcomes:**

- Identify their role in the laboratory setting, as a front-line role model for the clinical laboratory. Be able to articulate their role and other applicable information in English clearly.
- Identify the relationships between quality specimen collection, correct specimen handling and processing and accurate laboratory test results.
- Differentiate between safe and unsafe clinical laboratory practices, including OSHA regulations regarding the handling and disposing of biohazard materials, chemicals/reagent hazards and physical hazards.
- Demonstrate the understanding of the need for quality assurance/quality control programs and demonstrate how to document such as required by instructors/supervisors.
- Demonstrate the ability to perform safe, successful and non-traumatic phlebotomy procedures.
- Describe the values, beliefs, and attitudes of the culturally diverse patient population.

**BASIC LABORATORY FOR THE PHLEBOTOMIST**

PHLE 116

3 Credits

11 hours of lecture

Learn to perform basic laboratory procedures that are required during specimen processing in a laboratory setting, including microcollection, pipetting, aliquoting, centrifugation, and basic equipment quality control. Cannot receive credit for both PHLE 116 and HEOC 160. Completion of PHLE 115 or concurrent enrollment in the Clark College Phlebotomy Program and Consent of Instructional Unit. Prerequisite: Concurrent enrollment in the Clark College Phlebotomy Program and Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate proper infection control.
- Recognize proper first aid and safety procedures in the laboratory setting.
- Identify quality assurance procedures in specimen collection.
- Utilize laboratory equipment.
- Determine the appropriate method of specimen collection.

**PHLEBOTOMY CLINICAL EXPERIENCE**

PHLE 197

5 Credits

150 hours of clinical

Supervised phlebotomy experience in a health care facility. Provides students with the opportunity to apply knowledge and skill in performing clinical procedures and in developing professional attitudes for interacting with other professionals and patients. Cannot receive credit for both PHLE 197 and HEOC 197. Contact a Health Occupations Advisor for additional requirements necessary for enrolling in this course. Concurrent enrollment in PHLE 198 Clinical Seminar is required. Prerequisite: Satisfactory completion of PHLE 115 and PHLE 116 and all of the course requirements, and consent of the Instructional Unit. [GE]

**Course Outcomes:**

- Identify their role in the laboratory setting, as a front-line role model for the clinical laboratory. Be able to articulate their role and other applicable information in English clearly.
- Identify the relationships between quality specimen collection, correct specimen handling and processing and accurate laboratory test results.
- Differentiate between safe and unsafe clinical laboratory practices, including OSHA regulations regarding the handling and disposing of biohazard materials, chemicals/reagent hazards and physical hazards.
- Demonstrate the understanding of the need for quality assurance/quality control programs and demonstrate how to document such as required by clinical instructors/supervisors.
- Demonstrate the ability to perform safe, successful and non-traumatic phlebotomy procedures in the clinical environment.

**PHLEBOTOMY CLINICAL SEMINAR**

PHLE 198

1 Credits

11 hours of lecture

Students concurrently enrolled in PHLE 197, Phlebotomy Clinical Experience, will receive support, direction and the necessary tools to aid in future employment in the phlebotomy and healthcare field. Concurrent enrollment in PHLE 197 is required. Attendance at all seminar sessions is mandatory in order to successfully complete the course. Cannot receive credit for both PHLE 198 and HEOC 198. Prerequisite: Satisfactory completion of PHLE 115 and PHLE 116 and all course requirements or consent of the Instructional Unit. [GE]

**Course Outcomes:**

- Identify their role in the laboratory setting, as a front-line role model for the clinical laboratory. Be able to articulate their role and other applicable information in English clearly.
- Demonstrate mastery of knowledge and competency requirements for the entry level Phlebotomy Technician by passing two of three "mock" board examinations administered by the instructor with a 75%.
- Display an understanding and empathy toward persons of culturally diverse backgrounds; patients, co-workers, as well as individuals with various types and degrees of disabilities.
- Exhibit advanced knowledge of the course material through the presentation and discussion of informational research related to phlebotomy, the laboratory, and healthcare environments.
- Demonstrate the development of a professional code of conduct for determining the proper course of action when confronted with medico-legal and bioethical situations in the laboratory; inpatient, or outpatient settings.

## Physical Science

### GENERAL PHYSICAL SCIENCE

PHSC 101

5 Credits

44 hours of lecture - 22 hours of lab

How the world around us behaves depends on the nature of matter and energy. Physical laws are presented in this course that describe the interaction of matter and energy. These laws are used to help explain experiences from daily life. For the non-science major, with little or no science background. [NS, SE]

#### Course Outcomes:

- Recall and explain the basic scientific facts, concepts and laws of physical science and how these relate to our everyday experiences.
- Distinguish between pseudoscience and the testable and falsifiable predictions of science.
- Describe and use the methods of science: the data acquisition and observations, pattern recognition, analysis and modeling that contribute to the understanding of facts, concepts, processes, and theories of physical science.
- Solve problems using relevant information, physical relationships, calculations, graphs, and appropriate units of measurement.

### GENERAL PHYSICAL SCIENCE

PHSC 102

5 Credits

44 hours of lecture - 22 hours of lab

A chemistry-focused physical science class, in which we will explore practical applications of chemical reactions. Different branches of chemistry such as inorganic, organic, biochemistry and green chemistry will be discussed as they pertain to the real world. For non-science majors with little or no science background. No prerequisites are required. [NS, SE]

#### Course Outcomes:

- Define and apply the steps of the Scientific Method to the real world situations.
- Classify the natural and physical world using scientific language.
- Describe the natural and physical world using scientific language.
- Know the subatomic particles and describe the structure of an atom.
- Describe the organization of the periodic table; use the table to categorize elements.
- Predict charges of certain elements (Group 1, 2, 16, 17, 18).
- Describe Dalton's Law of Atomic Theory.

- Apply IUPAC nomenclature rules for binary and ionic compounds.
- Determine a chemical formula from the compound name or from the charges of its ions.
- Define and describe the types of bonding.
- Define components of a chemical reaction.
- Write balanced chemical reactions.
- Name organic molecules by functional group classification.
- Draw and/or label functional groups in different bonding representations.
- Describe bonding patterns as they pertain to the shape of organic molecules.
- Describe the roles that functional groups and shape play in physical properties of organic molecules.
- Identify structural and physical differences between carbohydrates and other biological molecules.
- Differentiate between carbohydrate classifications using structural features.
- Identify structural and physical differences between lipids and other biological molecules.
- Differentiate between lipid classifications using structural features.
- Identify structural and physical differences between amino acids and other biological molecules.
- Differentiate between amino acids classifications and properties using structural features.
- Name different levels of protein structure related to different bonding forces within the molecule.
- Identify and choose topics that relate to science.
- Develop an awareness of the relationship between responsible citizenship and scientific understanding.
- Develop interpersonal and communication skills as they relate to science.
- Safely explore the natural and physical world through laboratory experiments.
- Apply lecture concepts to laboratory setting.
- Perform experiments.
- Analyze and comprehend scientifically written material.
- Describe observations using scientific language.
- Report, evaluate and summarize results using scientific language.

## **INTRODUCTION TO DESIGN**

PHSC 104

5 Credits

44 hours of lecture - 33 hours of lab

Introduction to the engineering method of problem solving through guided Engineering design projects. Focus on developing group skills, understanding the effects of different learning styles, producing strategies for innovation, and fostering creativity in problem solving. Cannot receive credit for both PHSC 104 and ENGR& 104. [NS, SE]

### **Course Outcomes:**

- Demonstrate creative thinking. Understand how to develop their creative abilities.
- Solve real-world problems in a way that demonstrates imagination and invention.
- Formulate possible solution; implement test; analyze results; and synthesize results into a form of creative expression.
- Demonstrate the ability to work effectively in a team. Realize personal learning styles, and will use conflict management techniques.
- Communicate clear, concise Engineering problem solving. Begin to create clear, concise technical reports.
- Understand Professionalism and Ethics. Develop a respect and commitment for the engineering profession.

## OUR CHEMICAL WORLD

PHSC 106

3 Credits

33 hours of lecture

Introduction to basic chemical concepts using cooperative learning and the backdrop of environmental science. This course is writing-intensive, requiring weekly essays discussing select chemical applications in the world around us. Topics include: energy and nutrient flow through the ecosystem; chemical hurdles facing agriculture; chemical, physical, and nuclear reactions of energy production; ramifications of chemical pollution; green chemical solutions. Intended for non-science majors with little or no scientific background. Prerequisite: A grade of "C" or better in ENGL 098, or eligibility for ENGL 101. [NS, SE]

### Course Outcomes:

- Define matter.
- Describe energy.
- Understand and identify changes and properties of matter.
- Define the universal characteristic of scientific laws.
- Apply the universal laws to chemical and environmental examples.
- Define chemical, physical and nuclear reactions.
- Describe nuclear processes.
- Illustrate the ubiquitous nature and far-reaching effects of chemical, physical, and nuclear reactions.
- Identify difference sources of pollution.
- Demonstrate the connection between personal actions and the state of one's environment.
- Use classmates' submissions to learn material and prepare own submission to be a learning tool for classmates.
- Use Standard American English to communicate.

## SCIENCE OF SCI FI

PHSC 110

5 Credits

33 hours of lecture - 44 hours of lab

Introduction to the Scientific Method and the principles of Physics, and Chemistry through the investigation of Science Fiction. Learn to distinguish between science and pseudoscience. Through the investigation of science fiction TV shows and films we will establish and investigate both accepted scientific principles and examine and invalidate others. Prerequisite: A grade of "C" or better in MATH 089 or 090, or placement in MATH 091 or higher. [NS, SE] [PNP]

### Course Outcomes:

- Define key terms relating to scientific rigor; including, law, hypothesis, theory, falsifiability, and verifiability.
- Distinguish science from pseudoscience in the content of a work of science fiction.
- Determine if a particular question can be answered by application of the scientific method.
- Determine if a particular argument conforms to the requirements of scientific rigor.
- Select relevant formulae and equations for the solution of problems in Physics.
- Solve and evaluate mathematical formulae to determine the plausibility of events depicted in a work of science fiction.
- Define key terms relating to experimental science; including error and uncertainty.
- Collect and record data to appropriate precision and in appropriate units of measure.
- Construct and analyze plots of experimental data to extract a result.
- Compare experimental results to the predictions of theory by computing a relative (percent) error.

## **COOPERATIVE WORK EXPERIENCE**

PHSC 199

1 - 3 Credits

99 hours of clinical

Supervised work experience in an approved job. Completion of specific learning objectives and employer evaluation. Completion of, or concurrent enrollment in, HDEV 195, 198, or 200 required. Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Fulfill the job requirements of the internship provider.

## **Physics**

### **APPLIED PHYSICS**

PHYS 090

5 Credits

44 hours of lecture - 22 hours of lab

Topics include force, motion, torque, energy, power, friction, electricity, magnetism, mechanical advantage, fluids, metric measurement, elasticity, heat, temperature, heat transfer, and heat engines. Open to all students seeking an Applied Science degree.

### **Course Outcomes:**

- Recall and explain the basic scientific facts, concepts and laws of physical science and how these relate to our everyday experiences.
- Distinguish between pseudoscience and the testable and falsifiable predictions of science.
- Describe and use the methods of science: the data acquisition and observations, pattern recognition, analysis and modeling that contribute to the understanding of facts, concepts, processes, and theories of physical science.
- Solve problems using relevant information, physical relationships, calculations, graphs, and appropriate units of measurement.

### **PHYSICS CALCULATIONS**

PHYS 091

1 Credits

11 hours of lecture

Methods of problem-solving in physics. Concurrent enrollment in PHYS & 124 is required. [PNP]

### **Course Outcomes:**

- Identify the appropriate model and select relevant principles and laws of physics applicable to a certain physics problem.
- Recognize and interpret the information given in a problem in the form of written description, graphs, tables and diagrams.
- Apply the laws of physics along with algebra tools to solve problems using equations and appropriate units.

### **PHYSICS CALCULATIONS**

PHYS 092

1 Credits

11 hours of lecture

Methods of problem-solving in physics. Concurrent enrollment in PHYS& 125 required. [PNP]

**Course Outcomes:**

- Apply the laws of physics along with algebra tools to solve problems using equations and appropriate units.
- Recognize and interpret the information given in a problem in the form of written description, graphs, tables and diagrams.
- Apply the laws of physics along with algebra tools to solve problems using equations and appropriate units.

**PHYSICS CALCULATIONS**

PHYS 093

1 Credits

11 hours of lecture

Methods of problem-solving in physics. Concurrent enrollment in PHYS& 126 required. [PNP]

**Course Outcomes:**

- Identify the appropriate model and select relevant principles and laws of physics applicable to a certain physics problem.
- Recognize and interpret the information given in a problem in the form of written description, graphs, tables and diagrams.
- Apply the laws of physics along with algebra tools to solve problems using equations and appropriate units.

**PHYSICS CALCULATIONS**

PHYS 094

1 Credits

11 hours of lecture

Methods of problem-solving in physics. Concurrent enrollment in PHYS& 221 required.

**Course Outcomes:**

- Identify the appropriate model and select relevant principles and laws of physics applicable to a certain physics problem.
- Recognize and interpret the information given in a problem in the form of written description, graphs, tables and diagrams.
- Apply the laws of physics along with algebra tools to solve problems using equations and appropriate units.

**PHYSICS CALCULATIONS**

PHYS 095

1 Credits

11 hours of lecture

Methods of problem-solving in physics. Concurrent enrollment in PHYS& 222 required.

**Course Outcomes:**

- Identify the appropriate model and select relevant principles and laws of physics applicable to a certain physics problem.
- Recognize and interpret the information given in a problem in the form of written description, graphs, tables and diagrams.
- Apply the laws of physics along with algebra tools to solve problems using equations and



appropriate units.

### **PHYSICS CALCULATIONS**

PHYS 096

1 Credits

11 hours of lecture

Methods of problem-solving in physics. Concurrent enrollment in PHYS& 223 required.

#### **Course Outcomes:**

- Identify the appropriate model and select relevant principles and laws of physics applicable to a certain physics problem.
- Recognize and interpret the information given in a problem in the form of written description, graphs, tables and diagrams.
- Apply the laws of physics along with algebra tools to solve problems using equations and appropriate units.

### **PHYSICS NON-SCI MAJORS**

PHYS&100

4 Credits

44 hours of lecture

Introduction to basic physics concepts for non-science majors, technical students, or students who desire a PHYS& 121 or 221 preparatory course. Concurrent enrollment in PHYS 101 Lab course required. Prerequisite: MATH 090 or equivalent. [NS, SE]

#### **Course Outcomes:**

- Determine physical parameters and evaluate technologies using relevant information, physical relationships, calculations, graphs, and appropriate units of measurement.
- Use appropriate written, oral, and visual communication skills while communicating an understanding of concepts and issues related to physics.

### **PHYSICS LAB NON-SCI MAJORS**

PHYS&101

1 Credits

33 hours of lab

Laboratory study of basic physics concepts for non-science majors, technical students, or students who desire a PHYS& 121 or 221 preparatory course. Concurrent enrollment in PHYS 100 course required or consent of the instructor. [NS, SE]

#### **Course Outcomes:**

- Use data acquisition and observations, data visualization, pattern recognition, analysis and modeling to explain facts, concepts, hypotheses, and theories related to physics.

### **GENERAL PHYSICS LAB I**

PHYS&124

1 Credits

33 hours of lab

Exploration of classical physics topics in mechanics through laboratory experience. Concurrent enrollment in PHYS& 134. [NS, SE]

**Course Outcomes:**

- Recall, recognize, select and apply the scientific concepts and principles of physics. Combine these concepts to construct an explanation of situations and phenomena of the physical world.
- Explain, interpret and communicate experimental results and scientific data organized in tables, graphs, diagrams, equations and written descriptions.
- Apply the scientific method to design and perform experiments using measuring tools, lab equipment and computers. Recognize and employ proper experimental techniques and examine precision, measurement error and statistical analysis of experimental data.

**GENERAL PHYSICS LAB II**

PHYS&amp;125

1 Credits

33 hours of lab

Exploration of classical physics topics in fluids, thermodynamics, and sound through laboratory experience. Concurrent enrollment in PHYS& 135. [NS, SE]

**Course Outcomes:**

- Recall, recognize, select and apply the scientific concepts and principles of physics. Combine these concepts to construct an explanation of situations and phenomena of the physical world.
- Explain, interpret and communicate experimental results and scientific data organized in tables, graphs, diagrams, equations and written descriptions.
- Apply the scientific method to design and perform experiments using measuring tools, lab equipment and computers. Recognize and employ proper experimental techniques and examine precision, measurement error and statistical analysis of experimental data.

**GENERAL PHYSICS LAB III**

PHYS&amp;126

1 Credits

33 hours of lab

Exploration of classical physics topics in electricity and magnetism, optics, and modern physics through laboratory experience. Concurrent enrollment in PHYS& 136. [NS, SE]

**Course Outcomes:**

- Recall, recognize, select and apply the scientific concepts and principles of physics. Combine these concepts to construct an explanation of situations and phenomena of the physical world.
- Explain, interpret and communicate experimental results and scientific data organized in tables, graphs, diagrams, equations and written descriptions.
- Apply the scientific method to design and perform experiments using measuring tools, lab equipment and computers. Recognize and employ proper experimental techniques and examine precision, measurement error and statistical analysis of experimental data.

**GENERAL PHYSICS I**

PHYS&amp;134

4 Credits

44 hours of lecture

First of a three-quarter sequence, offered in fall and winter quarters. Physical principles of motion,

equilibrium, dynamics, gravity, work energy, momentum, and fluids. Recommended for students in medicine, dentistry, pharmacy, physical therapy, forestry and the life sciences. Concurrent enrollment in PHYS 091 and PHYS& 124 required. Prerequisite: A grade of "C" or better in MATH 103 or equivalent or concurrent enrollment in MATH 111. [NS, SE]

**Course Outcomes:**

- Recall and state the scientific facts, concepts and principles related to mechanics.
- Answer questions about the physical world and solve problems. Analyze particular situations, select the appropriate principles and model, and apply the laws of mechanics along with mathematical tools.
- Interpret and explain fundamental laws of mechanics, and recognize how they apply to their everyday life. Combine the concepts and principles of mechanics to construct an explanation of situations and phenomena of the physical world.
- Explain, interpret and communicate scientific information and data organized in tables, graphs, diagrams, equations and written descriptions.

**GENERAL PHYSICS II**

PHYS&135

4 Credits

44 hours of lecture

Second of a three-quarter sequence beginning with PHYS& 134. Fundamental physical principles of sound, fluids, heat, thermodynamics, electricity, and magnetism. Concurrent enrollment in PHYS& 125 and PHYS 092. Prerequisite: A grade of "C" or better in PHYS& 134. [NS, SE]

**Course Outcomes:**

- Recall and state the scientific facts, concepts and principles related to physics.
- Answer questions about the physical world and solve problems. Analyze particular situations, select the appropriate principles and model, and apply the laws of mechanics along with mathematical tools.
- Interpret and explain fundamental laws of mechanics, and recognize how they apply to their everyday life. Combine the concepts and principles of mechanics to construct an explanation of situations and phenomena of the physical world.
- Explain, interpret and communicate scientific information and data organized in tables, graphs, diagrams, equations and written descriptions.

**GENERAL PHYSICS III**

PHYS&136

4 Credits

44 hours of lecture

Third of a three-quarter sequence beginning with PHYS& 134. Topics in electricity, magnetism, atomic and nuclear physics, and optics. Concurrent enrollment in PHYS& 126 and 093. Prerequisite: A grade of "C" or better in PHYS& 135. [NS, SE]

**Course Outcomes:**

- Recall and state the scientific facts, concepts and principles related to physics.
- Answer questions about the physical world and solve problems. Analyze particular situations, select the appropriate principles and model, and apply the laws of mechanics along with mathematical tools.
- Interpret and explain fundamental laws of mechanics, and recognize how they apply to their everyday life. Combine the concepts and principles of mechanics to construct an explanation of situations and phenomena of the physical world.
- Explain, interpret and communicate scientific information and data organized in tables,

graphs, diagrams, equations and written descriptions.

### **COOPERATIVE WORK EXPERIENCE**

PHYS 199

1 - 3 Credits

99 hours of clinical

Supervised work experience in an approved job. Completion of specific learning objectives and employer evaluation. Completion of, or concurrent enrollment in, HDEV 195, 198, or 200 required. Prerequisite: Consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Fulfill the job requirements of the internship provider.

### **ENGINEERING PHYSICS LAB I**

PHYS&231

1 Credits

33 hours of lab

Students will explore classical physics topics in mechanics through laboratory experience. Concurrent enrollment in PHYS& 241. [NS, SE]

#### **Course Outcomes:**

- Recall, recognize, select and apply the scientific concepts and principles of physics. Combine these concepts to construct an explanation of situations and phenomena of the physical world.
- Explain, interpret and communicate experimental results and scientific data organized in tables, graphs, diagrams, equations and written descriptions.
- Apply the scientific method to design and perform experiments using measuring tools, lab equipment and computers. Recognize and employ proper experimental techniques and examine precision, measurement error and statistical analysis of experimental data.

### **ENGINEERING PHYSICS LAB II**

PHYS&232

1 Credits

33 hours of lab

Students will explore classical physics topics in fluids, thermodynamics, and sound through laboratory experience. Concurrent enrollment in PHYS& 242. [NS, SE]

#### **Course Outcomes:**

- Recall, recognize, select and apply the scientific concepts and principles of physics. Combine these concepts to construct an explanation of situations and phenomena of the physical world.
- Explain, interpret and communicate experimental results and scientific data organized in tables, graphs, diagrams, equations and written descriptions.
- Apply the scientific method to design and perform experiments using measuring tools, lab equipment and computers. Recognize and employ proper experimental techniques and examine precision, measurement error and statistical analysis of experimental data.

### **ENGINEERING PHYSICS LAB III**

PHYS&233

1 Credits

33 hours of lab

Students will explore classical physics topics in electricity and magnetism, optics, and modern topics through laboratory experience. Concurrent enrollment in PHYS& 243. [NS, SE]

#### **Course Outcomes:**

- Recall, recognize, select and apply the scientific concepts and principles of physics. Combine these concepts to construct an explanation of situations and phenomena of the physical world.
- Explain, interpret and communicate experimental results and scientific data organized in tables, graphs, diagrams, equations and written descriptions.
- Apply the scientific method to design and perform experiments using measuring tools, lab equipment and computers. Recognize and employ proper experimental techniques and examine precision, measurement error and statistical analysis of experimental data.

### **ENGINEERING PHYSICS I**

PHYS&241

4 Credits

44 hours of lecture

Classical physics topics in mechanics. For students majoring in engineering, chemistry, physics, geology, or mathematics. Beginning course of a three-quarter sequence offered each year starting fall and winter quarters. Concurrent enrollment in PHYS& 231 and PHYS 094. Prerequisite: Completion of or concurrent enrollment in MATH& 152 (or MATH 211). [NS, SE]

#### **Course Outcomes:**

- Recall and state the scientific facts, concepts and principles related to physics.
- Answer questions about the physical world and solve problems. Analyze particular situations and construct integral and differential equations from the stated information based on the appropriate physical model.
- Interpret and explain fundamental laws of mechanics, and recognize how they apply to their everyday life. Combine the concepts and principles of mechanics to construct an explanation of situations and phenomena of the physical world.
- Explain, interpret and communicate scientific information and data organized in tables, graphs, diagrams, equations and written descriptions.

### **ENGINEERING PHYSICS II**

PHYS&242

4 Credits

44 hours of lecture

Physics topics in fluids, heat, thermodynamics, sound, electricity, and magnetism. Second quarter of a three-quarter sequence beginning with PHYS& 241. Concurrent enrollment in PHYS& 232 and PHYS 095. Prerequisite: A grade of "C" or better in PHYS& 241. [NS, SE]

#### **Course Outcomes:**

- Recall and state the scientific facts, concepts and principles related to physics.
- Answer questions about the physical world and solve problems. Analyze particular situations and construct integral and differential equations from the stated information based on the appropriate physical model.
- Interpret and explain fundamental laws of mechanics, and recognize how they apply to their everyday life. Combine the concepts and principles of mechanics to construct an explanation

of situations and phenomena of the physical world.

- Explain, interpret and communicate scientific information and data organized in tables, graphs, diagrams, equations and written descriptions.

### **ENGINEERING PHYSICS III**

PHYS&243

4 Credits

44 hours of lecture

Topics in electricity, magnetism, atomic and nuclear physics, and optics. Third quarter of a three-quarter sequence beginning with PHYS& 241. Concurrent enrollment in PHYS& 233 and PHYS 096. Prerequisite: A grade of "C" or better in PHYS& 242. [NS, SE]

#### **Course Outcomes:**

- Recall and state the scientific facts, concepts and principles related to physics.
- Answer questions about the physical world and solve problems. Analyze particular situations and construct integral and differential equations from the stated information based on the appropriate physical model.
- Interpret and explain fundamental laws of mechanics, and recognize how they apply to their everyday life. Combine the concepts and principles of mechanics to construct an explanation of situations and phenomena of the physical world.
- Explain, interpret and communicate scientific information and data organized in tables, graphs, diagrams, equations and written descriptions.

### **SPECIAL PROJECTS**

PHYS 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the department. Prerequisite: Consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## **Political Science**

### **AMERICAN NATIONAL GOVERNMENT AND POLITICS**

POLS 111

5 Credits

55 hours of lecture

The institutions, structures, and processes that affect the course of politics and public policy at the national level of American government. [SE, SS]

#### **Course Outcomes:**

- Become more knowledgeable, active and effective citizens by developing factual knowledge and analytic skills relating to: the Constitution and founding documents.
- Become more knowledgeable, active and effective citizens by developing factual knowledge and analytic skills relating to: democracy, civil rights, and civil liberties.
- Become more knowledgeable, active and effective citizens by developing factual knowledge and analytic skills relating to: the institutions of our political system.
- Become more knowledgeable, active and effective citizens by developing factual knowledge and analytic skills relating to: the interplay of parties, groups, and ideologies in the political

process.

- Become more knowledgeable, active and effective citizens by developing factual knowledge and analytic skills relating to: the roles, responsibilities, and rights of citizens.

### **STATE AND LOCAL GOVERNMENT**

POLS 131

5 Credits

55 hours of lecture

The institutions, structures, and political processes at the state and local levels of government in our federal system. [SE, SS]

#### **Course Outcomes:**

- (Student Learning Objectives) Students will become more informed, active and effective citizens by developing factual knowledge and analytic skills relating to: A) The basic structure and function of Federalism. A) How this is shaped by the United State

### **SURVEY OF STATE AND LOCAL GOVERNMENT**

POLS 141

3 Credits

33 hours of lecture

The structure and operation of state and local government, stressing the politics and other processes involved in the making of public policy at these levels of government. Designed for paralegal students. [SE, SS]

### **MODEL UNITED NATIONS**

POLS 151

2 Credits

22 hours of lecture

The United Nations and its functions, current problems, and world reactions to them. Entering students first register for 151, then subsequent numbers for up to a total of 6 quarters. [SE, SS]

### **MODEL UNITED NATIONS**

POLS 152

2 Credits

22 hours of lecture

The United Nations and its functions, current problems, and world reactions to them. Entering students first register for 151, then subsequent numbers for up to a total of 6 quarters. [SE, SS]

### **MODEL UNITED NATIONS**

POLS 153

2 Credits

22 hours of lecture

The United Nations and its functions, current problems, and world reactions to them. Entering students first register for 151, then subsequent numbers for up to a total of 6 quarters. [SE, SS]

### **WORLD WITHOUT WAR**

POLS 161

3 Credits

33 hours of lecture

Seminar exploring psychological, emotional, political, economic, and other causes of war. Emphasis on search for peace and kinds of peace research currently being conducted in the world. [SE]

### **SURVEY OF THE UNITED STATES CONSTITUTION**

POLS 171

3 Credits

33 hours of lecture

An examination of the role of the Constitution and judicial interpretation in American politics and public policy. Primary emphasis is on the United States Supreme Court. Specific topics will include civil rights, civil liberties, economic regulation and property rights, and criminal justice.

Prerequisite: POLS 111 or CJ& 101 or HIST& 146. [SE]

### **INTERNATIONAL RELATIONS**

POLS&203

5 Credits

55 hours of lecture

World politics, concepts and theories from the post-World War II period. Processes of power, foreign policy, development and trends in the current international scene analyzed. Conflict and conflict resolution and control. [SE, SS]

#### **Course Outcomes:**

- Become more knowledgeable, active, and effective global citizens by developing factual knowledge and analytic skills relating to the international/ world system, including the history of the international system and how it has shaped the modern world.
- Become more knowledgeable, active, and effective global citizens by developing factual knowledge and analytic skills relating to the international/ world system, including the competing theories of world politics and international decision making.
- Become more knowledgeable, active, and effective global citizens by developing factual knowledge and analytic skills relating to the international/ world system, including the primary actors in the system.
- Become more knowledgeable, active, and effective global citizens by developing factual knowledge and analytic skills relating to the international/ world system, including the types of interactions among members of the system, including war, diplomacy, an
- Become more knowledgeable, active, and effective global citizens by developing factual knowledge and analytic skills relating to the international/ world system, including major issues in international politics.
- Become more knowledgeable, active, and effective global citizens by developing factual knowledge and analytic skills relating to the international/ world system, including how the international system continues to adapt and evolve.

### **THE GEOPOLITICS OF THE MIDDLE EAST**

POLS 220

5 Credits

55 hours of lecture

Geo-political survey of the Middle East, including interrelationships between the physical, economic and political geography of this region, the impact of geography on politics and political issues within the nations of this region, the corresponding impact of politics and political issues on geography and on the lives of the people living in this region, as well as the resulting diversity of cultures, beliefs, perceptions, challenges and issues among the people of this region. This course will also examine the importance and impact of the Middle East on the rest of the world, as well as the impact and influence of the rest of the world on the Middle East. Credit not allowed for both POLS 220 and GEOG 220. [SE]



**Course Outcomes:**

- Identify the Middle East's physical environment, regional demography, and prevailing cultural patterns.
- Analyze and evaluate primary and secondary sources as they pertain to comprehending the interconnectedness of contemporary Middle Eastern issues and global affairs.
- Explain reasons for the great variety of cultural, socio-economic and political activities in the region.
- Summarize the importance and impact of the Middle East on the rest of the world, as well as the impact and influence of the rest of the world on the region.

**THE GEOPOLITICS OF AFRICA**

POLS 221

5 Credits

55 hours of lecture

Geo-political survey of Africa, including interrelationships between the physical, economic and political geography of this region, the impact of geography on politics and political issues within the nations of this region, the corresponding impact of politics and political issues on geography and on the lives of the people living in this region, as well as the resulting diversity of cultures, beliefs, perceptions, challenges and issues among the people of this region. This course will also examine the importance and impact of Africa on the rest of the world, as well as examine the impact and influence of the rest of the world on Africa. Credit not allowed for both POLS 221 and GEOG 221. [SE]

**Course Outcomes:**

- Identify Africa's physical environment, regional demography, and prevailing cultural patterns.
- Explain reasons for the great variety of cultural, socio-economic and political activities in the region.
- Analyze and evaluate primary and secondary sources as they pertain to comprehending the interconnectedness of contemporary African geopolitical issues and global affairs.
- Summarize the importance and impact of African countries on the rest of the world, as well as the impact and influence of the rest of the world on the continent.

**THE GEOPOLITICS OF CHINA, JAPAN & EAST ASIA**

POLS 222

5 Credits

55 hours of lecture

Geo-political survey of China, Japan and East Asia, including interrelationships between the physical, economic and political geography of this region, the impact of geography on politics and political issues within the nations of this region, the corresponding impact of politics and political issues on geography and on the lives of the people living in this region, as well as the resulting diversity of cultures, beliefs, perceptions, challenges and issues among the people of this region. This course will also examine the importance and impact of China, Japan and East Asia on the rest of the world, as well as examine the impact and influence of the rest of the world on China, Japan and East Asia. Credit not allowed for both POLS 222 and GEOG 222. [SE]

**Course Outcomes:**

- Identify the physical environment, regional demography, and prevailing cultural patterns of China, Japan and East Asia.
- Analyze and evaluate primary and secondary sources as they pertain to comprehending the interconnectedness of contemporary China, Japan and East Asian geopolitical issues and global affairs.

- Explain reasons for the great variety of cultural, socio-economic and political activities in the region.
- Summarize the importance and impact of China, Japan and East Asia on the rest of the world, as well as the impact and influence of the rest of the world on the region.

## **THE GEOPOLITICS OF SOUTH AND CENTRAL ASIA**

POLS 223

5 Credits

55 hours of lecture

Geo-political survey of South and Central Asia, including interrelationships between the physical, economic and political geography of this region, the impact of geography on politics and political issues within the nations of this region, the corresponding impact of politics and political issues on geography and on the lives of the people living in this region, as well as the resulting diversity of cultures, beliefs, perceptions, challenges and issues among the people of this region. This course will also examine the importance and impact of South and Central Asia on the rest of the world, as well as examine the impact and influence of the rest of the world on South and Central Asia. Credit not allowed for both POLS 223 and GEOG 223. [SE]

### **Course Outcomes:**

- Identify the physical environment, regional demography, and prevailing cultural patterns of South and Central Asia.
- Analyze and evaluate primary and secondary sources as they pertain to comprehending the interconnectedness of contemporary South and Central Asian geopolitical issues and global affairs.
- Explain reasons for the great variety of cultural, socio-economic and political activities in the region.
- Summarize the importance and impact of South and Central Asia on the rest of the world, as well as the impact and influence of the rest of the world on the region.

## **ENVIRONMENTAL POLITICS**

POLS 231

5 Credits

55 hours of lecture

Examines the relationship between industrial civilization and the natural environment by exploring underlying ecological philosophies and the economic and political processes by which environmental decisions are made. Emphasis on critical thinking and evaluating alternative points of view. Prerequisite: POLS 111, 131 or POLS& 203 (or POSC 111, 131 or 211), or consent of Instructional unit. [SE, SS]

### **Course Outcomes:**

- Develop factual knowledge and analytic skills relating to the history of environmental thought and consciousness.
- Develop factual knowledge and analytic skills relating to the recognition and development of the environment as a public policy issue.
- Develop factual knowledge and analytic skills relating to the role of citizens and interest groups in shaping this process.
- Develop factual knowledge and analytic skills relating to the role of the major institutions of government in environmental policy making.
- Develop factual knowledge and analytic skills relating to the major environmental problems and issues facing the US and the planet.
- Develop factual knowledge and analytic skills relating to alternative approaches and solutions to these problems.

**MODEL UNITED NATIONS**

POLS 251

2 Credits

22 hours of lecture

The United Nations and its functions, current problems, and world reactions to them. Entering students first register for 151, then subsequent numbers for up to a total of 6 quarters. [SE, SS]

**MODEL UNITED NATIONS**

POLS 252

2 Credits

22 hours of lecture

The United Nations and its functions, current problems, and world reactions to them. Entering students first register for 151, then subsequent numbers for up to a total of 6 quarters. [SE, SS]

**MODEL UNITED NATIONS**

POLS 253

2 Credits

22 hours of lecture

The United Nations and its functions, current problems, and world reactions to them. Entering students first register for 151, then subsequent numbers for up to a total of 6 quarters. [SE, SS]

**SELECTED TOPICS**

POLS 280

1 - 5 Credits

55 hours of lecture

This course focuses on selected topics in political science. Topics vary and course theme and content change to reflect new topics. Because the course varies in content, it is repeatable for credit for different topics. [SE]

**Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this course.

**SPECIAL PROJECTS**

POLS 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the department.

Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

**Paralegal****INTRODUCTION TO LEGAL THEORY**

PRLE 101

3 Credits

33 hours of lecture

Introduction to the origin of our legal system and the theories giving rise to our common law, civil law, and statutory law systems, with emphasis on legal terminology in our contemporary legal system. Review of the court system with emphasis on our state courts and an overview of substantive law. [GE] [PNP]

**Course Outcomes:**

- 1.1. List general historical origins of law
- 1.2. Explain basic concepts of a common law legal system, civil law system
- 1.3. Explain the purpose and differences between substantive laws and procedural laws
- 1.4. Identify and define various personnel working in the US legal system, such as attorneys, paralegal, justices, and clerks. Explain the concept of federalism, the power of the federal government to make laws and identify the source of that power
- 1.5. Discuss the limits on the right of the states to make laws in light of federalism
- 1.6. Explain the difference between exclusive and concurrent jurisdiction as related to the law-making process
- 1.7. Explain how the Supremacy Clause relates to the law-making power of the states
- 1.8. Identify and describe the function of each branch of the federal government
- 1.9. Describe the role of the US Constitution and state constitutions
- 1.10. Explain how the concept of precedent operates today
- 1.11. Compare and contrast case law and statutory law
- 1.12. Describe the organization of the US Constitution
- 1.13. Explain the concepts of separation of powers and checks and balances
- 1.14. Describe the origin and importance of judicial review
- 1.15. Discuss the rights found in the 1st Amendment and other amendments in the Bill of Rights
- 1.16. Explain the Constitutional basis and the Supreme Court interpretation of the right to privacy
- 1.17. Explain how the Constitutional mechanisms work through the applications of the Interstate Commerce Clause and the Supremacy Clause to interstate commerce and Federal Sovereignty versus State Sovereignty
- 1.18. Define the concept of due process.
- 1.19. Explain the purpose of the warrant requirement
- 1.20. Explain the purpose of the initial appearance of a defendant
- 1.21. Generalize the Fourth Amendment requirements that must be met before a search warrant will be issued
- 1.22. List and explain the role of the trial participants such as plaintiff, defendant, witness and more
- 1.23. Describe the voir dire questioning process
- 1.24. Explain the difference between the burden of proof in a criminal case and the burden of proof in a civil case
- 1.25. Discuss the importance of a closing argument
- 1.26. Outline the basic procedural phases in a civil lawsuit (pre-trial, trial and post-trial)
- 1.27. Compare and contrast subject matter jurisdiction with personal or geographical jurisdiction
- 1.28. Define venue and explain how it is determined in specific cases
- 1.29. Describe the different means of services of process and explain the Constitutional purpose of proper service of process
- 1.30. Outline and define the scope of Discovery and the different methods of Discovery
- 1.31. Define the concept of due process.
- 1.32. Explain the purpose of the warrant requirement
- 1.33. Explain the purpose of the initial appearance of a defendant
- 1.34. Generalize the Fourth Amendment requirements that must be met before a search warrant will be issued
- 1.35. Paraphrase the concept of relevancy
- 1.45. Explain the relevance of tort law to personal injury litigation
- 1.46. Compare and contrast intentional torts and negligence
- 1.47. Discuss the elements of a cause of action for negligence

- 1.48. Explain defenses to different types of torts
- 1.49. Outline the elements required for the formation of a contract
- 1.50. Explain the purpose of the UCC in contract law
- 1.51. Explain common law contract concepts including the Statute of Frauds, the parol evidence rule, quasi contract principles and promissory estoppel
- 1.52. Distinguish real property from personal property
- 1.53. Identify types of ownership and non-ownership interest in real property
- 1.54. Explain the nature of intellectual property.
- 1.55. List the procedures for protecting various types of intellectual property
- 1.56. Identify the three major types of business organizations
- 1.57. Describe the characteristics of a sole proprietorship
- 1.58. Compare and contrast a general partnership with a limited partnership
- 1.59. Describe the characteristics of a business corporation
- 1.60. Explain the roles of directors, officers, and shareholders in a corporation
- 1.61. Explain the differences between community property and separate property
- 1.62. Explain how family law disputes differ from other civil actions
- 1.63. Explain the elements of a divorce, custody, child support and alimony actions
- 1.64. Describe the benefits of ADR
- 1.65. Explain how Arbitration works
- 1.66. Describe the qualification of arbitrators, mediators and other ADR providers Compare and contrast arbitration with mediation
- 1.67. List and define methods of ADR other than arbitrating and mediation
- 1.68. Describe the roles of private judges, special master (neutrals) and discovery referees in ADR2.

## **LEGAL ETHICS**

PRLE 102

3 Credits

33 hours of lecture

Introduction to legal ethics, a study of issues: respecting client confidentiality, protecting a client's privileged communications, avoiding conflicts of interests, and avoiding unauthorized practice of law. Exploration of other ethical issues regarding legal fees and fee sharing arrangements, advertising and solicitation, and competence and honesty. [GE] [PNP]

### **Course Outcomes:**

- 2.1. Define basic concepts of a common law legal system, civil law system.
- 2.2. Recite the purpose and differences between substantive laws and procedural laws.
- 2.3. Identify and define Unauthorized Practice of Law.
- 2.4. Determine the importance of lawyer and non-lawyer employees in a legal office to have a working knowledge of their jurisdiction's rules of lawyer conduct.
- 2.5. List various sanctions for violations of the RPC.
- 2.6. Outline a Lawyers' duty of supervision under RPC 5.3.
- 2.7. Appraise and evaluate conduct that is authorized practice of law and that which is unauthorized.
- 2.8. Discuss what activities paralegals are permitted to perform.
- 2.9. Evaluate and defend the reasons underlying the principles found in the duty of confidentiality.
- 2.10. Explain when the duty of confidentiality arises.
- 2.11. Critique how long the duty of confidentiality applies.
- 2.12. Distinguish between the Work Product Rule and the duty of confidentiality.
- 2.13. List concerns when a lawyer sues an existing client in an unrelated suit.
- 2.14. Assess the public and private concerns of joint representation (when a lawyer represent two clients in the same matter) .
- 2.15. Relate the conflicts caused by the lawyer in pursuit of his/her own interests.
- 2.16. Describe how one lawyer's conflict may affect the firm's duty to avoid conflicts.

- 2.17. Critique the harm in the different prohibitions against lawyers making any false or misleading statements with appropriate comments in each assessment.
- 2.18. Defend the policy that Lawyers shall not create false or misleading information.
- 2.19. Explain the meaning behind the rule that a lawyer's fee shall not be unreasonable.
- 2.20. List the types of legal fees.
- 2.21. Identify and explain various problems related to lawyer substance abuse/addiction, judicial misconduct, failure to ethically abide by Discovery requests, and the minimum level of responsibility that all members of the legal profession are expected to
- 2.22. Compare and contrast the duty of competence between a lawyer and a non-lawyer employee specifically a paralegal.
- 2.23. Appraise the general value in truthfulness in legal representation.
- 2.24. Analyze and differentiate the variety of topics in legal ethical dilemmas and the assortment of viewpoints shared by student led discussions.

## LEGAL RESEARCH

PRLE 103

3 Credits

22 hours of lecture - 22 hours of lab

Legal research terminology and legal research strategies. Topics include efficient techniques to locate state and federal legal information by citation; locate search tools; update validity of legal resources; construct appropriate legal citations using ALWD Citation Manual style; develop a research strategy to efficiently and productively research a given legal issue. PRLE 102 recommended. Prerequisite: A grade of "C" or better in PRLE 101 and ENGL& 101 or consent of Instructional Unit. [GE] [PNP]

### Course Outcomes:

- 3.1. Recite basic legal research utilities.
- 3.2. Outline the conventional and computer assisted research services to find the best answer to a research problem as quickly and as effectively as possible.
- 3.3. Compare and contrast the Federal Court System with the State Court Systems when confronted with research assignments to understand the weight or emphasis of cases from such courts and systems
- 3.4. Assess and locate statutes, federal or state, which govern or control various areas of concern by reviewing a statute's scope, language, and court interpretations of such statute.
- 3.5. Compare and contrast the Federal Court System with the State Court Systems when confronted with research assignments to understand the weight or emphasis of cases from such courts and systems.
- 3.6. Assess and locate statutes, federal or state, which govern or control various areas of concern by reviewing a statute's scope, language, and court interpretations of such statute.
- 3.7. Analyze and recite the elements of a typical court case and the case reporters which publish such decisions from state and federal courts
- 3.8. Assess, compare and contrast the use of digests, annotated law reports and Words and Phrases as legal research sources which provide an exhaustive overview of areas of law, in order to "speed up" the research process, to help the learner interpret th
- 3.9. Outline and determine the relevant primary authority when presented with a novel legal issue by deriving the legal issue from the use of secondary sources of law, such as legal encyclopedias, periodicals, treatises and Restatements of Law.
- 3.10. Outline and determine the relevant primary authority when presented with a novel legal issue by deriving the legal issue from the use of secondary sources of law, such as opinions of attorneys general, dictionaries, directories, form books, uniform
- 3.11. Evaluate the validity of legal authorities manually and electronically (via LexisNexis) using Shepard's Citations
- 3.12. Prescribe research techniques for special research issues found in the use of legislative histories, presidential documents, administrative law, international law, local and municipal law, and court rules.

## **LEGAL WRITING I**

PRLE 106

3 Credits

33 hours of lecture

Introduction to the basics of technical legal writing and the relationship of legal writing to legal analytical thought. Guidance through both theoretical and practical applications of writing. Focus on straight forward language. Prerequisite: A grade of "C" or better in PRLE 103 and ENGL& 101 or consent of Instructional Unit. [GE] [PNP]

### **Course Outcomes:**

- 4.1. Sketch out a case brief parts .
- 4.2. Define basic concepts of a common law legal system.
- 4.3. Recite the purpose and differences between substantive laws and procedural laws.
- 4.4. Construct precise and accurate statements in legal writing.
- 4.5. Draft clear statements in legal writing.
- 4.6. Explain statements in legal writing with enhanced readability.
- 4.7. Organize statements in legal writing to maximize the statements' informational or persuasive power.
- 4.8. Explain her/his selection of proper citation in legal authorities.
- 4.9. Practice effective legal research techniques utilizing primary and secondary sources to provide accurate statements of law.
- 4.10. Outline common rules of legal citation.
- 4.11. Outline a common form of legal writing: case brief.
- 4.12. Examine various case briefs to select the most effective styles.
- 4.13. Review the format and construction of the Legal Memorandum.
- 4.14. Construct legal issues (questions) using the most effective legal writing techniques.
- 4.15. Identify in samples of legal memoranda various elements of objectivity, specificity, and completeness.
- 4.16. Organize the format of a memorandum.
- 4.17. Prepare a Legal Memoranda (intra-office) assessing the strengths and weaknesses of a client's case in order that the supervising attorney may best represent the client's interests and select a direction for the client's legal needs.
- 4.18. Employ effective proofreading skills to eliminate in others' documents unclear passages, redundant phrases spelling and grammatical errors and typographical errors.
- 4.19. Develop techniques in polishing the finished writing project so its appearance enhances readability.

## **CIVIL LITIGATION AND PROCEDURES**

PRLE 109

3 Credits

33 hours of lecture

The litigation process, with emphasis on the law of torts and civil litigation including client and witness interviews, pleadings preparation, investigation, and appeal procedures. Prior completion of PRLE 102 and 104 recommended. Prerequisite: A grade of "C" or better in ENGL& 101 required. [GE] [PNP]

### **Course Outcomes:**

- 5.1. Define basic concepts of civil litigation and procedure.
- 5.2. Understand the role of the paralegal in civil litigation.
- 5.3. Describe the different court systems where civil litigation occurs.
- 5.4. Compare and contrast jurisdiction and venue.
- 5.5. Compare the role of the paralegal in civil litigation and the role of the attorney.

- 5.6. Define basic concepts of civil litigation and procedure.
- 5.7. Discover the various court systems in which civil litigation.
- 5.8. Appraise and evaluate preliminary considerations and evidence and investigation issues.
- 5.9. Discover the ethical considerations related to civil litigation.
- 5.10. Understand interviewing and evidence related to civil litigation.
- 5.11. Understand and demonstrate the drafting of the complaint and response process.
- 5.12. Understand and demonstrate the drafting of the answer.
- 5.13. Understand and demonstrate the drafting of counterclaims, cross-claims and third party complaints.
- 5.14. Describe the elements and draft a complaint.
- 5.15. Understand how to file a complaint.
- 5.16. Define types and draft an answer.
- 5.17. Recognize how to draft counterclaims, cross-claims and third party complaints.
- 5.18. Summarize the rule Prepare depositions and interrogatory questions and understand the paralegal's role.
- 5.19. Identify advantages and disadvantages of oral depositions s concerning motion practice and general principles of discovery.
- 5.20. Understand the paralegal's role in Independent Medical Exams, Request for Documents, and Request for Admissions.
- 5.21. Identify and explain elements and processes of trials, settlements, and post-trial practice.

## **CRIMINAL LAW AND PROCEDURES**

PRLE 110

3 Credits

33 hours of lecture

The litigation process, with emphasis on criminal law including client and witness interviews, pleadings preparation, investigation and appeals preparation. Study of general criminal law and procedures to provide a basic understanding of the criminal justice system. PRLE 102 and PRLE 104 recommended. Prerequisite: A grade of "C" or better in ENGL& 101 and PRLE 106 or consent of Instructional Unit. [GE] [PNP]

### **Course Outcomes:**

- 6.1. Explain the constitutional, statutory, and common law provisions implicated in enforcing the criminal law.
- 6.2. Comprehend the nature and origin of criminal law.
- 6.3. Understand the elements of common defenses to criminal offenses.
- 6.4. Identify the constitutional, statutory, and common law limits on the application and enforcement of the law.
- 6.5. Explain the search and seizure clause of the Fourth Amendment.
- 6.6. Identify when government action constitutes a seizure.
- 6.7. Analyze situations when warrants are required and when exceptions exist.
- 6.8. Explain the requirements for lawful interrogations and identifications.
- 6.9. Explain the criminal court procedure, from the charging decision to the appeals process.
- 6.10. Distinguish the rules of evidence from the rules of criminal procedure.
- 6.11. Understand and apply the elements of common criminal offenses to specific cases.

## **LAW OFFICE PROCEDURES AND COMPUTER TECHNOLOGY**

PRLE 115

3 Credits

33 hours of lecture

Law office organization, specialized recordkeeping, law office computer applications (software in



data management, storage and calendar controls), and accounting, scheduling, filing, management of personnel and other aspects of law office management. PRLE 102 recommended. Prerequisite: A grade of "C" or better in ENGL& 101 required. [GE] [PNP]

**Course Outcomes:**

- 7.1. Explain the functions of the components of a computer system in the law office.
- 7.2. Describe the different classes of software and the functions they perform in a law office.
- 7.3. Understand the application of legal ethics in the use of technology.
- 7.4. Understand the impact of court rules on the use of software and trial practice.
- 7.5. Describe the features of the electronic courtroom and the paperless office.
- 7.6. Describe how a computer network is used by a law firm.
- 7.7. Explain the importance of maintaining computer and network security and the steps that may be taken to do so.
- 7.8. Understand the use of legal-specific applications programs.
- 7.9. Describe how the computer is used to conduct factual and legal research.
- 7.10. Know how to locate and use the resources for learning how to use specific software programs.
- 7.11. Understand how the courts use technology.
- 7.12. Communicate with others in a support or user position about technology as it relates to the legal community.
- 7.13. Define basic structure of the courts.
- 7.14. Identify and define various personnel and departments in the US legal system, such as attorneys, paralegal, justices, clerks and prosecutors and the roles other departments play in the legal system such as Auditor, Treasurer, Secretary of State, Ins

**INTERVIEWING, INVESTIGATION AND EVIDENCE**

PRLE 150

3 Credits

33 hours of lecture

Strategies, techniques and tactics for interviewing witnesses and clients including investigation procedures, collecting evidence and preparation of complete reports for the attorney. Students will understand, review and apply Rules of Evidence. CMST& 210 or 230 (or CMST 201 or 211) and PRLE 103 recommended. Prerequisite: A grade of "C" or better in ENGL& 101 required. [GE] [PNP]

**Course Outcomes:**

- 8.1. Examine paralegal and attorney roles and applicable rules of ethics as they relate to paralegals and litigation and the handling of evidence.
- 8.2. Outline how to investigate a case and implement an evidence plan.
- 8.3. Summarize and analyze an interview, for parties, non-parties and other witnesses, within the parameters of communication theory and various motivational factors, facilitators, inhibitors, motive, perception, and rapport building in interviews.
- 8.4. List the various methods of Discovery that are available through the legal system.
- 8.5. Contrast relevant and irrelevant evidence in federal and state court systems.
- 8.6. Identify methods for conducting legal research regarding evidence.
- 8.7. Outline the Rules of Evidence Outline including foundation and chain of custody, admissibility, highly prejudicial evidence, hearsay, recognized exceptions to hearsay, opinion testimony.
- 8.8. Demonstrate proper file organization during the trial's progression.
- 8.9. Distinguish among the various alternative dispute resolution systems.
- 8.10. Understand how traditional rules of evidence apply to new technologies such as electronic records and files.

## **CIVIL LITIGATION I: LEGAL DOCUMENT PREPARATION**

PRLE 151

3 Credits

33 hours of lecture

Preparation of legal documents, legal terminology, and court rules and procedures as applied to general areas of law. Ability to type 40 wpm is recommended. Prerequisite: A grade of "C" or better in ENGL& 101, PRLE 101, PRLE 102 and BTEC 122 or 125 or consent of Instructional Unit. [GE] [PNP]

### **Course Outcomes:**

- 9.1. Discover the basic concepts of a common law legal system, civil law system.
- 9.2. Compare the purpose and differences between substantive laws and procedural laws.
- 9.3. Understand how to prepare, serve, and file pleadings, legal forms, and other papers regularly used in litigation and other areas of law.
- 9.4. Find, interpret, and apply Washington Court Civil Rules and Local County Court Rules in relation to the documents they have prepared.

## **COMPUTER RESEARCH IN LAW**

PRLE 203

3 Credits

22 hours of lecture - 22 hours of lab

Survey of legal research terminology, electronic legal resources, and research strategies. Students will learn to locate state and federal legal information by citation through finding tools, utilize research strategies to efficiently locate non-legal information of interest to the legal researcher, evaluate the validity of electronic sources, and construct appropriate electronic sources. Prerequisite: A grade of "C" or better in ENGL& 101, PRLE 103 and 106 or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- 10.1. Identify the legal authority of a legal source when cited to a court.
- 10.2. Understand the structure of federal and state court systems.
- 10.3. Understand the publication sequence of primary legal resources.
- 10.4. Distinguish between official and unofficial legal publications.
- 10.5. Understand the function of digests in case law research.
- 10.6. Locate federal and state court decisions and codes by citation.
- 10.7. Understand the function and publication formats of administrative codes.
- 10.8. Identify the unique research value of various secondary resources.
- 10.9. Properly use the ALWD Tables to identify sources and abbreviations.
- 10.10. Construct a legal citation for a given primary or secondary legal resource.
- 10.11. Understand the general advantages and disadvantages of free and fee-based electronic resources.
- 10.12. Consider scope and cost as factors in selecting a cost-effective service.
- 10.13. Determine the arrangement of information sources in fee-based services.
- 10.14. Apply Boolean logic, proximity connectors, and field restrictions to a search strategy.
- 10.15. Understand how to refine an initial search strategy for productive results.
- 10.16. Differentiate among search engine and their document retrieval style.
- 10.17. Determine a Web site's purpose from its URL.
- 10.18. Evaluate a Web site's authority and scholarship.
- 10.19. Evaluate information content for accuracy, comprehensiveness, and uniqueness.
- 10.20. Determine whether a Web site's information is current.
- 10.21. Evaluate a Web site's design, presentation style, and technology.
- 10.22. Evaluate a Web site's integrity and stability.
- 10.23. Understand the basic search strategy of Internet search tools, including the availability and function of advanced search features.

- 10.24. Identify and apply the standard evaluation criteria for evaluating electronic resources.
- 10.25. Diagnose the appropriateness of a Web site's technology.
- 10.26. Review Issue Formation.
- 10.27. Understand the role secondary research plays in identifying primary legal authority and commentary about primary sources.
- 10.28. Understand the specialized purpose of secondary resources including legal encyclopedias, Restatements, American Law Reports, and practice materials.
- 10.29. Understand the legal research function of legal periodicals and news resources.
- 10.30. Understand the major purposes of citation services.
- 10.30. Understand the major purposes of citation services.
- 10.31. Understand how to refine initial search strategy for productive results.
- 10.32. Determine the appropriate format to review and deliver research results.
- 10.33. Understand and appropriately apply electronic research techniques and evaluation techniques to selected Internet Web sites.
- 10.34. Understand and appropriately apply electronic research techniques and search strategies to selected Lexis databases.
- 10.35. Review the purpose and process of statutory law and its relationship to legal research.
- 10.36. Understand the basic rules and process of statutory interpretation.
- 10.38. Review the function of administrative agencies and the rule-making process.
- 10.39. Properly update federal and state statutes and regulations.
- 10.40. Identify electronic sources that can extend legal research beyond the scope of print research materials or techniques.
- 10.41. Transfer traditional print research techniques and strategy to online statutory and regulatory resources.
- 10.42. Locate legal cases with citation, party names and topics.
- 10.43. Consult legal dictionaries and encyclopedias for known and unknown topics.
- 10.44. Research law review articles, restatements and other explanatory materials.
- 10.45. Research legal news periodicals, newspapers and journals.

## **FAMILY LAW**

PRLE 204

3 Credits

33 hours of lecture

Law and theory relating to dissolutions of marriage, legal separation, parenting/custody agreements, prenuptials, antenuptial agreements, adoptions, child support, change of name, and post-divorce issues such as maintenance modification, child support modification, and parenting plan modifications. Prerequisite: A grade of "C" or better in ENGL& 101, PRLE 101 and PRLE 151 or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- 11.1. Identify the sources of law used to resolve family matters.
- 11.2. Describe the role of societal values in the development of family law.
- 11.3. Describe the basic structure of the Washington State Court System.
- 11.4. Discuss the factors that precipitate changes in family law.
- 11.5. List the procedures court use to address disputed family law issues.
- 11.6. List the procedures law firms use within the office to handle family law cases.
- 11.7. Determine the requirements for a valid marriage.
- 11.8. Understand how a common law marriage is created.
- 11.9. Identify and describe the activities that constitute the unauthorized practice of law.
- 11.10. Explain the ethical issues involved in dealing with pro se or pro per litigants.
- 11.11. Understand the ethical issues that arise in the area of family law practice.
- 11.12. Explain the consequences of practicing law without a license.
- 11.13. Describe the impact of electronic mail and the precautions that must be taken to avoid breaches of client confidentiality.
- 11.14. Determine the requirements for a valid marriage in the State of Washington.

- 11.15. Identify the legal benefits of marriage.
- 11.16. Understand how a common law marriage is created.
- 11.17. Define the legal remedies available to cohabiting couples according to the landmark decision of *Marvin v. Marvin*.
- 11.18. Compare and contrast civil marriage, religious marriage, common law marriage, covenant marriage, civil union, domestic partnership, same-sex marriage and cohabitation.
- 11.19. Explain the difference between a divorce and an annulment.
- 11.20. Identify the factors that justify annulling a marriage.
- 11.21. Describe the circumstances that favor a legal separation rather than a divorce.
- 11.22. Explain the advantages and disadvantages of no-fault divorce.
- 11.23. Describe the difference between prenuptial and postnuptial agreements.
- 11.24. Understand the historical evolution of prenuptial agreements.
- 11.25. Identify the enforceable and unenforceable provision of a prenuptial agreement.
- 11.26. Understand the statutory factors in Washington considered by family courts in evaluating the issue of alimony.
- 11.27. Identify and define the various types of alimony.
- 11.28. Identify the basis for and the law governing prenuptial agreements, palimony and cohabitation and the requirements for a valid marriage.
- 11.29. Explain the circumstances that trigger the termination of alimony.
- 11.30. Understand how and when alimony may be modified.
- 11.31. Recognize the tax consequences of alimony.
- 11.32. List and describe the various forms of ownership of real property.
- 11.33. Distinguish marital property from separate property.
- 11.34. Understand the concept of property transmutation.
- 11.35. Provide examples of the conversion of separate property into marital property.
- 11.36. Describe the concepts of quotable distribution and community property.
- 11.37. Define dissipation of marital assets and give examples.
- 11.38. Explain the effect of bankruptcy on a property settlement.
- 11.39. Identify the factors considered in determining the child's best interest.
- 11.40. Understand the role family relationship play in the determination of custody.
- 11.41. Draft pleadings and documents, such as a Petition for Dissolution of Marriage, Parenting Plans, etc. using court standard legal forms and/or legally specific software and given hypothetical fact situations.
- 11.42. Define the term psychological parent.
- 11.43. Describe the joint legal custody arrangement.
- 11.44. Identify scenarios in which a third party custody action may be brought in Washington.
- 11.45. Understand the rationale behind implementation of the child support guidelines.
- 11.46. Use the internet to find the child support guidelines in Washington.
- 11.47. Describe the purpose of deviation criteria and identify the factors a court may take into consideration when deviating from the guidelines.
- 11.48. Understand the basis for modification of child support orders.
- 11.49. Describe the child support enforcement process.
- 11.50. Understand the emotional aspects of family law practice.
- 11.51. Recognize the importance of referring clients to appropriate support services when necessary.
- 11.52. Describe the role of the paralegal in the client interview process.
- 11.53. Identify the steps in the client interview.
- 11.54. Identify and describe the essential information that must be obtained from a client during the initial interview.
- 11.55. Interview clients to gather necessary financial information and facts to complete case information statements as well as preparation of same from a hypothetical fact situation.
- 11.56. Draft a dissolution of marriage complaint or petition.
- 11.57. Determine the proper geographical venue in which to file the pleadings.
- 11.58. Understand the difference between in rem and in personam jurisdiction.
- 11.59. Draft an Answer or Response to a Petition for Dissolution of Marriage and a Counter-Complaint.

- 11.60. Define the phrase “cooling-off period” and explain the purpose of a pendente lite motion.
- 11.61. Describe the basic components of a pendente lite motion.
- 11.62. List and define the most frequently used family law motion.
- 11.63. Understand the purpose and nature of ex parte proceedings.
- 11.64. Understand the role of discovery in a dissolution action.
- 11.65. Understand the paralegal’s role in facilitating discovery requests.
- 11.66. Recognize how a failure to implement effective discovery measures may expose an attorney to a legal malpractice claim if crucial personal or financial information is not request or disclosed.
- 11.67. Know the difference between a motion and request and when they are used in the discovery process.
- 11.68. Understand the limitations on the admissibility of evidence obtained by a client’s own surveillance methods in a dissolution action.
- 11.69. Understand the remedies available for over burdensome requests, and the possibility of sanctions for failure to comply with the discovery requests.
- 11.70. Understand the relevance and limitations of information obtained via social networking sites and surveillance methods.
- 11.71. Understand the relevant use of information obtained on the internet and social networking websites in family law litigation.
- 11.72. Explain the various types of Alternative Dispute Resolution options used to resolve family matters.
- 11.73. Understand the paralegal’s role in the Alternative Dispute Resolution process.
- 11.74. Distinguish between a contested and an uncontested hearing.
- 11.75. Explain the purpose of a judicial pretrial conference.
- 11.76. Discuss the role of the paralegal in trial preparation.
- 11.77. Draft pleadings and documents, such as a proposal letter for client, Petition for Dissolution of Marriage, Separation Agreement Parenting Plans, etc. using court standard legal forms and/or legally specific software and given hypothetical fact situ
- 11.78. Identify the modifiable and non-modifiable portions of a dissolution decree.
- 11.79. Describe the events that give rise to the changed circumstances needed to modify.
- 11.80. Identify the options some states provide to assist a spouse in recovering unpaid alimony or child support payments.
- 11.81. Explain why only exceptional circumstances allow for modification of a property distribution award.
- 11.82. Describe situations where the government permissibly intrudes into family matters.
- 11.83. Distinguish the concept of parens patriae as compared to in loco parentis.
- 11.84. Explain the difference between adoption, open adoption and stepparent adoption.
- 11.85. Understand the function of a child protection agency.
- 11.86. List the various social and legal service available to families dealing with domestic violence issues.
- 11.87. Identify and describe the different types of surrogacy agreements.
- 11.88. Be familiar with the issues involved in representing clients in domestic violence cases and list the grounds for and requirements of obtaining restraining orders for relief from physical abuse.

## **ESTATE PLANNING AND PROBATE LAW**

PRLE 205

3 Credits

33 hours of lecture

Law and theory of estate planning, probate, and options of probate with emphasis on wills, trusts, community property agreements, gifts, estate taxation, probate procedures, administration and accounting. Prerequisite: A grade of "C" or better in PRLE 101 and ENGL& 101 or consent of Instructional Unit. [GE]

## Course Outcomes:

- 12.1. Explain the need for an estate plan.
- 12.2. Identify basic terminology of wills.
- 12.3. Discuss the purposes of a will.
- 12.4. Identify, explain, and classify the various kinds of property, such as real and personal property.
- 12.5. Distinguish the different types of property ownership.
- 12.6. Identify probate and non-probate property.
- 12.7. Explain the content of and advantages of preparing an estate planning and estate administration portfolio.
- 12.8. Identify the disadvantages of failing to have an estate plan.
- 12.9. Understand terminology related to dying intestate and dying testate.
- 12.10. Define statute of intestate succession.
- 12.11. Explain the order of preference for heirs inheriting.
- 12.12. Compare and contrast per stirpes and per capita.
- 12.13. Explain the advantages of having an estate plan.
- 12.14. Distinguish the different types of gifts contained in a will and recognize under what circumstances a gift may fail.
- 12.15. Discuss the requirements of intent, testamentary capacity, and other formalities for a valid will.
- 12.16. Discuss the methods of will revocation.
- 12.17. Describe and discuss the following documents: codicil, power of attorney, power of attorney health care, and health care directive.
- 12.18. Discuss why each client's estate plan differs.
- 12.19. Discuss and practice how to effectively conduct an initial client interview.
- 12.20. Determine when to include and draft various sections of a will.
- 12.21. Discuss disinheritance and related clauses included in a will.
- 12.22. Explain the requirements for a testator's signature and witnesses' signatures.
- 12.23. Describe the procedure for executing a will and where the original will is recommended to be stored.
- 12.24. Discuss when a trust is an effective planning device.
- 1.1. Explain the four elements of a trust.
- 12.26. Define beneficiary and explain the concept of equitable title.
- 12.27. Define trustee, explain legal title, and identify a trustee's duties and powers.
- 12.28. Explain different types of basic trusts.
- 12.29. Describe how a trust terminates.
- 12.30. Identify different types of probate procedures.
- 12.31. Explain, in general, the procedure for conducting an estate administration.
- 12.32. Describe the role of the personal representative, identify different types of personal representatives, and identify the personal representative's duties and powers.
- 12.33. Define bond and determine when it is required.
- 12.34. Discuss when a personal representative's duty is terminated.
- 12.35. Discuss an initial client interview for an estate administration.
- 12.36. Review the initial action taken by a law firm once hired for a probate.
- 12.37. Discuss the purpose of a petition, its sections, and draft a petition for estate administration in lab.
- 12.38. Identify and discuss other initial court documents and draft them.
- 12.39. List the purpose of the letters of appointment and draft the document.
- 12.40. Define the purpose of an inventory, its contents, and prepare an inventory.
- 12.41. List under what circumstances an appraisal would be required.
- 12.42. Summarize the procedure for notification of creditors, creditors' options, and how the estate may respond to a claim.
- 12.43. List the preference given to creditors in payment of claims.
- 12.44. Prepare an SS4 form and perform the procedure for acquiring an employer identification number.
- 12.45. Define estate tax and various schedules under the Federal Estate Tax Form 706.

- 12.46. Understand why a decedent's final income tax return is required.
- 12.47. Discuss state and federal estate tax.
- 12.48. Explain and draft the documents used to close an estate.
- 12.49. Outline the procedure for a will contest.
- 12.50. List the advantages of and when a small estate administration would occur.
- 12.64. Compare and contrast ancillary and domiciliary administration.

## **REAL ESTATE AND PROPERTY LAW**

PRLE 206

3 Credits

33 hours of lecture

Law of personal and real property with emphasis on common types of real estate transactions and conveyances such as deeds, contracts, leases, deeds of trust, liens, zoning agreements, assessments, searches and foreclosures. Drafting of conveyance instruments and methods of recording and searching public records. Prerequisite: A grade of "C" or better in PRLE 101 and ENGL& 101 or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- 13.1. Explain the differences between real and personal property.
- 13.2. Explain the economic characteristics of real property.
- 13.3. Describe the real estate market.
- 13.4. List and explain the various classifications of real property.
- 13.5. Explain the differences between residential, commercial and industrial property.
- 13.6. Explain the rights created by fee simple absolute estates.
- 13.7. Define the differences between conditional fee estates, such as fee simple determinable and fee simple on a condition subsequent.
- 13.8. Describe how a life estate is created.
- 13.9. Explain the types of estates available to two or more owners of a single parcel of real estate.
- 13.10. Define the rights and obligation of joint owners.
- 13.11. Draw a metes and bounds description.
- 13.12. Explain the water rights available to landowners.
- 13.13. Define the role of property descriptions in accurately describing particular real estate tracts.
- 13.14. Describe how property boundaries change when they are bordered by water.
- 13.15. Distinguish between voluntary transfers and involuntary transfers of title in real estate.
- 13.16. Explain the basic requirements of a will.
- 13.17. Compare and contrast dedication and homesteading as a means to transfer real estate title.
- 13.18. Explain foreclosure.
- 13.19. List and explain the elements of adverse possession.
- 13.20. Explain how courts determine what qualifies as a fixture.
- 13.21. Describe how easements are created.
- 13.22. Define the air and mineral rights that real property owners possess.
- 13.23. Explain the purpose of liens.
- 13.24. Describe the importance of water rights.
- 13.25. Define the basic components of any legally binding contract.
- 13.26. Explain the importance of the Statute of Frauds to real estate transactions.
- 13.27. Explain the origin of the obligations between landlords and their tenants and how obligations have changed over time.
- 13.28. Define the basic features of leasehold estates.
- 13.29. Describe the impact of contract and property law of leasehold estates.
- 13.30. Explain how various tenancies are created, administered and terminated.
- 13.31. Explain how deeds symbolize the real estate transaction.

- 13.32. Describe the various types for deeds.
- 13.33. Define the minimum legal requirements for a deed.
- 13.34. Explain the function of deed clauses.
- 13.35. Describe the warranties made by specific types of deeds.
- 13.36. Describe the important role played by mortgage lenders in the real estate market.
- 13.37. Define the purpose of the secondary mortgage market.
- 13.38. List and explain the function of corporations such as Fannie Me, Ginnie Mae and Freddie Mac.
- 13.39. Explain the common clauses and provisions found in mortgages and deeds of trust.
- 13.40. Describe the various types of mortgages available to fund the purchase of real property.
- 13.41. Describe the nature and purpose of zoning regulations.
- 13.42. Explain the importance of urban planning.
- 13.43. Define important state and federal laws that affect the rights of private landowners.
- 13.44. Describe the area of nuisance law.
- 13.45. Identify the various real estate professions.
- 13.46. Define the role played by real estate brokers in the sale of property.
- 13.47. Explain the importance of agency law for real estate brokers.
- 13.48. Describe the function of real estate inspectors and surveyors.
- 13.49. Explain the importance of title insurance and why a title exam is necessary.
- 13.51. Explain the extent of information that can be located though public records.
- 13.51. Explain the extent of information that can be located though public records.
- 13.52. Describe the importance of a real estate settlement.
- 13.53. Explain the basic procedures involved in completing a real estate settlement.
- 13.54. List and describe the participants in the closing.
- 13.55. Define the important documents require at a closing.
- 13.56. Explain the ethical concerns that arise from the use of paralegals in real estate closings.

## **BUSINESS ORGANIZATIONS**

PRLE 207

3 Credits

33 hours of lecture

Significant state law regarding corporations and partnerships, preparation and filing of corporate documents, partnership agreements, conduct of corporate shareholder and director meetings, corporate distributions, commercial litigation, secured transactions. Prerequisite: A grade of "C" or better in PRLE 101 and ENGL& 101 or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Review basic considerations in the selection of a business enterprise.
- Compare and contrast the three basic forms of business organization: sole proprietorships, partnerships and corporations.
- Breakdown the formation of an agency relationship, including agents' authority, duty, liability and termination.
- Critique the advantages and disadvantages of a sole proprietorship.
- Critique the advantages and disadvantages of a general partnership.
- List the duties and rights of partners.
- Outline how partnerships are formed and dissolved and the rights and duties of partners during the winding up.
- Discuss the formation of a limited partnership, the liability of both general partners.
- List the advantages of LLP and LLC formation.
- Explain the operation, transferability and dissolution and taxation of LLP's and LLC's.
- Differentiate the types of corporations.
- Critique the advantages and disadvantages of incorporation.
- Describe the role of the paralegal in corporation activities.



- Define the features of various equity securities and debt securities in corporate finance.
- Explain how corporations derive capital from securities.
- Describe the tax structure for corporations.
- Name the various shareholders' rights and responsibilities.
- List the various directors' rights and responsibilities.
- Name the various officers' rights and responsibilities.
- Outline restrictions related to the procedures and distribution of dividends.
- Define the nature of mergers and acquisitions, share exchanges, the purchase of corporate assets and stock.
- List the various procedures in qualification of foreign corporations.
- Explain the effect of failure to qualify a foreign corporation.
- Outline the nature of voluntary dissolution, revocation of dissolution, administrative dissolution and involuntary dissolution.
- Outline the features of liquidation in non-judicial and judicial procedures.
- Compare and contrast the specialized purposes and goals of Close, non-profit, professional, parent/subsidiary, "S", and publicly traded corporations.

## **BANKRUPTCY LAW**

PRLE 208

3 Credits

33 hours of lecture

Introduction to bankruptcy procedures including filing of initial petition, selection of appropriate relief, meeting of creditors, adversarial proceedings, the final discharge hearing, and automatic stay. Analysis of relief available under Chapter 7, 11, 12, and 13 of the United States Bankruptcy code. Prerequisite: A grade of "C" or better in ENGL& 101, PRLE 101, 102, 103, and 106 or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- 15.1. Sketch out a case brief parts and the statutory scheme of the US Bankruptcy Code.
- 15.2. Define basic concepts of a common law legal system, civil law system.
- 15.3. Recite the purpose and differences between substantive laws and procedural laws.
- 15.4. Distinguish the concepts of Voluntary Bankruptcy and Involuntary Bankruptcy.
- 15.5. Argue why individuals or businesses seek bankruptcy relief.
- 15.6. Distinguish debtor relief from debt collection in the bankruptcy system.
- 15.7. Describe how multiple bankruptcy proceedings may be consolidated?.
- 15.8. List the main reasons for initiating an involuntary bankruptcy against a debtor.
- 15.9. illustrate how a voluntary bankruptcy proceed is commenced.
- 15.10. List the basic documents which a debtor in bankruptcy files.
- 15.11. Define who may be a Debtor in Ch. 7, Ch. 1 and Ch. 13 Filings.
- 15.12. Distinguish a noticed motion from an ex parte application.
- 15.13. List the purposes which Means Testing serves within the Bankruptcy Code.
- 15.14. Understand key terminology found in Sec 101 of the US Bankruptcy Code.
- 15.15. Argue how an equity security holder is not an insider within the Bankruptcy Code.
- 15.16. Analyze the effect of a discharge under Ch. 7.
- 15.17. List the requirements of a reaffirmation agreement.
- 15.18. Explain the concept of Conversion.
- 15.19. Provide examples of when a debtor may convert a case from one Chapter to another without a noticed motion.
- 15.20. Distinguish conversion versus dismissal of a bankruptcy proceeding.
- 15.21. List important state exemptions in Washington State for both realty and personalty.
- 15.22. Provide examples of claims unaffected by exemptions.
- 15.23. Argue the purposes for exemptions.
- 15.24. Define a Homestead.
- 15.25. Explain how a debtor may avoid a lien that impairs an exemption.
- 15.26. Define the basic role of a bankruptcy trustee.

- 15.27. Differentiate between the duties of a Ch. 7 trustee and a trustee in a reorganization proceeding.
- 15.28. Define the purpose of the automatic stay.
- 15.29. List basic activities subject to and not subject to the automatic stay.
- 15.30. Describe the procedure used for obtaining relief from the automatic stay.
- 15.31. Argue how a secured creditor may be entitled to adequate protection during an automatic stay.
- 15.32. Describe situations in which a debtor may want to file a motion to impose the automatic stay.
- 15.33. Distinguish between an objection to a debtor's discharge and an objection to the dischargeability of a debt.
- 15.34. Explain why certain debts are non-dischargeable without an affected creditor being required to initiate an adversary proceeding and list those debts.
- 15.35. evaluate which debts become non-dischargeable only by a creditor commencing a complain objecting to dischargeability of the debt.
- 15.36. Argue why a debtor would desire to initiate a complaint to determine the dischargeability of a debt.
- 15.37. List which circumstances a debtor could be denied a discharge.
- 15.38. Explain why the general definition of estate property is intentionally overbroad.
- 15.39. Argue why post-petition wages of a debtor are not considered property of the estate.
- 15.40. List the ways in which a trustee's avoiding powers are exercised.
- 15.41. Name the elements of an avoidable preference.
- 15.42. Provide details the court will demand in defining a fraudulent transfer.
- 15.43. Examine the types of improper post-petition transfers.
- 15.44. Describe the common methods by which a bankruptcy trustee liquidates an estate's assets.
- 15.45. Distinguish among various executory contracts and non-executory contracts in Bankruptcy law.
- 15.46. Outline the Bankruptcy Administrative Timeline.
- 15.47. Describe how a credit files a proof of claim in a bankruptcy proceeding.
- 15.48. List grounds a trustee may use to object to a proof of claim.
- 15.49. Define an administrative claim.
- 15.50. List when a secured claim survives bankruptcy.
- 15.51. Outline the priority of unsecured claims.
- 15.52. Compile an inventory of events that must occur before a Ch. 7 bankruptcy asset estate may be closed.
- 15.53. Determine the purpose of a reorganization proceeding.
- 15.54. Outline the grounds for dismissal or conversion of a reorganization proceeding.
- 15.55. List the permissible length of a Ch. 13 plan.
- 15.56. Order the mandatory elements in a Ch. 13 plan.
- 15.57. Explain how a Ch. 13 debtor may cramdown a plan over the objection of an unsecured creditor.
- 15.58. Distinguish a Ch. 11 from other bankruptcy proceedings.
- 15.59. Describe the procedure that a plan proponent must follow to obtain confirmation of a Ch. 11 reorganization plan.
- 15.60. Contrast core and non-core proceedings in federal bankruptcy court.
- 15.61. Examine the concerns of a Debtor in effective preparation of the Statements and Schedules.

## **CIVIL LITIGATION: INSURANCE CLAIMS**

PRLE 209

3 Credits

33 hours of lecture

Introduction to case management theory, using a "walk-through" personal injury action and preparation/handling of insurance claim(s) on behalf of a civil plaintiff. A complete preparation of

a legal case, from intake to litigation including applicable legal terminology, court rules and procedures. Emphasis on the practices of law surrounding insurance claims and policies related to a civil action. Prerequisite: A grade of "C" or better in PRLE 106, 151 and ENGL& 101 or consent of Instructional Unit. [GE]

**Course Outcomes:**

- 16.1. Define basic concepts of a common law legal system, civil law system.
- 16.2. Recite the purpose and differences between substantive laws and procedural laws.
- 16.3. Identify and explain a Motorist's Tort Claim in Washington.
- 16.4. Describe the paralegal's role under RPC 5.3 by listing the tasks performed by a paralegal.
- 16.5. Identify and define how the law practice establishes the Attorney/Client Relationship by listing the tasks performed by the paralegal in creating a client file.
- 16.6. Explain what a conflict of interest is and what a law office and do to limit conflict of interest problems.
- 16.7. Recognize the Statue of Limitations in an action.
- 16.8. Identify and define various fee agreements and medical and other authorizations used in the law practice.
- 16.9. Identify and define the paralegal's role in gathering evidence by identifying key elements to an investigative report of a collision or incident.
- 16.10. Demonstrate skills in mapping a collision scene.
- 16.11. Understand what evidence is and how it is used in a tort collision case.
- 16.12. Define an investigation plan, including elements of interviewing witnesses and obtaining recorded statements.
- 16.13. Define an investigation plan, including elements of interviewing agencies and obtaining medical and wage statements.
- 16.14. Explain the policies in HIPPA laws.
- 16.15. Demonstrate proper interviewing skills.
- 16.16. Identify and explain various medical terminology, including traumatic, degenerative, chronic, congenital and acute injuries.
- 16.17. Identify and define the components of a settlement demand, including settlement authority, valuation, settlement conference, and "release" agreements.
- 16.18. Prepare a draft demand letter for a given scenario.
- 16.19. Explain the nature of settlement negotiations.
- 16.20. List various concerns in a settlement for a minor.
- 16.21. Identify and define components in waiver.
- 16.22. Discuss the limitations of subrogation claims and claim liens.

**LEGAL WRITING II**

PRLE 210

3 Credits

33 hours of lecture

Methods of legal research and legal writing. Application of research and analysis skills learned in PRLE 103 Legal Research and PRLE 203 Computer Research in Law. Continuation of the writing skills learned in PRLE 106 Legal Writing I. Focus on skills to research more intricate issues of law in a more accurate and precise method, with emphasis on preparing complex legal documents such as an interoffice Memorandum, Memorandum in Support of Motion and other types of legal documents, including the Appellate Brief. Prerequisite: A grade of "C" or better in ENGL& 101, PRLE 103, 203, and 106 or consent of Instructional Unit. [GE]

**Course Outcomes:**

- 17.1. Describe the systems by which law is classified, recorded and indexed at the Federal and state levels..
- 17.2. Determine and use appropriate sources of law in legal research and writing projects.

- 17.3. Describe the rules for proper use and placement of citation forms and signals within written legal material.
- 17.4. Employ appropriate citation forms and signals in legal research and writing projects.
- 17.5. Use computer-based / electronic research functions to supplement legal research, in locating additional or more recent law, and in tracing the history of a particular case, statute or regulation..
- 17.6. Employ law-updating techniques in legal research.
- 17.7. Convert salient facts into legal issues for the purpose of legal research.
- 17.8. Classify facts and legal issues into typical research categories used in digests and indexing systems.
- 17.9. Analyze facts and legal issues in the accomplishment of legal research and writing projects.
- 17.10. Recognize and correct/redraft examples of improper legal writing style..
- 17.11. Employ correct and appropriate legal writing style in accomplishing legal research and writing projects.
- 17.12. Employ appropriate law-finding techniques in the accomplishment of legal research and writing projects, including the use of digests, and Lexis/Nexis.
- 17.13. Recognize and correct/redraft examples of improper legal writing style..
- 17.14. Given formulated issues and facts, employ research strategies to locate applicable rules of law regardless of whether the legal authority is known..
- 17.15. Compare the similarities and differences of various types of legal writing, according to purpose, organization and style.
- 17.16. Successfully complete legal research and writing projects involving the use of a law library and a representative sample of law sources, citations, and writing styles.

## **TORT LAW AND PROCEDURES**

PRLE 211

3 Credits

33 hours of lecture

Resolution of personal injury claims with insurance companies, social security and workers' compensation claims, with emphasis on the interpretation of insurance policies and the procedures for processing claims and effecting settlements. Methods for identifying workers' compensation and social security claims, as well as the filing and processing of these claims through the applicable state and federal administrative law procedures. Prerequisite: A grade of "C" or better in PRLE 106 and ENGL& 101 or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- 18.1. Define basic concepts of a common law legal system, civil law system.
- 18.2. Recite the purpose and differences between substantive laws and procedural laws.
- 18.3. Define what is a tort.
- 18.4. Define the basic concept of tort law and the sources of tort law.
- 18.5. Summarize the social and individual purposes behind the law of torts.
- 18.6. List the various categories of tort law.
- 18.7. Identify alternative methods to resolve a dispute without resorting to litigation.
- 18.8. Expound upon why no proceeding can commence without personal jurisdiction, subject matter jurisdiction and proper venue.
- 18.9. Describe features common to a complaint.
- 18.10. Recognize how service of process plays a critical role in the commencement of litigation.
- 18.11. Define a motion and its function in the litigation process.
- 18.12. Account for the role of discovery and the types of discovery.
- 18.13. List the steps needed to conduct and conclude a trial.
- 18.14. Define the right of appeal both as a right and discretionary.
- 18.15. Define the tort of negligence by outlining the duty of reasonable care, the reasonable person stand the sources of the duty.

- 18.16. Breakdown the concepts within the requirement of proximate cause.
- 18.17. Give examples of typical damages in a negligence claim.
- 18.18. Identify the burden of proof in a negligence claim as the concept relates to the degrees of negligence, *res ipsa loquitur*, and unavoidable accidents.
- 18.19. Provide the elements of wrongful death and survival actions.
- 18.20. Critique joint tortfeasor's liability.
- 18.21. Contrast the defense of contributory negligence to comparative negligence and how they relates to law of "last clear chance" doctrine.
- 18.22. Critique assumption of risk doctrine from other negligence defenses.
- 18.23. Specify the role of natural condition in the duty of landholders.
- 18.24. List the duties of a landholder towards all persons entering the property, including trespassers, invitees and licensees,.
- 18.25. Recite the liability of landholders as sellers of real estate.
- 18.26. Compare negligence law to intentional tort law.
- 18.27. List and define the intentional torts that involve an injury or harm to persons.
- 18.28. Provide examples of intentional torts involving and injury to property, tangible and intangible.
- 18.29. Discuss the value of good will in protecting intangible property.
- 18.30. Define the various types of misrepresentation and the nature of damages.
- 18.31. Discuss the nature of nuisance, its interests and requirements for private and public nuisance.
- 18.32. Summarize how a nuisance interferes with the use and enjoyment of land.
- 18.33. List remedies available for a nuisance.
- 18.34. Define and classify the traditional defenses available in an action for intentional tort.
- 18.35. Paraphrase the rationale behind the concept of immunity for tort liability, including family structure, governmental immunity, and immunity for public officers and more.
- 18.36. Provide examples of strict liability as applied to animals and abnormally dangerous activity.
- 18.37. Explain the concept of Privity of contract and the nature of warranties and how they relate to social values evolved in product liability.
- 18.38. Determine the proper parties for a product liability action.
- 18.39. Analyze recovery for product liability from various parties under strict liability and negligence.
- 18.40. Contrast the nature of principal and agent liability with independent contractor liability.
- 18.41. Provide examples of the legal duty between an agent and a principle.
- 18.42. Distinguish between and independent contractor and an employee.
- 18.43. Explain how *pater familias* has evolved as a doctrine to all in a family to sue for an injury to any one of them for various torts, including alienation of affection and criminal conversation.

## **LAW AND ECONOMICS**

PRLE 212

3 Credits

33 hours of lecture

Legal rules, regulations and precedent interact with market mechanics and influence the allocation of resources. Focus on the common law property, contract and tort area, methods to explain, predict and evaluate such areas as a means to predict future outcomes and evaluate their potential impact upon societal welfare. Topics include relevant economic theories in conjunction with individual court cases to emphasize how the subtleties of the theory connect with key facts of the case. Course methodology develops the economic theory in the context of legal problems via point by point analysis. Prerequisite: A grade of "C" or better in ENGL& 101 or consent of Instructional Unit. [GE, SE]

### **Course Outcomes:**

- 19.1. Understand the economic viewpoint of selecting assumptions.
- 19.2. Explain the economic viewpoint of how all benefits and costs can be measured in terms of dollars,.
- 19.3. Define the concept of consumer sovereignty.
- 19.4. Critique the theory of exogenous preferences.
- 19.5. Understand the value of utility maximization for individuals.
- 19.6. Explain the nature of "price equals costs" economic theory.
- 19.7. Apply competitive market economic theory in two areas: pollution control and products liability.
- 19.8. Define the hierarchy of state and federal courts.
- 19.9. Compare and contrast primary and secondary sources of law.
- 19.10. Critique the problems with Stare Decisis in the US Common Law tradition.
- 19.11. Order the stages of Civil Litigation.
- 19.12. Analyze behavior under the Coase theorem as applied to Nuisance Laws.
- 19.13. Analyze behavior under the Coase theorem as applied to Contract Laws.
- 19.14. Analyze behavior under the Coase theorem as applied to Automobile Liability Laws and Insurance for Risk Bearing Behavior.
- 19.15. Analyze behavior under the Coase theorem as applied to Law Enforcement Fines and/or Imprisonment.
- 19.16. Analyze behavior under the Coase theorem as applied to Principal-Agent Law.
- 19.17. Analyze behavior under the Coase theorem as applied to the impact of Civil Law Suit and Settlement Rules.
- 19.18. Analyze behavior under the Coase theorem as applied to economic redistribution by taxes and transfers via legal rules.
- 19.19. Analyze the problems of valuation under the Coase theorem as applied to contract, torts and property.

## SELECTED TOPICS

PRLE 280

1 - 3 Credits

33 hours of lecture

Varying topics for the paralegal profession as listed in the quarterly class schedule. May be repeated for credit. [GE] [PNP]

### Course Outcomes:

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this course.

## SPECIAL PROJECTS

PRLE 290

1 - 5 Credits

Opportunity for students to plan, organize and complete special projects approved by the department. Contact the instructional dean, division chair or your instructor for more information or to make arrangements to register for Special Project credits in this department. (Note: special project closely supervised by the instructor. Student must create written plan, select an instructor and petition for Departmental approval.) Consent of Instructional Unit. [GE]

### Course Outcomes:

- Demonstrate learning objectives as determined by the supervising instructor.

## **CASA SPECIAL PROJECT**

PRLE 295

1 - 5 Credits

Court Appointed Special Advocate (CASA) Internship Project: a specialized Internship. Supervised, community service learning experience as trained, court appointed child advocate. Must complete thirty or more hours in CASA training and minimum one year commitment as a court appointed child advocate. No set requirement for hours worked per week, which is to be determined by the student and CASA. Work sites include the YWCA, Clark County courts, and other related off-site locations necessary for CASA program work. Must receive admission into the Vancouver YWCA's Court CASA Program. Must pass background check. Prerequisite: A grade of "C" or better in ENGL& 101 and consent of Instructional Unit. [GE]

### **Course Outcomes:**

- 22.1. Meet opportunities, embrace challenges and accept changes that will improve the CASA Program's work.
- 22.2. Collaborate with other CASA Program members and other state and local programs in the benefit of children to effectively and creatively carry out child advocacy in the courts.
- 22.3. Meet occasions to challenge their responsiveness, respectfulness, honesty, fairness and humaneness.
- 22.4. Experience CASA's respect for diversity in all of its forms.
- 22.5. Link himself/herself to the community need in child advocacy and protection, organized and coordinated with the Clark County YWCA's CASA Program.
- 22.6. Through service learning with CASA Program, determine how social and service rewards and permits numerous community children to have an independent voice.
- 22.7. Argue for the best advocacy for abused and neglected children.
- 22.8. Explain how each person in a community has an integral role to play in delivering excellent service to members in that community.

## **PARALEGAL INTERNSHIP**

PRLE 299

1 - 3 Credits

Attorney-supervised work-based learning experience in a law office or other legal facility for paralegal internship. A capstone including a scheduled internship. Credits/grades based on hours worked, work performance, and completion of learning objectives specified in a learning contract (demonstrated adequate skills and professionalism) and completion of Seminar "Paralegal Information Night". Prerequisite: Department Chair approval required, based on completion of core paralegal courses (all PRLE and BUS& 201). [GE] [PNP]

### **Course Outcomes:**

- Display proper techniques of written communication.
- Appreciate the value of and ability to use correct mechanics of oral communication.
- Demonstrate an awareness of working relationships and their importance.
- Attend to detail in completion of necessary paperwork with employer.
- 23.5. Gain familiarity in the workings of a law office and/or specifically the role of the paralegal through activities such as: client interviewing, maintaining case files, legal research, drafting letters and other legal documents under the supervision

## **Psychology**

### **GENERAL PSYCHOLOGY**

PSYC&100

5 Credits

55 hours of lecture

The scientific study of behavior and mental processes including research methods, psychobiological processes, learning, memory, psychological disorders, psychotherapy, and other topics to be determined by the instructor. Prerequisite: COMPASS reading score of 85 or higher, or a cumulative GPA of 2.0 or higher. [SE, SS] [PNP]

**Course Outcomes:**

- Recognize, define, and apply basic terms, concepts, and principles in the areas of research methods, neuroscience, human memory, learning through conditioning, psychological disorders, and psychotherapy.
- Define and distinguish between correlational and cause/effect relationships and their implications; apply these concepts to specific examples. Understand the relationship between how data are collected and the conclusions that can be drawn from them.
- Communicate about psychology in writing.

**COOPERATIVE WORK EXPERIENCE**

PSYC 199

1 - 5 Credits

165 hours of clinical

Supervised work experience in an approved job. Completion of specific learning objectives and employer evaluation. Completion of, or concurrent enrollment in, HDEV 195, 198, or 200 required. Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Fulfill the job requirements of the internship provider.

**LIFESPAN PSYCHOLOGY**

PSYC&200

5 Credits

55 hours of lecture

Principles and theories of human growth and development; the interaction of psychological, biological, and social factors throughout the life span. Prior completion of PSYC& 100 or (PSYC 101) recommended. [SE, SS]

**Course Outcomes:**

- Recognize, define, and apply basic terms, concepts, and principles in the areas of developmental theories, research methods, and empirical findings on physical, cognitive, social and emotional development, and social issues that influence developmental ou
- Define and distinguish between correlational and cause/effect relationships and their implications; apply these concepts to specific examples. Understand the relationship between how data are collected and the conclusions that can be drawn from them.
- Communicate about lifespan psychology in writing.

**SOCIAL PSYCHOLOGY**

PSYC 203

5 Credits

55 hours of lecture

Effects of social environment and interpersonal processes on both individual and collective behaviors. Socialization, impression formation and management, attitude formation and change,



prejudice, aggression, altruism, leadership, power, conformity, environmental psychology, and other topics. Prerequisite: PSYC& 100 (or PSYC 101). [SE, SS]

**Course Outcomes:**

- Recognize, define, and apply basic terms, concepts, and principles in the area of social psychological theories, research methods, impression formation and management, prejudice, aggression, altruism, leadership, and conformity.
- Define and distinguish between correlational and cause/effect relationships and their implications; apply these concepts to specific examples. Understand the relationship between how data are collected and the conclusions that can be drawn from them.
- Communicate about lifespan psychology in writing.

**PSYCHOLOGY: SELECTED TOPICS**

PSYC 280

1 - 3 Credits

33 hours of lecture

Selected topics in psychology as listed in the quarterly class schedule. May be repeated for credit. Prerequisite: PSYC& 100 (or PSYC 101) or consent of instructional Unit. [SE]

**Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this course.

**SPECIAL PROJECTS**

PSYC 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the department. Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

**Professional Technical Computational Skills**

**PROFESSIONAL TECHNICAL COMPUTATIONAL SKILLS**

PTCS 110

5 Credits

55 hours of lecture

Intended for students enrolled in career technical education programs. It includes topics from algebra, geometry, statistics, inductive reasoning, and trigonometry with an emphasis on applications and measurement. This course will satisfy the computational requirement for the Certificate of Proficiency, Associate of Applied Science and the Associate of Applied Technology. Prerequisite: A grade of "C" or better in MATH 030 or recommending score on placement test. [CP]

**Course Outcomes:**

- Demonstrate the ability to perform the manipulation of fractions, decimals, percents, and equivalent forms.
- Demonstrate the ability to perform unit conversions of numbers, volume, mass, angles, time, temperature, etc.

- Understand the limitations on precision and accuracy imposed by measurement processes.
- Solve equations and use equations to model and solve real world applications.
- Use trigonometry to solve a right triangle problems.
- Make correct inferences based on inductive reasoning.

## Professional Technical Writing

### APPLIED TECHNOLOGY WRITING DESCRIPTIONS

PTWR 094

1 Credits

11 hours of lecture

Basic skills for organizing and writing technical descriptions for Applied Technology courses; identifying and describing objects or events and exploring best practices and procedures for practical scenarios. Concurrent enrollment in an Applied Technology program. Prerequisite: ASSET Writing Test Score 36-38, placement in ENGL 097, or "C" or better in DVED 094.

#### Course Outcomes:

- Course is in suspension, pending curricular review.

### APPLIED TECHNOLOGY WRITING ANALYSES

PTWR 095

1 Credits

11 hours of lecture

Basic skills for organizing and explaining causes and effects as taught in Applied Technology classes; writing concise reports under timed conditions that reflect the results of research, critical thinking and problem-solving. Concurrent enrollment in an Applied Technology program. Prerequisite: ASSET Writing Test Score 36-38, placement in ENGL 097, or "C" or better in DVED 094.

#### Course Outcomes:

- Course is in suspension, pending curricular review.

### APPLIED TECHNOLOGY WRITING PROCEDURES

PTWR 096

1 Credits

11 hours of lecture

Basic skills for organizing and writing technical descriptions of processes or procedures for Applied Technology courses; writing concise reports under timed conditions that reflect the results of research, critical thinking and problem-solving. Concurrent enrollment in an Applied Technology program. Prerequisite: ASSET Writing Test Score 36-38, placement in ENGL 097, or "C" or better in DVED 094.

#### Course Outcomes:

- Course is in suspension, pending curricular review.

### APPLIED TECHNOLOGY WRITING REPORTS

PTWR 097

1 Credits

11 hours of lecture

Basic skills for person-to-person research and communication in Applied Technology courses; writing concise reports under timed conditions that reflect the results of research, critical thinking and problem-solving. Concurrent enrollment in an Applied Technology program. Prerequisite: ASSET Writing Test Score 36-38, placement in ENGL 097, or "C" or better in DVED 094.

**Course Outcomes:**

- Course is in suspension, pending curricular review.

**APPLIED TECHNOLOGY WRITING APPLICATIONS**

PTWR 098

1 Credits

11 hours of lecture

Basic skills for seeking and identifying potential employers, analyzing published notices of employment opportunities, writing and revising letters of applications and preparing appropriate resumes of professional experience. Designed to provide tangible tools related to gaining employment. Concurrent enrollment in an Applied Technology program. Prerequisite: ASSET Writing Test Score 36-38, placement in ENGL 097, or "C" or better in DVED 094.

**Course Outcomes:**

- Course is in suspension, pending curricular review.

**FUNDAMENTALS OF TECHNICAL WRITING**

PTWR 099

3 Credits

33 hours of lecture

Fundamental skills in workplace written communication: focus on resumes, instructions, letters, memos, reports; methods of writing clear, concise documents for technical audiences and purposes. Prerequisite: ASSET Writing Test Score 39-44 or ENGL 097.

**Course Outcomes:**

- Course is in suspension, pending curricular review.

**INTRODUCTION TO APPLIED TECHNICAL WRITING**

PTWR 135

5 Credits

55 hours of lecture

Introduction to principles of effective workplace communication: focus on methods of writing clear, concise documents for technical audiences and purposes; summarizing technical information; collaborating successfully in small groups. For students of all technical fields. Prerequisite: A grade of "C" or better in ENGL 098 taken at 5 credits or recommending score on the writing skills placement test for ENGL& 101. [C, GE]

**Course Outcomes:**

- Conduct effective and ethical research.
- Employ communication appropriate to a specific audience, purpose, and situation.
- Evaluate and accurately summarize technical/professional sources and texts.
- Revise visuals and content with attention to accuracy, brevity, specificity, unity, and clarity.
- Identify ethical issues involved in professional writing.

- Develop effective strategies for working in small groups.

## Reading

### **CRITICAL READING**

READ 087

4 Credits

44 hours of lecture

Development of advanced comprehension skills such as recognizing the author's tone, interpreting figuration language, distinguishing fact and opinion, recognizing persuasive language, and evaluating the soundness of an argument. Prerequisite: Recommending score on placement test or written consent of Instructional Unit.

#### **Course Outcomes:**

- Use pre-reading, while-reading, and post-reading strategies to monitor and improve comprehension of range of college-level materials.
- Identify purpose, topic, main idea, supporting details, and organizational patterns in single and multi-paragraph texts.
- Use textual evidence to support inferences drawn from texts.
- Analyze, summarize, and respond logically to texts.
- Employ vocabulary building strategies, such as using context clues and using a college-level dictionary.

### **COLLEGE READING**

READ 100

4 Credits

44 hours of lecture

Develops skills for more comprehensive and efficient college level reading. Emphasis is on the improvement of comprehension and reading rate, the development of good reading habits, critical and analytical skills, study-reading techniques, and vocabulary enhancements. Prerequisite: College reading level on placement test or recommendation of instructor. [GE]

#### **Course Outcomes:**

- Use pre-reading, while-reading, and post-reading strategies to monitor and improve comprehension of range of college-level materials.
- Identify and articulate the relationships between purpose, topic, main idea, and supporting details in article/chapter-length texts.
- Use adequate textual evidence to support inferences drawn from texts and evaluate the validity of others' inferences about texts.
- Paraphrase and summarize accurately, synthesize, and evaluate the effectiveness of article/chapter-length texts.
- Employ vocabulary building strategies, such as using context clues and using a college-level dictionary.

## Sociology

### **INTRO TO SOCIOLOGY**

SOC& 101

5 Credits

55 hours of lecture

Introduces the sociological perspectives that explain human interaction, social institutions, and social change. Examines these social phenomena from a variety of sociological perspectives, including the functionalist, conflict, and symbolic-interactionist. Prerequisite: COMPASS reading score of 85 or higher, or a cumulative GPA of 2.00 or higher. [SE, SS]

**Course Outcomes:**

- Demonstrate an understanding of the impact of three social, structural, and/or cultural factors upon individual behavior and how individuals impact society as a whole.
- Name the three dominant theoretical perspectives in the field of Sociology and demonstrate an understanding of at least two assumptions within each of them.
- Demonstrate an understanding of status, roles, power, groups, organizations and social stratifications; which includes identifying some individual, institutional, and/or ideological components that maintain and challenge systems of power, privilege and in
- Demonstrate an understanding of one of the major research methods used within the tradition of Sociology.
- Demonstrate an understanding of the social construction of identity.

**MARRIAGE AND FAMILY EXPERIENCES IN THE U.S.**

SOC 121

3 Credits

33 hours of lecture

Marriage and family experiences will be examined along with other social institutions that affect the marriage and family relationships in a changing U.S. culture. [SE, SS]

**Course Outcomes:**

- Differentiate between and apply the sociological theories of Structural-Functionalism, Conflict and Symbolic Interactional-ism to the institution of the family.
- Identify how the economy and culture influence marriage and the family, and communicate the relationship between those social factors and how families impact both individuals and society.
- Describe and analyze the functions and roles that families have traditionally performed in American (United States) society.
- Describe the historical changes in the American family, including changes in courtship, intimacy, partnering, marriage, divorce and parenting.
- Identify individual, institutional, and ideological components that maintain and challenge systems of power, privilege and inequity and how these influence family patterns and kinship roles in the family.

**RACE AND ETHNICITY IN THE U.S.**

SOC 131

3 Credits

33 hours of lecture

The sociological perspectives of race and ethnicity, including an examination of prejudice and discrimination from the interpersonal to the institutional level. Application of concepts and theories to both historical and current events in the U.S. [SE, SS]

**Course Outcomes:**

- Understand the social construction of race and ethnicity and differentiate between and apply the sociological theories of Structural-Functionalism, Conflict and Symbolic Interactional-ism to race and ethnicity.
- Develop a sociological framework for understanding the historical and contemporary status of various racial / ethnic groups in the U.S., including economic, educational, representation,

and status barriers.

- Use the sociologic perspective to identify and analyze possible causes, purposes, and solutions to the various types of racism, including quiet racism, institutional racism, colorism, personal racism, discrimination, etc.
- Identify the historical, economic, and regional/national influences on inter-group relations.
- Identify individual, institutional, and ideological components that maintain and challenge systems of power, privilege and inequity.

## **INTRODUCTION TO ISLAM**

SOC 141

3 Credits

33 hours of lecture

Introduction to the world of Islam and Muslim populations. Topics include Islam as a way of life in a socio-cultural context and the ways this religion affects the individual, family, and social life in various Islamic societies. Focus on analyzing Islam both in theory and in practice. [SE]

### **Course Outcomes:**

- Students will develop an understanding of what it means to be Muslim and identify core Muslim beliefs (cosmology and theology), practices (rituals and moral teachings), and cultural values.
- Students will develop an understanding of the history and foundations of the civilization of Islam and be able to identify core universal, cultural and social influences.
- Students will differentiate the meanings and practices of Islam from other major world and religious views (i.e. Christianity, Hinduism, Judaism, Taoism, Buddhism etc.).
- Students will develop an understanding of Islam as a moral system and identify some of its doctrinal, ritual, philosophical, moral and spiritual dimensions.
- Students will identify individual, institutional, and ideological components that maintain and challenge systems of power, privilege and inequity.

## **COOPERATIVE WORK EXPERIENCE**

SOC 199

1 - 5 Credits

165 hours of clinical

Supervised work experience in an approved job. Completion of specific learning objectives and employer evaluation. Completion of, or concurrent enrollment HDEV 195, 198 or 200 required. Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Students will demonstrate an understanding of the learning objectives as determined by supervising Instructor and work supervisor.

## **SOCIAL PROBLEMS**

SOC& 201

5 Credits

55 hours of lecture

Study of the magnitude and consequences of social problems in the US from a sociological perspective and examination of solutions to these problems from a cross-cultural perspective. Topics include: health, work, inequality, family, environment, substance abuse, crime and national security. Prerequisite: A grade of "C" or better in SOC& 101. [SE, SS] [PNP]

### **Course Outcomes:**

- Identify three social, structural and/or cultural factors that impact social problems in modern society and communicate the relationship between those factors and how social problems impact both individuals and society.
- Differentiate between and apply the sociological theories of Structural-Functionalism, Conflict and Symbolic Interactional-ism to social problems.
- Develop a sociological framework for understanding possible causes, purposes, and solutions to social problems.
- Identify the implications (intended and unintended consequences) and analyze the strengths and weaknesses of specific social policies designed to address social problems.
- Identify individual, institutional, and ideological components that maintain and challenge systems of power, privilege and inequity.

## **DEATH AND DYING**

SOC 220

3 Credits

33 hours of lecture

A comprehensive survey of death, dying, bereavement, and other losses and their societal impacts upon people. Various cultural attitudes, traditions and changing values surrounding death and dying will be explored. [SE, SS]

### **Course Outcomes:**

- Students will develop an understanding of their own beliefs, fears and attitudes regarding death and dying.
- Students will identify key historical, societal and cultural components of death and dying.
- Students will develop an understanding of the death system, children's attitudes toward death, hospice care, violent death, assisted suicide, bereavement, and the concept of a good death.
- Students will develop an understanding of how death and dying issues impact society at large and how society impacts our personal views on death and dying.

## **DOMESTIC VIOLENCE**

SOC 230

5 Credits

55 hours of lecture

Introducing historical and current ideas, myths and empirical research regarding domestic partner abuse. Defining abuse and examining cultural, social, family and psychological factors associated with offenders and victims: why, how, who, and what responses have been tried. Prerequisite: SOC& 101 or PSYC& 100 (or SOC 101 or PSYC 101). [SE]

### **Course Outcomes:**

- Identify three psychological, social, and/or cultural factors that contribute to the prevalence and patterns of Domestic Violence in modern society.
- Identify and differentiate between myths about Domestic Violence in popular culture and the myths and facts regarding Domestic Violence in the real world.
- Plan, develop and execute an research based project, based on empirical data about Domestic Violence, designed to ameliorate the effects of partner abuse or prevent its occurrence.
- Identify individual, institutional, and ideological components that maintain and challenge systems of power, privilege and inequity within the context of Domestic Violence.

## **CRIMINOLOGY**

SOC 240

5 Credits

55 hours of lecture

An introductory examination of crime, deviant behavior and social control. Crime and deviance as social processes. Historical and contemporary explanations of criminological theory. Prerequisite: SOC& 101 or PSYC& 100 (or SOC 101 or PSYC 101). [SE]

### **Course Outcomes:**

- Identify three social, structural and/or cultural factors that contribute to the prevalence and patterns of crime in modern society and communicate the relationship between those factors and how the occurrences of crime impact both individuals and society
- Identify historical and current definitions and myths about crime and deviance as well as understand some of their consequences.
- Use the scientific method (i.e. scientific criteria) to critique various historical and current criminological theories.
- Participate in a service learning activity OR write a term paper and identify how various concepts in criminology apply to those involved in the criminal justice system.
- Identify individual, institutional, and ideological components that maintain and challenge systems of power, privilege and inequity.

## **SOCIOLOGY: SELECTED TOPICS**

SOC 280

1 - 5 Credits

55 hours of lecture

Varying topics in Sociology as listed in the quarterly class schedule. May be repeated for credit. [SE]

### **Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this course.

## **SPECIAL PROJECTS**

SOC 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the department. Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## **Spanish**

### **SPANISH I**

SPAN&121

5 Credits

55 hours of lecture

First of a three-quarter sequence in elementary Spanish. Emphasis on listening/speaking skills, with additional practice in reading/writing. Intended for students with little or no previous



experience. Not open to native speakers. Students with one year of recent high school Spanish with a grade of B or higher need to enroll in SPAN& 122; students with two years of recent high school school Spanish with a B or higher need to enroll in SPAN& 123. Over and under-qualified students must change to the appropriate level during week one. [HA, SE]

**Course Outcomes:**

- Use simple phrases and sentences to describe self, family and friends, where we live and some of our pastimes. Interact in a simple way, provided that the other person is prepared to repeat or rephrase things at a slower rate of speech and help the student
- Understand familiar words and very basic phrases concerning myself, my family and immediate concrete surroundings when people speak slowly and clearly.
- Understand short texts that consist of simple sentences, high frequency words, assigned vocabulary, and familiar names or words such as cognates.
- Write simple connected text on topics which are familiar or of personal interest. Write personal letters describing experiences and impressions.
- Identify and explain some differences and similarities between the target culture(s) and US culture.

**SPANISH II**

SPAN&122

5 Credits

55 hours of lecture

Continuation of the elementary Spanish sequence. Students should have successfully completed SPAN& 121, one term of college of Spanish, or one recent year of high school Spanish with a grade of B or higher. Students with two years of recent high school Spanish with B or higher need to enroll in SPAN& 123. Over and under-qualified students must change to the appropriate level during week one. [HA, SE]

**Course Outcomes:**

- Use a series of phrases and sentences to describe in simple terms my family and other people, living conditions, my educational background and my present or most recent job.
- Use a series of phrases and sentences to describe in simple terms family and other people, living conditions, educational background and present or most recent job. Communicate in simple and routine tasks requiring a simple and direct exchange of information
- Understand phrases and the highest frequency vocabulary related to areas of most immediate personal relevance (e.g. very basic personal and family information, shopping, local area, employment). Catch the main point in short, clear, simple messages and understand the description of events, feelings and wishes in personal letters.
- Write simple connected text on topics which are familiar or of personal interest. Write personal letters describing experiences and impressions.
- I can identify and explain some differences and similarities between the target culture(s) and US culture.
- Use a series of phrases and sentences to describe in simple terms family and other people, living conditions, educational background and present or most recent job. Communicate in simple and routine tasks requiring a simple and direct exchange of information
- Understand phrases and the highest frequency vocabulary related to areas of most immediate personal relevance (e.g. very basic personal and family information, shopping, local area, employment). Catch the main point in short, clear, simple messages and understand the description of events, feelings and wishes in personal letters.
- Identify and explain some differences and similarities between the target culture(s) and US culture.

### **SPANISH III**

SPAN&123

5 Credits

55 hours of lecture

Conclusion of the three-quarter sequence in elementary Spanish. Students should have successfully completed SPAN& 122, two terms of college Spanish, or two recent years of high school Spanish with a grade of B or higher. Over and under-qualified students must change to the appropriate level during week one. [HA, SE]

#### **Course Outcomes:**

- Deal with most situations likely to arise while traveling in an area where the language is spoken. Enter unprepared into conversations on topics that are familiar, of personal interest or pertinent to everyday life (ex. Family, hobbies, work, travel). C
- Understand the main points of clear standard speech on familiar matters regularly encountered in work, school, leisure, etc. Understand the main points of many radio or TV programs on current affairs or topics of personal or professional interest when th
- Understand texts that consist mainly of high frequency everyday or job-related language. Understand the description of events, feelings and wishes in personal letters.
- Write simple connected text on topics which are familiar or of personal interest. Write personal letters describing experiences and impressions.
- Identify and explain some differences and similarities between the target culture(s) and US culture.

### **CONVERSATIONAL SPANISH**

SPAN 141

3 Credits

33 hours of lecture

Intensive practice in Spanish conversation. Discussion in small groups of contemporary topics common to American and Hispanic societies. Prerequisite: SPAN& 122 or equivalent. [HB, SE]

#### **Course Outcomes:**

- Describe and narrate in the three major time frames: past, present and future.
- Engage in conversations on concrete topics in both informal and formal contexts.
- Express his/her own opinions about the films and what they learned from watching them.
- Deal effectively and maturely with differences in opinions and possibly debate about sometimes-difficult issues in a respectful manner.
- Understand the main points and recognize new vocabulary on matters that have been presented to me prior to watching a film in Spanish.
- Understand the class discussions well enough to stay actively engaged.
- Understand all directions for my preparation assignments and quizzes in Spanish.
- Read and understand the main ideas of film synopsis and critique.
- Write simple connected text using past, present and future on topics that are familiar to me.
- Narrate scenes from movies that they have seen and complete writing exercises using new vocabulary.
- Identify and explain some differences and similarities between the target culture(s) and US culture based on careful observation while watching movies in class.
- Differentiate between the countries and themes presented in the films.

### **STUDY ABROAD ORIENTATION**

SPAN 150

1 Credits

11 hours of lecture

Preparing students to travel with the Clark College study abroad program in Spanish-speaking country. Successful completion of this course required for students to participate in the travel abroad program. Application and acceptance into the study abroad program also required. Prerequisite: A grade of "C" or better or concurrent enrollment in SPAN& 122 or above; or consent of Instructional Unit. [SE]

**Course Outcomes:**

- Understand the host cities, schools, historical landmarks we will visit.
- Learn norms, customs, and how to behave appropriately in México/Uruguay/Spain in various situations and places.

**SPANISH IV**

SPAN&221

5 Credits

55 hours of lecture

Discussion in Spanish of topics from Hispanic civilization and culture. Intensive grammar review and composition practice. Students should have successfully completed SPAN& 123, three terms of college Spanish, or three to four recent years of high school Spanish with a grade of B or higher. Over and under-qualified students must change to the appropriate level during week one. [HA, SE]

**Course Outcomes:**

- Interact with a degree of fluency and spontaneity that makes regular interaction with native speakers possible. Take an active part in discussion in familiar contexts, accounting for and sustaining my views. Present clear, detailed descriptions on a wide
- Understand extended speech and lectures and follow even complex lines of argument provided the topic is reasonably familiar. Understand most TV news and current affairs programs. Understand the majority of films in standard dialect.
- Read articles and reports concerned with contemporary problems in which the writers adopt particular attitudes or viewpoints. Understand contemporary literary prose.
- Write clear, detailed text on a wide range of subjects related to my interests. write an essay or report, passing on information or giving reasons in support of or against a particular point of view. Write letters highlighting the personal significance
- Identify and explain some important differences and similarities between the target culture(s) and US culture.

**SPANISH V**

SPAN&222

5 Credits

55 hours of lecture

Discussion in Spanish of topics from Hispanic civilization and culture. Intensive grammar review and composition practice. Students should have successfully completed SPAN& 221 or the equivalent. [HA, SE]

**Course Outcomes:**

- Interact with a degree of fluency and spontaneity that makes regular interaction with native speakers possible. Take an active part in discussion in familiar contexts, accounting for and sustaining my views. Present clear, detailed descriptions on a wide
- Understand extended speech and lectures and follow even complex lines of argument provided the topic is reasonably familiar. Understand most TV news and current affairs programs. Understand the majority of films in standard dialect.
- Read articles and reports concerned with contemporary problems in which the writers adopt

- particular attitudes or viewpoints. Understand contemporary literary prose.
- Write clear, detailed text on a wide range of subjects related to my interests. write an essay or report, passing on information or giving reasons in support of or against a particular point of view. Write letters highlighting the personal significance
- Identify and explain some important differences and similarities between the target culture(s) and US culture.

## **SPANISH VI**

SPAN&223

5 Credits

55 hours of lecture

Discussion in Spanish of topics from Hispanic civilization and culture. Intensive grammar review and composition practice. Students should have successfully completed SPAN& 222 or the equivalent. [HA, SE]

### **Course Outcomes:**

- Interact with a degree of fluency and spontaneity that makes regular interaction with native speakers possible. Take an active part in discussion in familiar contexts, accounting for and sustaining my views. Present clear, detailed descriptions on a wide
- Understand extended speech and lectures and follow even complex lines of argument provided the topic is reasonably familiar. Understand most TV news and current affairs programs. Understand the majority of films in standard dialect.
- Read articles and reports concerned with contemporary problems in which the writers adopt particular attitudes or viewpoints. Understand contemporary literary prose.
- Write clear, detailed text on a wide range of subjects related to my interests. write an essay or report, passing on information or giving reasons in support of or against a particular point of view. Write letters highlighting the personal significance
- Identify and explain some important differences and similarities between the target culture(s) and US culture.

## **SELECTED TOPICS**

SPAN 280

1 - 5 Credits

55 hours of lecture

Selected topics in Spanish. Topics vary and course theme and content change to reflect new topics. This course may be repeated for credit. [SE]

### **Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of Spanish.

## **SPECIAL PROJECTS**

SPAN 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the department.

Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

## Surveying & Geomatics

### INTRODUCTION TO GPS

SURV 100

2 Credits

11 hours of lecture - 22 hours of lab

Introduction to global positioning tools. Fundamental concepts and use of modern handheld GPS. Includes field work and use of basic GPS software. Prerequisite: A grade of "C" or better in MATH 095 or qualifying score on placement test. [GE]

#### Course Outcomes:

- Give a condensed history of surveying equipment.
- Understand the basics behind the PLSS.
- Have an understanding of USGS topographic maps: how they were derived, scale, contours, coordinates, UTM's, Sections, Townships and Ranges, understanding topographic features.
- Determine a rough distance by pacing.
- Understand the difference between various horizontal and vertical datums and the importance of keeping them separate. Know the difference between International foot and U.S. Survey foot.
- Scale Latitudes and Longitudes on a USGS topographic map and search for those points on the ground. Collect Latitudes and Longitudes and map them on a topographic map.
- Find and plot UTM coordinates on a topographic map.
- Understand and then collect State Plane coordinates with a survey grade GPS receiver using Static, RTK and the WSRN.
- Set the correct datum in a hand held GPS.
- Process GPS static data using OPUS.
- Enter Latitudes and Longitudes in a handheld GPS and navigate to those points, collect GPS waypoints.

### FUNDAMENTALS OF SURVEY

SURV 102

2 Credits

11 hours of lecture - 22 hours of lab

Introduction to concepts of map reading, coordinate systems, the Public Land Survey System, basic legal descriptions of real property, plotting field data and creating a plat, and the minimum requirements for preparing plats in the State of Washington. No field work required. [GE]

#### Course Outcomes:

- Describe the history and basics of land surveying.
- Describe the historical and modern establishment of boundaries – the Public Land Survey System (PLSS).
- Identify and use various surveying equipment
- Perform basic surveying computations.
- Complete a legal description diagram neatly and completely.
- Know how to get basic info from a 1:24000 USGS topographic map and the basics of plane coordinate systems.
- Understand the history & structure of the PLSS.
- Know where to go and what to look for when preparing for a survey, and learn how to uniquely and precisely describe land with words.
- Know the basics of survey sketches and note keeping, and how to plot field data and construct a simple plat.
- Know the plat requirements for the State

## **COMPUTATION AND PLATTING**

SURV 104

5 Credits

55 hours of lecture

Basic coordinate geometry, curves and solutions, conversions, statistics and error analysis, traverse calculations, inverting, coordinate positions, and area calculations. Prerequisite: A grade of "C" or better in MATH 103. [GE]

### **Course Outcomes:**

- Learn techniques in coordinate geometry.
- Utilize coordinate geometry techniques to solve real survey problems and scenarios.
- Learn the basics of statistics related to survey measurements.
- Learn and practice good, clean notekeeping and assignment solution submittal formats.
- Read and interpret a legal description, and resolve/compute the boundary using hand computations and drafting.

## **FIELD SURVEY I**

SURV 121

5 Credits

33 hours of lecture - 44 hours of lab

Basic theory of surveying, measurement and calculation. Topics include measurement and determination of boundaries, areas, shapes, and location through traversing techniques, error theory, compass adjustments, public land system, and use of programmable calculators. Also covers principles of measurements of distances, elevation and angles. Concurrent enrollment in Lab. Prerequisite: A grade of "C" or better in MATH 095 or qualifying score on placement exam. [GE]

### **Course Outcomes:**

- Describe the history and basics of land surveying.
- Describe the historical and modern establishment of boundaries – the Public Land Survey System (PLSS).
- Identify and use various surveying equipment
- Perform basic surveying computations.
- Complete a legal description diagram neatly and completely.

## **FIELD SURVEY II**

SURV 122

5 Credits

33 hours of lecture - 44 hours of lab

Theories of electronic distance measurement, instrument calibration and analysis; principles of route location and design; theories of circular, parabolic, and spiral curves; highway and railway geometric design; area and volumes of earthwork; and mass diagrams. Prerequisite: A grade of "C" or better in SURV 121. [GE]

### **Course Outcomes:**

- Identify and use various surveying equipment, including equipment calibration.
- Understand the principles of route location and design.
- Describe the theories of circular, parabolic, and spiral curves used in highway and railway design.
- Perform horizontal and vertical curve computations.

- Perform area calculations and volumes of earthwork calculations.

## **PROFESSIONAL ETHICS**

SURV 123

1 Credits

11 hours of lecture

Survey safety, ethics, and communication. Problem solving methods, procedures, and human relations related to on-the-job work experience in field surveying. Prerequisite: Completion of, or concurrent enrollment in, SURV 121. [GE] [PNP]

### **Course Outcomes:**

- Identify and demonstrate leadership traits.
- Resolve or cope with ethical situations in the workplace.
- Communicate effectively
- Give and receive mentoring and resolve conflicts.

## **INTRODUCTION TO GIS**

SURV 125

3 Credits

22 hours of lecture - 22 hours of lab

Introduction to Geographic Information Systems (GIS) methods and theory. Background and development of GIS technology. Introduction to relational and spatial databases and spatial analysis. Prerequisite: A grade of "C" or better in MATH 089 or 090, or placement in MATH 091 or higher. [GE]

### **Course Outcomes:**

- Understand technical GIS concepts, terminology and techniques used in the industry.
- Understand map standards and various coordinate systems.
- Identify potential sources of GIS data and how to create data from various sources of information.
- Compile and analyze GIS data.
- Make maps with GIS software.
- Work through a GIS project from start to finish.

## **ROUTE SURVEYING**

SURV 163

5 Credits

33 hours of lecture - 44 hours of lab

Introduction to elements of horizontal and vertical route alignment and layout. Use design software and a total station for the construction of a section of road. Include the construction of a topographic map, a centerline alignment, and a final plan and profile showing centerline alignment. Use of topographic data for earthwork computations for proposed route. Prerequisite: A grade of "C" or better in SURV 162. [GE]

### **Course Outcomes:**

- Understand the basics of land surveying.
- Understand and use various surveying equipment.
- Perform basic surveying computations.

## **CO-OP WORK EXPERIENCE**

SURV 199

1 - 5 Credits

165 hours of clinical

Work-based learning experience that enables students to apply specialized occupational theory, skills and concepts. Specific objectives are developed by the College and the employer.

Prerequisite: A grade of "C" or better in SURV 121. [GE]

### **Course Outcomes:**

- Fulfill the job requirements of the internship provider.

## **BOUNDARY SURVEYS**

SURV 202

4 Credits

44 hours of lecture

Principles and laws relating to boundary surveys, including their creation, ownership, and the role of the surveyor; introduction to the Public Land Survey System, including history, proportioning, subdividing and evidence analysis. Topics include boundary history and boundary surveys, rights in land, junior/senior title rights, retracement of original surveys, deed first/survey first, common and case law, ranking/prioritizing evidence, controlling monuments and corners, errors in legal descriptions and plats. Prerequisite: A grade of "C" or better in SURV 121. [GE]

### **Course Outcomes:**

- Describe the function of the surveyor and authority.
- Describe the historical and modern establishment of boundaries.
- Comprehend the Public Land Survey System.
- Perform computations for lost corner positions, section subdivision, and proportioning perform mathematical computations of these aspects of the surveying system.
- Understand evidence evaluation and procedures.
- Perform land survey records research, visit a county surveyor's office, and perform research of a specific project.

## **LEGAL DESCRIPTIONS**

SURV 203

3 Credits

33 hours of lecture

Research and practice pertaining to the legal aspects of writing land description documents used in real property; written research project required. Prerequisite: A grade of "C" or better in SURV 121. [GE]

### **Course Outcomes:**

- Identify different methods used to describe and locate real property interests.
- Prepare concise, accurate and unambiguous land descriptions using a variety of written formats.
- Identify and prioritize controlling elements of land descriptions.
- Apply commonly used words and phrases in the context of written descriptions.
- Recognize land descriptions that are not sufficient to uniquely describe the parcels they purport to describe.
- Perform research required for analysis of written land descriptions.



## **BOUNDARY LAW I**

SURV 223

3 Credits

33 hours of lecture

Introduction to statute law, common law, case law, and legal principles of land boundaries and the practice of land surveying in Washington. Topics include an introduction to principles of professional practice and ethical consideration. Prerequisite: A grade of "C" or better in SURV 121. [GE]

### **Course Outcomes:**

- Understand the function of the surveyor and authority.
- Perform research required for analysis of court cases.
- Prepare concise, accurate and unambiguous technical reports on selected court cases.
- Properly apply commonly used words and phrases in the context of court decisions and reports.
- Recognize that the courts remand some decisions back to lower courts for additional interpretation or reconsideration.

## **SUBDIVISION PLANNING A & PLATTING**

SURV 225

3 Credits

33 hours of lecture

A study of selected state laws and regulations pertaining to the surveying profession that affect the surveying of division of lands; layout and design of subdivisions; environmental considerations and site analysis procedures. Prerequisite: A grade of "C" or better in SURV 102 and 122. [GE]

### **Course Outcomes:**

- Research public records to compile pertinent laws and regulations for land subdivisions.
- Estimate project costs and time.
- Mathematical calculation and subdivision application process requirements for plats  
A. Students will be graded on mathematical closures of survey work and completeness of the required applications
- Final plat design requirements A. Students will be graded on established plat checking standards and that all pertinent laws and regulations have been met

## **ARC GIS I**

SURV 250

3 Credits

22 hours of lecture - 22 hours of lab

Introduction to ArcGIS. GIS concepts, methodologies, and techniques. Prerequisite: A grade of "C" or better in SURV 125. [GE]

### **Course Outcomes:**

- Be familiar with the basic functionality of the ArcGIS application.
- Be familiar with the fundamental concepts of GIS and how they relate to GIS analysis and map production.
- Navigate and utilize the tools available in ArcGIS.
- Produce maps using GIS technology.
- Formulate appropriate methodologies and employ basic analytical techniques in order to complete straightforward GIS projects within ArcGIS.

## MAP PROJECTIONS

SURV 252

2 Credits

22 hours of lecture

Overview of map projections with emphasis on conformal projections used in the geomatics profession. U.S. State Plane Coordinate system, implementation, and computations. Prerequisite: A grade of "C" or better in SURV 121. [GE]

### Course Outcomes:

- Understand the need and use of map projections
- Understand datum coordinates and map coordinates
- Understand the basis of map projections and properties of different projections
- Understand the U.S. State Plane Coordinates system and its use
- Do coordinates conversions using available software
- Do traverse computations using State Plane coordinates

## SURVEY SOFTWARE APPLICATIONS

SURV 264

4 Credits

33 hours of lecture - 22 hours of lab

Use of surveying and related software to solve and plot assignments in traverse calculations, horizontal and vertical curve alignments, profiles, contours, and earthwork calculations. Some hand generated plots and calculations will be made to supplement the computer calculations. Prerequisite: A grade of "C" or better in SURV 121. [GE]

### Course Outcomes:

- Describe the basics of land surveying related software.
- Perform basic surveying computations.
- Create spreadsheets to aid in job costing via Microsoft Excel software.
- Analyze troubled areas in Digital Terrain Models (DTMs) utilizing Civil3D.

## SELECTED TOPICS

SURV 280

1 - 6 Credits

44 hours of lecture

Course focuses on selected topics in Surveying. Topics vary, and course theme and content change to reflect new topics. Because the course varies in content, it is repeatable for credit for different topics. [SE]

### Course Outcomes:

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this course.

## SPECIAL PROJECTS

SURV 290

1 - 5 Credits

Opportunity to plan, organize, and complete special projects approved by the department. Prerequisite: Consent of Instructional Unit. [GE]

**Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

**Tutoring****TUTORING**

TUTR 185

1 - 3 Credits

66 hours of lab

Introduction to methods and techniques in tutoring. Tutoring training assignments in various disciplines. [GE]

**Course Outcomes:**

- Assess another student's communication efforts to determine the most appropriate type of tutorial assistance needed (content specific, study or test taking skills, time management, etc.).
- Recognize another student's current level of knowledge and provide well-organized information to help increase the student's level of understanding and ability to succeed.
- Determine the most appropriate methods of assisting based on the other student's feedback (i.e., questioning, explanations or modeling problem solving techniques, etc.).
- Recognize and value the experience of assisting someone else in the learning process and gain confidence in his/her own abilities.
- Demonstrate respect for and the ability to work with diverse student populations with different abilities, skills and learning styles.

**TUTORING-WRITING**

TUTR 186

1 - 3 Credits

66 hours of lab

Introduction to strategies for effectively tutoring writers at all stages of the writing process and experience working one-on-one with writing across the disciplines. [GE]

**Course Outcomes:**

- Assess another student's communication efforts to determine the most appropriate type of tutorial assistance needed (content specific, study or test taking skills, time management, etc.).
- Recognize another student's current level of knowledge and provide well-organized information to help increase the student's level of understanding and ability to succeed.
- Determine the most appropriate methods of assisting based on the other student's feedback (i.e., questioning, explanations or modeling problem solving techniques, etc.).
- Recognize and value the experience of assisting someone else in the learning process and gain confidence in his/her own abilities.
- Demonstrate respect for and the ability to work with diverse student populations with different abilities, skills and learning styles.

**Welding****INTRODUCTION TO WELDING**

**WELD 102**

6 Credits

44 hours of lecture - 44 hours of lab

An introduction to the welding industry and the various career paths available within the industry. Practical application in general shop safety and department-required training on metal working equipment. Prerequisite: A grade of "C" or better, or concurrent enrollment in HLTH 120, and eligibility for MATH 030. [GE]

**Course Outcomes:**

- Demonstrate the ability to safely use all metal working shop equipment and perform safety inspections of equipment
- Demonstrate the ability to successfully weld and understand the processes and equipment used in Manual, and Semi-Automatic welding
- Set up and safe use of Oxy/Fuel Cutting equipment
- Set up and safe use of Plasma Arc Cutting equipment

**EXPLORING WELDING I**

## WELD 107

6 Credits

33 hours of lecture - 66 hours of lab

Instruction and practice of arc welding processes, oxyfuel processes, and fabrication machinery for beginning to advanced welders. Specialized instruction and American Welding Society welder certification is available to advanced students. [GE]

**Course Outcomes:**

- Perform an assortment of arc welding processes, oxy-fuel processes, and fabrication machinery operation.

**WELDING BLUEPRINT READING**

## WELD 110

5 Credits

55 hours of lecture

Interpretation of welding blueprints, welding symbols, tolerances and structural shapes. [GE]

**Course Outcomes:**

- Demonstrate shop drawing, and the use and interpretation of drawing elements and welding symbols. Interpret title block components and local and general drawing notes. Explain multi-view drawings, various drawing change systems, dimensioning and toleranci

**WELDED SCULPTURE LAB I**

## WELD 120

3 Credits

66 hours of lab

Development of a rudimentary expressive design language using welded metal as a medium. Exploration of beginning welding and metal-working skills. Concurrent enrollment in ART 295 required. [GE]

**Course Outcomes:**

- Demonstrate the ability to successfully weld and understand the procedure of the GMAW, Short Arc welding process.

- Demonstrate successful joint construction in the flat and horizontal positions for fillet welds.
- Demonstrate the ability to use a handheld plasma cutter.
- Demonstrate the ability to safely use all shop equipment related to the GMAW processes.
- Perform layout procedures from models designed by the student.

### **WELDING SCULPTURE LAB II**

WELD 121

3 Credits

66 hours of lab

Three dimensional design problems are explored while creating a welded metal sculpture. Gas metal arc welding and plasma arc cutting are introduced. Use of hydraulic power equipment and metal cut-off equipment is covered. Concurrent enrollment in ART 296 required. [GE]

#### **Course Outcomes:**

- Demonstrate the ability to successfully weld and understand the procedure of the GMAW, Short Arc welding process.
- Demonstrate successful joint construction in the flat and horizontal positions for fillet welds.
- Demonstrate the ability to use a handheld plasma cutter.
- Demonstrate the ability to safely use all shop equipment related to the GMAW processes.
- Perform layout procedures from models designed by the student.

### **WELDED SCULPTURE LAB III**

WELD 122

3 Credits

66 hours of lab

A fabricated welded metal sculpture is created while learning advanced metal working skills. The gas tungsten arc welding process and resistance welding are covered. Concurrent enrollment in ART 297 required. [GE]

#### **Course Outcomes:**

- Demonstrate the ability to successfully weld and understand the procedure of the GMAW, Short Arc welding process.
- Demonstrate successful joint construction in the flat and horizontal positions for fillet welds.
- Demonstrate the ability to use a handheld plasma cutter.
- Demonstrate the ability to safely use all shop equipment related to the GMAW processes.
- Perform layout procedures from models designed by the student.

### **GAS METAL ARC WELDING**

WELD 140

6 Credits

33 hours of lecture - 66 hours of lab

Instructional theory and application of Gas Metal Arc Welding processes on ferrous metals. Concurrent enrollment in WELD 141 or consent of Instructional Unit. Prerequisite: A grade of "C" or better in WELD 102 or consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Identify and describe Welding Technology principles of operation, terms and safe practices related to GMAW welding and cutting processes. Understand and explain the use of GMAW electrodes
- Describe the functions of GMAW power sources, electrical parameters, output characteristics

- and auxiliary controls
- Describe the criteria for visual inspection of GMAW weldments
- Describe OFC and PAC principles of operation.

## **GAS METAL ARC FABRICATION**

WELD 141

6 Credits

33 hours of lecture - 66 hours of lab

Application of concepts of gas metal arc welding processes on ferrous metals with a focus on fabrication techniques, proper use of hand tools and equipment found in industry. Concurrent enrollment in WELD 140 or consent of Instructional Unit. Prerequisite: A grade of "C" or better in WELD 102 or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Identify and describe Welding Technology principles of operation, terms and safe practices related to GMAW welding and cutting processes
- Understand and explain the use of common hand tools
- Apply GMAW in the assembly of layout projects
- Describe the criteria for visual inspection of GMAW weldments.
- Apply OFC and PAC principles of operation to layout projects

## **FLUX CORE ARC WELDING**

WELD 142

6 Credits

33 hours of lecture - 66 hours of lab

Instructional theory and application of arc cutting processes/oxyfuel cutting and flux core arc welding processes on ferrous metals. Concurrent enrollment in WELD 143 or consent of Instructional Unit. Prerequisite: A grade of "C" or better in WELD 102, 140 and 141 or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Identify and describe Welding Technology principles of operation, terms and safe practices related to FCAW welding and cutting processes
- Understand and explain the use of FCAW electrodes
- Describe the functions of FCAW power sources, electrical parameters, output characteristics and auxiliary controls
- Describe the criteria for visual inspection of FCAW weldments.
- Describe OFC and PAC principles of operation

## **FLUX CORE ARC FABRICATION**

WELD 143

6 Credits

33 hours of lecture - 66 hours of lab

Application of concepts of flux core arc welding processes on ferrous metals with a focus on fabrication techniques, proper use of hand tools and equipment found in industry. Concurrent enrollment in WELD 142 or consent of Instructional Unit. Prerequisite: A grade of "C" or better in WELD 102, 140 and 141, or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Identify and describe Welding Technology principles of operation, terms and safe practices

- related to FCAW welding and cutting processes
- Understand and explain the use of common hand tools
- Describe the criteria for visual inspection of FCAW weldments
- Apply OFC and PAC principles of operation to layout projects

## **SHIELDED METAL ARC WELDING**

WELD 144

6 Credits

33 hours of lecture - 66 hours of lab

Instructional theory and application of arc cutting processes/oxyfuel cutting and shielded metal arc welding processes on ferrous metals. Concurrent enrollment in WELD 141 or consent of Instructional Unit. Prerequisite: A grade of "C" or better in WELD 102, 142 and 143, or consent on Instructional Unit. [GE]

### **Course Outcomes:**

- Identify and describe Welding Technology principles of operation, terms and safe practices related to OFC, CAC-A and SMAW welding and cutting processes
- Understand and explain the use of SMAW electrodes
- Describe the functions of SMAW power sources, electrical parameters, output characteristics and auxiliary controls
- Describe the criteria for visual inspection of SMAW weldments
- Describe OFC and CAC-A principles of operation

## **SHIELDED METAL ARC FABRICATION**

WELD 145

6 Credits

33 hours of lecture - 66 hours of lab

Application of concepts of shielded metal arc welding processes on ferrous metals with a focus on fabrication techniques, proper use of hand tools and equipment found in industry. Concurrent enrollment in WELD 140 or consent of Instructional Unit. Prerequisite: A grade of "C" or better in WELD 102, 142 and 143, or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Identify and describe Welding Technology principles of operation, terms and safe practices related to OFC, CAC-A and SMAW welding and cutting processes
- Understand and explain the use of SMAW electrodes
- Describe the functions of SMAW power sources, electrical parameters, output characteristics and auxiliary controls
- Describe the criteria for visual inspection of SMAW weldments
- Describe OFC and CAC-A principles of operation

## **WELDING CERTIFICATION**

WELD 156

2 Credits

44 hours of lab

Students will review the requirements to earn program required AWS welding certifications. Prerequisite: Successful completion with a "C" or better of WELD 102 and consent of Instructional Unit. [GE] [PNP]

### **Course Outcomes:**

- Enhance skills in FCAW, SMAW, GTAW, GMAW, SAW, PAC and Oxy/fuel cutting processes

### **COOPERATIVE WORK EXPERIENCE**

WELD 199

1 - 5 Credits

165 hours of clinical

Supervised work experience in an approved job. Completion of specific learning objectives and employer evaluation. Prerequisite: Consent of Instructional Unit. [GE]

#### **Course Outcomes:**

- Fulfill the job requirements of the internship provider.

### **ELEMENTARY METALLURGY**

WELD 235

2 Credits

22 hours of lecture

Physical metallurgy oriented towards the metal working trades, ferrous and non-ferrous metals, manufacturing methods, material classification and identification, thermal processing, and joining. Concurrent enrollment in WELD 236 required. [GE]

#### **Course Outcomes:**

- Demonstrate the ability to identify various metals and their uses.
- Demonstrate the ability to converse about the characteristics of metals in written and verbal formats.
- Demonstrate the proper use of metallurgical terminology on tests, assignments and classroom activity's.
- Demonstrating an understanding of metallurgical knowledge as it applies to welding, machining and other trade crafts.

### **ELEMENTARY METALLURGY LAB**

WELD 236

2 Credits

44 hours of lab

Application of physical metallurgy oriented towards the metal working trades, ferrous and non-ferrous metals, manufacturing methods, material classification and identification, thermal processing, and joining. Concurrent enrollment in WELD 235 required. [GE]

#### **Course Outcomes:**

- Demonstrate the ability to identify various metals and their uses.
- Demonstrate the ability to converse about the characteristics of metals in written and verbal formats.
- Demonstrate the proper use of metallurgical terminology in a lab environment.
- Demonstrating an understanding of metallurgical knowledge as it applies to welding, machining and other trade crafts.
- Demonstrate the ability to analyze test results in the metallurgical lab.

### **GAS TUNGSTEN ARC WELDING**



## WELD 240

6 Credits

33 hours of lecture - 66 hours of lab

Instructional theory and application of arc cutting process/oxyfuel cutting and gas tungsten arc welding processes on ferrous metals. Concurrent enrollment in WELD 241 or consent of Instructional Unit. Prerequisite: A grade of "C" or better in WELD 102, 144 and 145, or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Identify and describe Welding Technology principles of operation, terms and safe practices related to GTAW welding and cutting processes
- Understand and explain the use of GTAW electrodes
- Describe the functions of GTAW power sources, electrical parameters, output characteristics and auxiliary controls
- Describe the criteria for visual inspection of GTAW weldments
- Describe PAW and PAC principles of operation

## **GAS TUNGSTEN ARC FABRICATION**

### WELD 241

6 Credits

33 hours of lecture - 66 hours of lab

Application of concepts of gas tungsten arc welding processes on ferrous metals with a focus on fabrication techniques, proper use of hand tools and equipment found in industry. Concurrent enrollment in WELD 240 or consent of Instructional Unit. Prerequisite: A grade of "C" or better in WELD 102, 144 and 145, or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Identify and use Welding Technology principles of operation, terms and safe practices related to OFC, PAW and GTAW welding and cutting processes
- Understand and explain the use of GTAW electrodes
- Describe the functions of GTAW power sources, electrical parameters, output characteristics and auxiliary controls
- Describe the criteria for visual inspection of GTAW weldments
- Identify, select and proper use of layout tools

## **ADVANCED WIRE FEED WELDING**

### WELD 242

6 Credits

33 hours of lecture - 66 hours of lab

Advanced instructional theory and application of arc cutting processes/oxyfuel cutting, sub-arc welding and wire feed welding processes on ferrous and nonferrous metals. Concurrent enrollment in WELD 243 or consent of Instructional Unit. Prerequisite: A grade of "C" or better in WELD 102, 142, 240 and 241, or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Identify and describe Welding Technology principles of operation, terms and safe practices related to FCAW & GMAW welding and cutting processes
- Understand and explain the use of specialty wire feed equipment
- Apply FCAW/GMAW in out of position welding
- Describe the criteria for visual inspection of FCAW/GMAW weldments
- Apply OFC and PAC principles of operation to weld assignments

## **ADVANCED WIRE FEED FABRICATION**

WELD 243

6 Credits

33 hours of lecture - 66 hours of lab

Application of concepts of wire feed welding processes on ferrous and non ferrous metals with a focus on fabrication techniques, proper use of hand tools and equipment found in industry. Concurrent enrollment in WELD 242 or consent of Instructional Unit. Prerequisite: A grade of "C" or better in WELD 102, 143, 240 and 241 or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Identify and use Welding Technology principles of operation, terms and safe practices related to GMAW, FCAW, SAW welding, and OFC & PAC cutting processes
- Understand and explain the use of wire electrodes in fabrication
- Describe the functions of wire feed power sources, electrical parameters, output characteristics and auxiliary controls
- Describe the criteria for visual inspection of wire feed weldments
- Identify, select and proper use of layout tools

## **ADVANCED GAS TUNGSTEN ARC WELDING**

WELD 244

6 Credits

33 hours of lecture - 66 hours of lab

Advanced instructional theory and application of arc cutting processes/oxyfuel cutting and gas tungsten arc welding processes on ferrous and nonferrous metals. Concurrent enrollment in WELD 245 or consent of Instructional Unit. Prerequisite: A grade of "C" or better in WELD 102, 240, 242 and 243 or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Identify and describe Welding Technology principles of operation, terms and safe practices related to GTAW welding and cutting processes
- Understand and explain the use of GTAW electrodes
- Describe the functions of GTAW power sources, electrical parameters, output characteristics and auxiliary controls
- Describe the criteria for visual inspection of GTAW weldments
- Describe PAW and PAC principles of operation

## **ADVANCED GAS TUNGSTEN ARC FABRICATION**

WELD 245

6 Credits

33 hours of lecture - 66 hours of lab

Application of concepts of advanced gas tungsten arc welding processes on nonferrous metals with a focus on fabrication techniques, proper use of hand tools and equipment found in industry. Concurrent enrollment in WELD 244 or consent of Instructional Unit. Prerequisite: A grade of "C" or better in WELD 102, 241, 242 and 243, or consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Identify and use Welding Technology principles of operation, terms and safe practices related to OFC, PAW and GTAW welding and cutting processes
- Understand and explain the use of GTAW electrodes
- Describe the functions of GTAW power sources, electrical parameters, output characteristics and auxiliary controls

- Describe the criteria for visual inspection of GTAW weldments
- Identify, select and proper use of layout tools

### **SELECTED TOPICS**

WELD 280

1 - 6 Credits

66 hours of lecture

Selected topics in Welding as listed in the quarterly class schedule. Repeatable for credit. [GE]

#### **Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this course.

### **SPECIAL PROJECTS**

WELD 290

1 - 5 Credits

Projects assigned according to needs and abilities of the student. Hours arranged with instructor. Maximum of 15 credits allowed toward a certificate or degree. Prerequisite: Consent of Instructional Unit required. [GE]

#### **Course Outcomes:**

- Outcomes to be defined by and agreed upon by individual student, instructor, and site supervisor.
- Demonstrate learning objectives as determined by the supervising instructor.

## **Women's Studies**

### **INTRODUCTION TO WOMEN'S STUDIES**

WS 101

5 Credits

55 hours of lecture

Contemporary feminist theory analyzing systems of power, privilege and inequity particularly with respect to gender, race, class, sexuality, age, and ability. Topics may include women and gender socialization, family, work, politics, health, sexuality, body image, violence, spirituality, art, and culture. Fulfills either Humanities or Social Science distribution requirements for the A.A. transfer degree. Prerequisite: A grade of "C" or better in ENGL 098 taken at 5 credits or recommended score on the writing placement test for ENGL& 101. [HA, SE, SS]

#### **Course Outcomes:**

- Discuss how the personal is political within feminism and identify the contributions of feminism to women's existing rights.
- Define feminism, womanism, sexism, racism, classism, homophobia, heterosexism, genderism, ageism, ableism, misogyny, androcentrism, Christianity, patriarchy, oppression, power, privilege, inequity, entitlements, institutional power, internalized oppression
- Identify and evaluate information on feminism and women's issues in print, electronic and broadcast media.
- Demonstrate an understanding of the social construction of identity and difference with regard to sex, gender, race, class, sexuality, age and ability, and recognize one's own place within the diversity of identities.
- Examine oppression from a feminist theoretical perspective, identifying institutional,

ideological, and individual components that maintain or challenge systems of power, privilege and inequity in contemporary U.S. society.

## **WOMEN AROUND THE WORLD**

WS 201

3 Credits

33 hours of lecture

Study of current issues affecting women. International feminism, reproductive rights, women in leadership, and affirmative action from a cross-cultural perspective. Fulfills either humanities or social science distribution requirements for the associate degree. [HA, SE, SS]

### **Course Outcomes:**

- Critically evaluate how current issues affecting women around the world are represented by news outlets.
- Investigate the role of women as change agents in their lives and in the development of their cultures and societies.
- Identify examples of the diversity and similarity of women's experiences around the world.
- Discuss current women's movements in major world areas.
- Analyze the economic, social, political, cultural, and interpersonal factors that contribute to women's lower status and power around the world.

## **WOMEN'S CULTURE**

WS 210

3 Credits

33 hours of lecture

A study of women's art and women in the arts, with emphasis on the roles and images of women in fine and folk art, music, film and mythology. Examines the historical events and sociological factors influencing those roles and images. Fulfills either humanities or social science distribution requirements for the A.A. transfer degree. [HA, SE, SS]

### **Course Outcomes:**

- Identify the historical and contemporary contributions of creative women to Western civilization in a variety of media, including print, audio-visual, and Internet.
- Analyze the differences in representations of women with differing racial, ethnic, social class, generational and other backgrounds and the effects of these representations on women's lives.
- Evaluate arguments surrounding the ideas of a women's culture.
- Demonstrate how women's position in society impacts the way they create and respond to culture.

## **RACE, CLASS, GENDER AND SEXUALITY**

WS 220

5 Credits

55 hours of lecture

Studies the social construction of difference, inequality and privilege in race, class, gender, sex, and sexual orientation in the U.S. Examines how these categories are created, maintained, and experienced; how meaning is assigned to those categories; and how social constructions can be challenged. Prerequisite: WS 101. [SE, SS] [PNP]

### **Course Outcomes:**

- Define these and other relevant terms: assimilation, class consciousness, cognitive dissonance, colonization, dysconscious, gentrification, hegemony, heteronormativity, internalized subordination and domination, intersectionality, intercultural competence,
- Analyze how categories of difference are created, maintained and experienced through power, privilege and inequity; how individual attitudes and behavior, institutional policies, practices and norms and societal/cultural values, beliefs and customs reinforce
- Demonstrate an awareness of one's own experiences of difference, identity, power, privilege and inequity.

## **RACISM & WHITE PRIVILEGE IN THE U.S.**

WS 225

3 Credits

33 hours of lecture

Critical examination of racism and white privilege in the U.S. analyzing systems of power, privilege and inequity; racial identity; and intercultural competence. [SE, SS] [PNP]

### **Course Outcomes:**

- Define these and other relevant terms: racism, prejudice, microaggression, whiteness, white privilege, oppression, compassionate awareness, institutional power, inequity, internalized racism, and intercultural competence.
- Analyze systems of power, privilege and inequity with regard to racism by explaining: 1) the social construction of race and white privilege over the history of the U.S.; 2) the individual, symbolic, and institutional components of racism; 3) the myth of
- Create a plan to further one's own intercultural competence, describing one's own development and experiences as a racial being and analyzing the effects of racism in one's own life.

## **SELECTED TOPICS**

WS 280

1 - 3 Credits

33 hours of lecture

This course focuses on selected topics in women's studies. Topics vary and course theme and content change to reflect new topics. This course may be repeated for credit. [SE]

### **Course Outcomes:**

- Complete objectives as determined by the course instructor.
- Apply the core concepts of the selected topic to the foundational principles of this course.

## **SPECIAL PROJECTS**

WS 290

1 - 5 Credits

Opportunity to plan, organize and complete special projects approved by the department.

Prerequisite: Consent of Instructional Unit. [GE]

### **Course Outcomes:**

- Demonstrate learning objectives as determined by the supervising instructor.

# College Information

## History

In the midst of the Great Depression, a group of educators boldly embraced a dream of higher education for Southwest Washington. That dream became reality when Clark College was founded as a private junior college in 1933.

The college was originally located in Vancouver's historic Hidden House, where it remained through 1937. During the next two decades, the college was housed at four different locations. In 1951, the college launched an evening program in the Applied Arts Center, the first building on the current 101-acre campus in Vancouver's Central Park.

Initial accreditation was granted during the 1936-37 academic year following a visit by professors from the University of Washington. In 1948, the college first received accreditation from the organization known as the Northwest Association of Secondary and Higher Schools. Today, that organization is known as the Northwest Commission on Colleges and Universities (NWCCU). Since its first accreditation in 1937, through periodic reviews, Clark College has remained accredited throughout its history.

Clark College first received state financial support in 1941. Five years later, the college was placed under the general supervision of the State Board of Education, with the Vancouver School Board serving as its policy-making body.

In 1967, the Washington State Legislature created a state system of community college districts. Clark Community College District No. 14, one of 34 Washington community and technical colleges, serves residents of Clark, Skamania and west Klickitat counties. The college is governed by a five-member board of trustees appointed by the Governor.

## Accreditation

Clark College is accredited by the Northwest Commission on Colleges and Universities \* (8060 165th Avenue NE, Suite 100, Redmond, WA 98052), a regional institutional accrediting agency recognized by the Secretary of the U.S. Department of Education.

Several of the college's programs are also accredited by program-specific accrediting bodies:

- The associate degree nursing program is accredited by the Accreditation Commission for Education in Nursing, Inc. \* (formerly known as the National League for Nursing Accrediting Commission).
- The dental hygiene program is accredited by the American Dental Association, Commission on Dental Accreditation. \*
- The associate degree medical radiography program is accredited by the Joint Review Committee on Education in Radiologic Technology.\*
- The medical assistant certificate program is accredited by the Commission on Accreditation of Allied Health Education Programs.
- The addiction counselor program is accredited by the National Addiction Studies Accreditation Commission.

- The automotive program is accredited by the National Automotive Technicians Education Foundation and certified by the National Institute for Automotive Service Excellence.
- The Automotive T-TEN program is a certified Toyota Technician Training Education Network (T-TEN) program.

\* Agencies recognized by the U.S. Department of Education as accrediting agencies.

## **College Assessment**

Clark College is committed to fostering the academic achievement and personal development of its students. To carry out that commitment, the college continuously gathers information about the effectiveness of its programs and services, the progress of its students toward educational and personal goals, and the achievements and perspectives of its alumni. This information is used to monitor program effectiveness, to recognize educational trends and opportunities, and to develop a sound, factual basis for academic planning.

Each Clark College student is expected to participate in the college's assessment efforts. Programs and services use various means to gather assessment information, including portfolios, performances, achievement tests, comprehensive examinations, surveys, interviews, focus groups, evaluation forms, and other methods. Occasionally, Clark College faculty and staff may present information about their assessment projects at professional conferences or publications, for the purpose of contributing to professional knowledge in the field of education. Aggregate assessment data may be used in these presentations, such as aggregate results from quizzes, surveys, etc. Students' consent must be obtained prior to presenting individual-level data.

## **Student Rights and Responsibilities**

Clark College provides its community and students with education and services of the highest quality. Admission to Clark College carries with it the presumption that students will conduct themselves as responsible members of the college community. Clark College expects that all students to conduct themselves in a manner consistent with its high standards of scholarship and conduct.

Student rights, responsibilities, and the Code of Student Conduct can be found at: [http://www.clark.edu/clark-and-community/about/policies-procedures/student\\_code.php](http://www.clark.edu/clark-and-community/about/policies-procedures/student_code.php). A hard copy can be requested in the Office of the Vice President for Student Affairs, Gaiser Hall 201 (GHL 204). These standards of conduct for students promote Clark College's educational purposes and provide students a full understanding of their rights and responsibilities.

## **Nondiscrimination and Equity**

Clark College recognizes, understands, confronts and challenges the institutional systems of privilege, power, and inequity so that all members of the Clark College community can support student learning. Clark College endeavors to facilitate student learning by providing the conditions that improve educational outcomes and eliminates systemic disparities among all groups.

Clark College is committed to freedom from discrimination for all members of the College community. The College expressly prohibits discrimination on the basis of race, color, national origin, age, perceived or actual physical or mental disability, pregnancy, genetic information, sex, sexual orientation, gender identity, marital status, creed, religion, honorably discharged veteran or military status, or use of a trained guide dog or service animal. In addition, the College is

committed to freedom from all forms of harassment including sexual harassment, domestic violence and harassment in the workplace. All claims of discrimination and harassment will be investigated by the designee of the President.

Discrimination is prohibited by Title VI of the Civil Rights Act of 1964, Title VII of the Civil Rights Act of 1964, Title IX of the Educational Amendments of 1972, Sections 504 and 508 of the Rehabilitation Act of 1973, the Americans with Disabilities Act and ADA Amendments Act, the Age Discrimination Act of 1975, the Violence Against Women Reauthorization Act, and Washington State's Law Against Discrimination, Chapter 49.60 RCW and its implementing regulations. For more information regarding the discrimination and harassment policy, please refer to [http://www.clark.edu/clark-and-community/about/policies-procedures/grievance\\_procedure.php](http://www.clark.edu/clark-and-community/about/policies-procedures/grievance_procedure.php)

Any person who believes she or he has been discriminated against or harassed by Clark College or its employee(s) or agent(s) on the basis of any status listed above, may request informal assistance and/or lodge a formal grievance. The College encourages the timely reporting of any incidents of discrimination or harassment. For complainants who wish to submit a complaint, a formal complaint form is available online at [http://www.clark.edu/campus-life/student-support/student\\_complaint/index.php](http://www.clark.edu/campus-life/student-support/student_complaint/index.php). Hard copies of the complaint form are available at the following locations on campus: the Diversity Center, Gaiser Hall 214 (GHL 214), the Office of the Vice President of Student Affairs, Gaiser Hall 204 (GHL 204), or the Office of Human Resources, Baird Administration Building 144 (BRD 144).

## **Behavioral Intervention and Threat Assessment (BITA)**

**360-992-2401**

Clark College strives to maintain a healthy and safe environment for all students, faculty and staff. Life can be challenging, and people may need support and referrals for assistance. Clark College's BITA team is composed of administrators, faculty counselors, and a case manager that collaboratively work to maintain a safe college environment. BITA works directly with students, faculty, and staff to respond to student behaviors and to identify students that pose a danger to self, others, or the college community. To learn more about BITA or submit a referral of concern at [clark.edu/campus-life/student-support/bita/index.php](http://clark.edu/campus-life/student-support/bita/index.php).

## **Notification of Students' Rights Under the Family Education Rights and Privacy Act**

Clark College conforms to the Family Educational Rights and Privacy Act (FERPA), as amended, which affords students certain rights as to their education records.

1. Students have the right to inspect and review their education records within 45 days of the day the college receives a written request for access. Students should submit, to the Registrar, written requests that identify the record(s) they wish to inspect. The Registrar will make arrangements for access and notify the student of the time and place where the record(s) may be inspected. If the records requested are not maintained in Enrollment Services, the student will be advised of the correct official to whom the request should be addressed.
2. Students have the right to request the amendment of the education records that they believe are inaccurate or misleading. Students must write the college official responsible for the record, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading. If the college decides not to amend the record as requested by the student, the college will notify the student of the decision and advise the student of the process by which the student may appeal the decision.



3. A student has the right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent. With few exceptions (stated below), no one will have access to student records without the written consent of the student. Clark College will not release a student's record to a parent/guardian without the student's written permission. Such a policy is in effect regardless of the student's age or financial dependency upon the parent/guardian.

The college may release student directory information without student consent which includes student name, student address, student e-mail, date of birth, major field of study, quarters of attendance, degrees and awards received, participation in activities and sports, and weight and height of members of athletic teams. With regard to former students, such information also includes addresses for use by the Clark College Foundation.

Exceptions include school officials with a legitimate educational interest in a student's educational record. A school official is a person employed by the college in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the college has contracted (such as an attorney, auditor, collection agent, or the National Student Clearinghouse, an agency which acts as a clearinghouse for student loan deferment reporting); a person elected to the board of trustees; or a student serving on an official committee, such as a disciplinary or grievance committee. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility. Exceptions also include accrediting agencies; student financial aid agencies; those who require student information in an emergency situation in which someone's health or safety is at risk; Clark College also discloses educational records without consent to officials of baccalaureate institutions in which a student seeks to, or intends to, enroll.

In compliance with the Higher Education Amendments of 1998, the college is authorized to disclose information to a parent or guardian about any school disciplinary violation involving alcohol or a controlled substance which has been found to have been committed by a student who is under the age of 21.

Pursuant to the Solomon Amendment, Clark College is authorized to disclose the following directory information to the military for recruitment purposes: student's name, address, telephone listing, date of birth, academic major, and degrees received from Clark College.

Students who do not wish to have directory information released by the college must file a student directory restriction request with Enrollment Services.

4. A student has the right to file a complaint with the U.S. Department of Education concerning alleged failures by Clark College to comply with the requirements of FERPA by writing to:

Family Policy Compliance Office  
U.S. Department of Education  
400 Maryland Ave. S.W.  
Washington, DC 20202-5920

In some instances, records may be withheld by the college. Academic transcripts are routinely withheld if a student has a financial obligation to the college. The Security/Safety Office may request a hold on records if there is concern that such records may compromise a criminal

investigation.

Copies of the complete FERPA policy may be obtained at Enrollment Services.

## **Limitation of Liability**

The college's total liability for claims arising from a contractual relationship with the student in any way related to classes or programs shall be limited to the tuition and expenses paid by the student to the college for those classes or programs. In no event shall the college be liable for any special, indirect, incidental, or consequential damages, including but not limited to, loss of earnings or profits.

## **Graduation Rates**

Below is the federal graduation rate survey (GRS) information for student cohorts from 2007, 2008, 2009, and 2010. The federal graduation rate survey definitions pertain to a specific cohort of Clark College students: new students attending full time, who plan to earn a degree or certificate, and without prior college experience.

Combined transfer out/completion/ graduation rate, 4-year average: 44%

GRS completion or graduation rate, 4-year average: 26%

GRS transfer out rate, 4-year average: 18%

Clark College provides this information pursuant to the federal Student Right to Know Act so that prospective students can make informed decisions about the college they might wish to attend. For help in interpreting these data, contact the Office of Planning & Effectiveness, 360-992-2506.

View the most recent cohort graduation rates at the National Center for Education Statistics website: [nces.ed.gov/collegenavigator](http://nces.ed.gov/collegenavigator)

## **Equity in Athletics**

The Equity in Athletics Disclosure Act is designed to make prospective students aware of a school's commitment to providing equitable athletic opportunities for its male and female students. Any co-educational institution of higher education that participates in a federal student aid program must prepare an EADA report each October. For a copy of the report, please contact the Athletic Department, O'Connell Sports Center, 360-992-2268, or visit the EADA website at <http://ope.ed.gov/athletics/>.

## **Consumer Information**

All Consumer Information, also known as Student Right to Know Information, is available on the Clark College website at [www.clark.edu/student\\_services/consumer\\_information/](http://www.clark.edu/student_services/consumer_information/)

Information is available in paper format through the Office of the Dean of Student Enrollment and Completion located in Gaiser Hall.

# Directories and Academic Calendar

## Clark College Board of Trustees

### **Jack Burkman** 2008 – 2018

B.S. in Mechanical Engineering, Montana State University

Certified Professional Coach, Antioch University – Seattle

Mr. Burkman is a Vancouver City Council member. He most recently served as the SW Region Planning Manager for Washington State Department of Transportation. Prior to that, he worked for Hewlett Packard for 28 years, including 21 years in Vancouver.

Community activities include:

- Member and former chair, SW Washington Regional Transportation Council
- Former vice president of Public Policy and member, YWCA Clark County Board of Directors
- Former chair and member, Fort Vancouver Regional Library Board of Trustees

### **Michael Ciraulo** 2014 – 2019

A.A.S. in Fire Protection, Portland Community College

B.S. in Business Management and Communications, Concordia University

Graduate of Executive Fire Officer Program, National Fire Academy

Mr. Ciraulo is a 20-year veteran of the fire service and is currently the Division Chief in charge of Training and Education at Clark County Fire and Rescue.

Community activities include:

- Incident Commander, Washington State Incident Management Team
- Former Mayor and Council member of City of Battle Ground
- Larch Corrections community Advisory Board
- Washington State Higher Education Facilities Authority

### **Royce Pollard** 2011 – 2016

B.S. in Secondary Education, University of Alabama

During his six terms as mayor of Vancouver, Wash. from 1996-2010, Royce Pollard shaped the development of downtown Vancouver including the revitalization of Esther Short Park and the dedication of the Hilton Vancouver Washington Hotel and Convention Center.

Community activities include:

- Board of Directors, Southwest Washington Red Cross

### **Jada Rupley** 2010 – 2015

B.A. in Psychology/Education, Central Washington University

M.Ed. in School Administration, Seattle Pacific University

Certified Superintendent, School Principal, School Psychologist

Jada Rupley is currently the Early Learning System Director for the State of Oregon. She is the former Associate Superintendent of Educational Service District 112.

Community activities include:

- Board Member, Clark County Skills Center Advisory Council
- Clark County Aging Task Force

### **Rekah Strong** 2012 – 2017

B.S. Criminal Justice, Portland State University

M.A. Social Work/Administration, Portland State University

Ph.D. Social Work Research, Portland State University

Rekah Strong is currently the Vice President of Organizational Development and Culture at the

United Way of the Columbia Willamette. She has more than 16 years of experience working in public agencies and developing strategies to improve organizational cultural humility.

Community activities include:

- Board member, We Reign Youth Foundation
- Trainer, Leadership Clark County Diversity

## Clark College Executive Cabinet

### **William Belden (2010)**

Vice President of Student Affairs  
B.A. Eastern Washington University  
M.Ed. Western Washington University

### **Sirius Bonner (2011)**

Special Advisor on Diversity and Equity  
B.A. Reed College  
M.A. Reed College

### **Tim S. Cook (1997)**

Vice President of Instruction  
B.S. Western Oregon State College  
M.A. Lewis and Clark College  
Ed.D. Oregon State University

### **Shanda L. Diehl (2008)**

Associate Vice President of Planning and Effectiveness  
B.A. Eastern Washington University  
M.P.H. University of Washington

### **Lisa Gibert, CFRE (2003)**

President/CEO, Clark College Foundation  
B.S. University of Oregon  
M.B.A. University of California, Irvine

### **Chato Hazelbaker (2013)**

Chief Information and Communications Officer  
B.A. Rocky Mountain College  
M.A. Crown College

### **Leigh A. Kent (2007)**

Executive Assistant to the President  
A.A., A.S. Holyoke Community College

### **Robert K. Knight (2004)**

President  
B.S. United States Military Academy  
E.M.B.A. Golden Gate University

### **Kevin Witte (2011)**

Associate Vice President  
of Economic and Community Development  
B.S. University of Washington  
M.B.A. University of Michigan

### **Robert D. Williamson (2009)**

Vice President of Administrative Services  
A.A. Ft. Steilacoom Community College  
B.A., M.A. Western Washington University

**A B C D E F G H I J K L M N O P Q R S T U V W X Y Z**

**A**

**B**

### **Rachele Bakic (2012)**

Interim Director of Academic Services  
B.A. The College of Saint Rose  
M.A. Hawaii Pacific University

### **Michelle M. Bagley (2008)**

Dean of Clark Libraries and Academic Success Services  
B.A. Minot State University  
M.L.S. Emporia State University

### **Andrew T. Barsotti (2008)**

Director of Data Services  
B.S. University of Wisconsin  
M.S. Washington State University, Pullman

### **Randall G. Blakely (2009)**

Satellite Campus Building Administrator

B.A., M.P.A. Portland State University  
B.S., Ed.D. Oregon State University

**Edie N. Blakley** (2008)  
Director of Career Services  
A.A.S. Linn Benton Community College  
B.S. Ed.M. Oregon State University

**Brittany Brist** (2014)  
Educational Planner - Professional/Technical  
B.S., M.S. Portland State University

**Barbara "Dani" Bundy** (2014)  
Associate Director of Running Start  
B.A. Washington State University

**Armetta Burney** (2012)  
Associate Director of Workforce Education Services  
B.S. Southern University  
M.B.A. Cardinal Stritch University

## C

**Linda S. Calvert** (1979)  
Associate Director of Running Start  
B.A. Washington State University

**Christy Campbell** (2014)  
Assistant Director of Business Services  
B.S. Washington State University

**Janette Clay** (2014)  
Transitional Studies Learning Communities Manager  
B.A. Lewis and Clark College

**Laurie S. Cornelius** (1982)  
Director of Services for Children & Families  
B.A. University of Washington  
M.A. Pacific Oaks

**Tina Cruz** (2015)  
Corporate Education Client Support Specialist

## D

**Narek Daniyelyan** (2014)  
Educational Partnerships Manager  
B.A. Washington State University

**David B. Daugherty** (2000)  
Director of IT Services  
Technology Services  
A.A. Lane Community College  
B.S., M.S. University of Oregon

**Karen L. Driscoll** (2008)  
Director of Financial Aid  
B.S. Eastern Washington University

**Karin Duncker** (2014)  
Columbia Gorge Educational Program Manager  
B.A. Hofstra University

**Kelsey DuPere** (2013)  
Director of Advising Services  
B.A. Portland State University  
M.S. Portland State University

## E

## F

**Mark Fennell** (2012)  
Director of Risk Management  
B.A. University of California, Los Angeles

**Kira Freed** (2014)  
Educational Planner - Health Occupations and Education  
B.A., M.S. Western Washington University

## G

**Carrie Gallagher** (2013)  
Executive Assistant Human Resources  
A.A. Clackamas Community College  
B.A. The University of Portland

**Michelle Giovannozzi** (2012)  
Director of Economic Development and Partnerships  
B.A. Princeton University  
M.S. Seattle Pacific University

**Kael Godwin** (2007)  
Research and Analytics Professional  
B.A., M.A. University of Nevada, Las Vegas

**Michelle L. Golder** (2007)  
Special Projects and Activities Manager  
B.S. University of Portland

**Sarah K. Gruhler** (2010)  
Director of Student Life  
B.A. Western Washington University  
M.Ed. Seattle University

**Tenzing Gyasto** (2014)  
Associate Director of Entry Services  
B.S. University of Oregon  
M.S. Arizona State University

## H

**Patricia Hamann** (2014)  
Business Developer  
B.A. University of Washington

**Theresa L. Heaton** (1977)  
Executive Assistant to the Vice President of Administrative Services

**Jason Heron** (2011)  
Software Application Developer  
B.S. University North Texas

**Aaron Hodukavich** (2012)  
Director of Disability Support Services  
B.S. Longwood University  
J.D. Howard University

**Genevieve Howard** (2010)  
Dean of Workforce, Career, and Technical Education  
B.A., M.A. California State University, Bakersfield

**Kanna Hudson** (2012)  
Research and Assessment Professional  
B.A., M.Ed. University of Washington

## I

## J

**Christopher Jacob** (2015)  
Assistant Athletics Director  
B.S. Nova Southeastern University

**Miles V. Jackson** (1998)  
Dean of Social Sciences and Fine Arts  
B.S. Portland State University  
M.S. University of Washington

**Kate Jacky** (2015)  
Associate Director of Financial Aid  
B.A. Washington State University

**Diana Jaramillo** (2014)  
Associate Director of Advising  
B.A. University of Southern California  
M.S. Miami University

**Vernon "Skip" A. Jimerson** (1991)  
Grounds Manager

**Rhianna Johnson** (2014)  
Director of Education at Larch Corrections  
B.A. Washington State University  
M.S. Portland State University

**Colman Joyce** (2012)  
Interim Associate Director of Enrollment Services & Registrar  
A.A. Portland Community College  
B.A. Marylhurst University  
M.S. Portland State University

## K

**Tanya Kerr** (2011)  
Internal Auditor  
B.A. University of Washington

**Jennifer Kirby** (2012)  
Project and Workflow Coordinator  
B.A. Saint Martin's College

**Alex Kirk** (2014)  
Completion Coach  
A.A. Columbia Basin College  
B.A. University of Portland  
M.A. Concordia University

**Monica L. Knowles** (1998)  
Bookstore Manager  
A.A. Brooks College

## L

## M

**John Maduta** (2010)  
Associate Director of Advising-Professional/Technical Programs  
B.A. Western Washington University  
M.S. Warner Pacific College

**Korene E. Marquez** (2013)  
Associate Director of Tutoring  
B.A. University of Oregon  
M.A. Portland State University

**Kimberly A. Marshel** (2008)  
Associate Director of Credit Articulation  
B.S. Portland State University  
W.S.CT. Portland State University  
M.S. Portland State University



**Maria Masson** (2014)  
Assistant Director of Human Resources  
B.A. University of Washington  
B.A. Portland State University  
M.A. Lewis and Clark College

**Susan Maxwell** (2001)  
Research, Reporting and Data Integrity Professional  
B.A., M.S. University of Wisconsin-Milwaukee

**Jeffery Miller** (2013)  
Environmental Health and Safety Manager  
B.S., M.S. Troy University

**Leslie Mohlman** (2014)  
Transitional Studies Student Success Navigator  
B.A. Warner Pacific College

**Cynthia L. Myers** (2007)  
Director of Nursing  
A.D.N. Clark College  
B.S.N. Washington State University, Vancouver

**N**

**O**

**Cindi M. Olson** (1999)  
Executive Assistant to the Vice President of Student Development

**Debra Ortiz** (2011)  
Director of Allied Health  
M.S. California State University

**Shelley R. Ostermiller** (2010)  
Associate Director of Advising Services  
A.A. Clark College  
B.A. Washington State University, Vancouver  
M.S. Warner Pacific College

**Eriko Otsuka** (2012)  
Software Application Integrator and Developer  
B.S., M.S. Washington State University, Vancouver

**P**

**Ken J. Pacheco** (2004)  
Director of Security & Safety  
B.A. Providence College  
M.S. University of New Haven

**Felisciana K. Peralta** (2008)  
Multicultural Retention Manager  
B.A. Central Washington University  
M.Ed. Heritage University

**Bonnie Peterson** (2014)  
Director of Professional & Personal Development  
B.S. St. Olaf College  
M.B.A. College of St. Thomas

**Timothy D. Petta** (2013)  
Director of Facilities Services  
Avis Contractor's License School

**Q**

**R**

**Paul J. Raines** (2009)  
Custodial Services Manager

**Tracy B. Reilly-Kelly** (1998)  
Continuing Education Program Manager  
B.A. The Evergreen State College  
M.S. Portland State University

**Julie L. Robertson** (2013)  
Research and Continuous Improvement Professional  
B.S. Lewis & Clark College  
M.S., M.S.W. Portland State University

**Matthew J. Rygg** (2013)  
Dean of Student Success and Retention  
B.B.A. Pacific Lutheran University  
M.Ed. Oregon State University  
Ph.D. Bowling Green State University

## S

**Mirranda Saari** (2013)  
Interim Director of Enrollment Services & Registrar  
B.S. Central Washington University  
M.Ed. Concordia University

**Sabra Sand** (2014)  
Director of Business Services  
B.A. Washington State University

**Jenna Scott** (2014)  
Transitional Studies Student Success Navigator  
B.A. Loyola Marymount University

**Ashley Schumacher** (2014)  
Advanced Registered Nurse Practitioner  
B.S.N. Oregon Health Sciences University  
M.S.N. University of California

**Natalie M. Shank** (2014)  
Assistant Director of Student Care and Community Standards  
B.A. Seattle Pacific University  
M.S. Radford University  
Ed.D. George Fox University

**Cathy Sherick** (2015)  
Associate Director of Instructional Programming & Innovation  
B.S. Eastern Oregon State  
M.A. Portland State University

**Michael Shingle** (2014)  
Educational Planner - College Prep & Transfer  
B.S., M.S. Oregon State University

**Jody Shulnak** (2007)  
International Student Recruitment & Outreach Manager  
B.S. Northern Arizona University  
M.S. Portland State University

**Lori Silverman** (2014)  
Director of Grant Development  
B.S. University of Wisconsin  
M.S. Portland State University

**Melissa Sinclair** (2012)  
Advising Divisional Manager  
B.S. Hawaii Pacific University  
M. Ed. University of Washington, Bothell

**Suzanne C. Smith** (2010)  
Student Learning Center Program Manager  
A.S. Utah Valley State College  
B.A. Washington State University, Vancouver

## T

**Julie F. Taylor** (2005)  
Administrative Secretary

**Patrick D. Taylor** (1998)  
Director of IT Infrastructure and Security

**Adriana J. Thomas** (2013)  
Health eWorkforce Program Manager  
B.A. Seattle Pacific University  
M.S. Central Connecticut State University

**Laurel E. Tygart** (2013)  
Executive Assistant to the Vice President of Instruction  
B.A. Western Oregon University

## U

## V

## W

**Angela "Ann" Walker** (2014)  
Director of Athletics  
B.A. Northwestern College  
M.A. University of Iowa

**Jane C. Walster** (2013)  
Director of International Programs  
A.A. Seattle Central Community College  
B.A., M.S.W. University of Washington

**Jim Watkins** (2003)  
Construction Project Manager  
B.A. New College

**Mayra Werner**(2015)  
Construction Manager  
A.A. Oakton Community College  
B.A. University of Illinois at Chicago  
M.A. Illinois Institute of Technology

**Peter G. Williams** (2011)  
Dean of Science, Technology, Engineering and Mathematics  
B.A. University of Vermont  
M.S. Washington State University  
Ph.D. Oregon State University

**Sue A. Williams** (1996)  
Interim Director of Human Resources  
A.A.S. Clark College  
B.A. Washington State University, Vancouver

**Patrick Willis** (2014)  
Career Advisor  
B.A., M.A. George Fox University

**Monica Wilson** (2014)  
Transitional Studies Administrative Manager  
B.S. Political Science, Portland State University  
B.S. Liberal Studies, Portland State University

## X

## Y

**Nancy Young** (2014)  
International Educational Planer  
B.A. Hendrix College  
M.A. Rutgers University

Z

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

A

**Lisa Aepfelbacher** (2011)  
Nursing B.S.N. Boston University  
M.S. Case Western Reserve University

**Jacqueline F. Allen-Bond** (2000)  
English as a Second Language  
B.A. University of Victoria, Canada  
M.A. School for International Training, Brattleboro

**Glenn Afflerbaugh** (2015)<sup>T-T</sup>  
Dental Hygiene  
B.S. Eastern Washington University

**Roberto P. Anitori** (2013)<sup>T-T</sup>  
Biology  
B.S., Ph.D. University of New South Wales

**Donald L. Appert** (1990)  
Music  
B.M. M.M. New England Conservatory  
D.M.A. University of Kansas

**Michael D. Arnold** (1989)  
Exercise Science, Physical Education  
A.S. North Country Community College  
B.S.E. Northwest Missouri State University  
M.S. Northeast Missouri State University  
Certified Strength and Conditioning Specialist

**Patricia Atkinson** (2015)<sup>T-T</sup>  
Economics  
B.S. Marist  
M.S. Portland State University

**Julie A. Austad** (2013)<sup>T-T</sup>  
Librarian  
B.A. Linfield College  
M.L.S. Emporia State University

B

**Karl L. Bailey** (2006)  
Chemistry  
B.S. California Polytechnic State University  
Ph.D. University of California, Davis

**Radmila Ballada** (2008)  
Technical Services and Systems Librarian  
B.A. University of Vermont

M.A. M.L.S. Southern Connecticut State University

**Kristine T. Barker** (1993)

Mathematics

B.A. Willamette University

M.A. University of Oregon

**Kayoko Y. Barnhill** (1994)

Mathematics

B.A.S. University of California, Davis

M.A. California State University, Sacramento

**Christina Colby Barsotti** (1992)

Engineering

B.S., M.S. Washington State University

**Carol L. Beima** (1999)

Adult Basic Education

B.A. Wittenberg University

M.Ed University of Washington

**Barbara Benge** (2014)

Business Technology

A.A.S. Clark College

**Gene Biby** (2011)

Drama

B.S., M.S. Murray State University

Ph.D. Southern Illinois University

**Aaron S. Bingham** (1994)

Mathematics

B.A. University of California, Los Angeles

M.A. California State University, Sacramento

**Mark E. Bolke** (2000)

Biology

B.S., M.S. Portland State University

**Lisa A. Borho** (1997)

Physical Education

B.S., M.S. University of Illinois

**Veronica P. Brock** (1995)

Health & Fitness

B.S. Eastern Washington University

M.S. East Stroudsburg University

**Susan K. Brookhart** (2006)

Chemistry B.A. Amherst College

M.S. California Institute of Technology

**Laurie H. Brown** (2002)

Nursing

A.S. Golden West College

A.S. Cypress College

B.S.N. California State University, Fullerton

M.P.A. Portland State University

M.S.N. Washington State University

**Caron Byrd** (2015)<sup>T-T</sup>

Adult Basic Education

A.S. Bakersfield College

B.A. San Francisco State University

M.A. California State University

## C

**Paul A. Casillas** (1990)

Mathematics B.A. Augustana College, Illinois

M.A. University of Iowa

M.S. University of Oregon

**Carlos J. Castro** (2006)

Sociology

B.A., M.A. M.C.R.P. Ph.D. University of Oregon

**Michael V. Ceriello** (2007)

Political Science

B.A. University of California, Santa Barbara

M.A. Western Washington University

**Anthony J. Chennault** (2008)

Biology

B.A. University of Puget Sound

M.S. Portland State University

**Lindsay Christopher** (2014)<sup>T-T</sup>

English

B.A. Mercyhurst University

M.A. University of Buffalo

Ph.D. university of Denver

**Steven Clark** (2011)

Biology

B.A. Linfield College

M.A. Lewis and Clark College

M.S. Portland State University

**Valerie S. Cline** (2011)

Nursing

A.D.N. Clark College

B.S.N. Washington State University, Vancouver

M.S.N. Walden University

**Adam Coleman** (2011)

Computer Technology

A.A.S. Clark College

B.S. Eastern Washington University

**Shayna Collins** (2012)

Counseling/Human Development

B.A. M.S. Minnesota State University, Mankato

**Lisa E. Conway** (2003)

Art

B.F.A. University of Michigan

M.F.A. Louisiana State University

**Kathryn "Kate" Cook** (2014)<sup>T-T</sup>

Mathematics

B.A. Principia College

M.S. California State University

**Amanda Crochet** (2011)

Chemistry

B.S. Tulane University

Ph.D. University of California, Berkeley

**William T. Cushwa** (1995)

Biology

B.S. Virginia Polytechnic Institute and State University

M.S. Ph.D. University of California, Davis

## D

**Jill C. Darley-Vanis** (2006)

English

B.A. Oregon State University

M.A. Portland State University

**Kushlani de Soyza** (2013)<sup>T-T</sup>  
Women's Studies  
B.S. Northwestern University  
M.Ed. University of Cincinnati  
M.A. Portland State University  
M.F.A. Oregon State University

**Marylynne Diggs** (1998)  
English  
B.A. University of Alabama  
M.A., Ph.D. University of Oregon

**Roxanne L. Dimyan** (1997)  
Librarian  
B.A. M.L.S. University of Washington

**Elizabeth Donley** (2011)  
English  
B.A. DePaul University  
M.A., M.F.A. Chapman University

**Kathryn "Katie" Donovan** (2011)  
Nursing  
B.S.N. Marquette University  
M.N. Washington State University

**April B. Duvic** (2009)  
Music B.A. Whitman College  
M.S.T. Portland State University

## E

**Evalinn "Sunnie" Elhart-Johnson** (2010)  
Business Medical Technology  
B.S. Humboldt State University  
M.S. Warner Pacific College

**Mark L. Elliott** (1994)  
Mathematics  
B.S., M.S. Portland State University

**Mary E. Evens** (2000)  
Business Technology  
B.A. Central Washington University  
M.A. Pepperdine University

## F

**Nadine L. Fattaleh-Diggs** (2002)  
Chemistry-General  
B.A. Scripps College  
M.S. Carnegie Mellon University

**Dee Anne Finken** (2013)<sup>T-T</sup>  
Journalism  
B.A. California State University, Sacramento  
B.A. Washington State University  
M.F.A. Portland State University

**Anita L. Fisher** (1990)  
History & Political Science  
B.A., M.A. University of Portland  
Ph.D. University of Oregon

**Nicholas C. Forrest** (1996)  
Political Science  
B.A. St. Joseph's College  
M.A. Ph.D. Northwestern University

**Van A. Forsyth** (1995)  
History

B.A. University of California, Berkeley  
M.A. San Francisco State University

## G

**Sara L. Gallow** (1999)  
English as a Second Language  
B.A. Michigan State University  
M.A. Ball State University

**Randall S. Givens** (1988)  
Nursing  
B.S. Walla Walla College M.S. University of Portland  
M.S.N. University of Portland

**Michael A. Godson** (1995)  
Automotive Technology  
A.A.S. Clark College  
A.S.E. Master Automotive Technician

**Deena M. Godwin** (2008)  
Communications Studies  
B.A. Dana College  
M.S. South Dakota State University

**Donald M. Gonser** (1994)  
Diesel  
A.S. Oregon Institute of Technology  
A.S.E. Master Medium/Heavy Truck Technician

**John P. Governale** (1993)  
Psychology  
A.A. Skagit Valley College  
B.A. Western Washington University  
M.S. Portland State University

**Zachary M. Grant** (2006)  
Librarian  
B.A. Oregon State University  
M.L.S. Emporia State University

**Garrett C. Gregor** (2002)  
Mathematics B.S. University of Utah  
M.S. Humboldt State University

**Gothard C. Grey** (2004)  
Physics  
B.S. (Physics) University of Utah  
B.S. (Chemistry) University of Utah  
B.S. (Mathematics) University of Utah  
M.S. California Institute of Technology  
Ph.D. University of Wisconsin, Madison

**Joshua Groesz** (2012)<sup>T-T</sup>  
Counseling/Human Development  
A.S. Linn-Benton Community College  
B.S. Oregon State University  
M.S. Southern Oregon University

## H

**Sandra L. Haigh** (2004)  
Biology B.S. Washington State University, Pullman  
M.S. Texas A&M University  
Ph.D. University of Nevada, Las Vegas

**Marilyn Hale** (2010)  
Business Technology  
B.S. University of Montana-Western  
M.Ed. Montana State University



**Kathrena L. Halsinger** (2001)  
Art/Graphics  
B.A. Western Washington University

**Adnan A. Hamideh** (2002)  
Business Administration  
B.A. B.S. Ed.D. Portland State University  
M.B.A. California State University

**Tonia L. Haney** (2010)  
Automotive  
B.S. Southern Illinois University

**Deborah L. Hendrickson** (2008)  
Nursing  
B.A. B.S. Winona State University  
M.P.H. Loma Linda University

**Rebecca Herman** (2015)<sup>T-T</sup>  
Dental Hygiene  
A.S. Clark College  
B.S., M.S. Concordia University

**Grant N. Hottle** (2013)<sup>T-T</sup>  
Art  
B.F.A. University of Oklahoma  
M.F.A. University of Oregon

**Garrett L. Hoyt** (2013)<sup>T-T</sup>  
Health and Physical Education  
B.S., PhD. Brigham Young University  
M.S. Colorado State University

**Dwight W. Hughes** (2003)  
Network Technology  
B.S. Northern Arizona University  
M.A. University of Phoenix Certifications in A+, Network+, MCP, CCAI, CCNA

**Robert L. Hughes** (1998)  
Network Technology  
A.S. Clark College  
B.A. The Evergreen State College

**Carol C. Hsu** (2010)  
Engineering  
B.S., M.S. The University of Texas, Austin

I

**Richard H. Inouye** (2007)  
Music  
B.M.E. University of Northern Colorado  
M.M. University of Colorado, Boulder

J

**Debra R. Jenkins** (2000)  
Early Childhood Education/Psychology  
A.A. Clark College  
B.A., M.A. Pacific Oaks College  
M.S. University of Phoenix

**Elizabeth Jochim** (2012)<sup>T-T</sup>  
Nursing  
B.S. Saint Martin's University  
B.S.N. Seattle University  
M.S. Grand Canyon University

**Andrew B. Johnson** (2013)<sup>T-T</sup>

Business and Technology  
B.A. George Fox University  
M.A. University of Phoenix

**Catherine E. Johnston** (2007)  
English as a Second Language  
B.A. DePaul University  
M.A. University of San Francisco

## K

**Yusufu Kamara** (2015)<sup>T-T</sup>  
Economics  
B.S. University of Sierra Leone  
M.A., Ph.D. University of Kansas

**Sally J. Keely** (1996)  
Mathematics  
B.S., M.S. Portland State University

**Izad Khormae** (2003)  
Engineering  
B.S., M.S. Iowa State University  
M.B.A. University of Oregon

**Travis T. Kibota** (1994)  
Biology  
B.S. University of California, Los Angeles  
M.S., Ph.D. University of Oregon

**Jenefer A. King** (2009)  
Medical Radiography  
Radiography Diploma, Christchurch School of Radiography, New Zealand

**Raymond T. Korpi** (2000)  
English  
B.S., M.A. University of Nebraska  
Ph.D. Washington State University

**David L. Kosloski** (1998)  
Communication Studies  
Speech B.A. Georgia State University, Atlanta  
M.A. Central Michigan University

## L

**Jennifer Leaver** (2011)  
Psychology  
B.S. University of Washington  
M.A. Claremont Graduate University

**Christopher R. Lewis** (1999)  
Electronics  
A.A.S., B.A.S. ITT Technical Institute  
M.B.A. City University of Seattle

**Dennis J. Lloyd** (2000)  
Diesel  
A.A.S. Clark College

**Kenneth S. Luchini** (2013)<sup>T-T</sup>  
Mechatronics  
A.S. Diablo Valley College  
B.S. California State University, Chico

**Donald Ludwig** (2015)<sup>T-T</sup>  
Sociology  
A.A. Spokane Community College  
B.A. Whitworth College  
M.S. Princeton Theological Seminary  
M.S. Rutgers University

**Michael Ludwig** (2014)<sup>T-T</sup>  
Dental Hygiene  
A.A.S. Clark College  
B.S. Eastern Washington University

**Luanne M. Lundberg** (1997)  
Adult Basic Education  
B.A. M.Ed. Western Washington University

**Sarah M. Luther** (2013)<sup>T-T</sup>  
Mathematics  
B.A., M.A. Lewis and Clark College  
M.S. Texas A&M University

## **M**

**Robert M. MacKay** (1983)  
Physics  
B.A. Chico State University  
M.S. Portland State University  
Ph.D. Oregon Graduate Institute of Science and Technology

**Kitty J. Mackey** (2001)  
Librarian  
B.A. University of Montana  
M.L.S. Indiana University

**Carole L. Mackewich** (1992)  
Counselor  
B.A. Bloomsberg State University  
M.Ed. University of Washington

**Michelle D. Mallory** (2008)  
Family Life/Early Childhood Education  
B.S. Western Oregon State College  
M.S. Portland State University

**Theresa Marks** (2012)  
Dental Hygiene  
A.S. Cape Cod Community College  
B.S. Eastern Washington University  
M.S. University of Washington

**Helen Martin** (2007)  
Business Technology  
Doctorandus Leiden University  
M.B.A. Georgia State University

**Rebecca L. Martin** (2000)  
Biology  
B.A. Vassar College  
M.A. Antioch University  
M.S. Washington State University

**Priscila E. Martins-Read** (1990)  
English as a Non-Native Language  
B.A. University of Washington  
M.Ed. Oregon State University

**Mika Maruyama** (2013)<sup>T-T</sup>  
Psychology  
B.A. Utah State University  
M.S., Ph.D. Portland State University

**Angie Marks** (2009)  
Nursing  
B.S.N., M.N. Washington State University

**Kanchan Mathur** (2005)  
Mathematics  
B.A. Delhi University  
M.S., Ph.D. Indian Institute of Technology

**Heather J. McAfee** (2013)<sup>T-T</sup>  
Geography  
B.A. University of Colorado, Colorado Springs  
M.A. University of Oregon

**Jody McQuillan** (2007)  
Adult Basic Education  
A.S. Madonna University  
B.S. Central Michigan University M.S.W. Portland State University

**Brian McVay** (2014)<sup>T-T</sup>  
Welding  
Journeyman Ironworker Certification

**Natalie R. Miles** (2013)<sup>T-T</sup>  
Adult Basic Education  
B.S., M.S. Valley City University

**Christopher E. Milner** (2007)  
Mathematics  
B.S. University of Puget Sound  
M.S. Oregon State University

**John J. Mitchell** (2004)  
Mathematics  
B.Sc. M.Sc. University College Dublin

**April E. Mixon** (2005)  
Chemistry  
B.S. Shippensburg University  
M.S. Oregon State University

**William H. Monroe** (2000)  
Mathematics  
B.S. University of Santa Clara  
B.S. California State University, Chico  
M.S. Portland State University

**Charlene Montierth** (2003)  
Geology  
A.A. A.S. Long Beach City College  
B.S. University of California, Los Angeles  
Ph.D. University of Oregon

**Meredith A. Moore** (2009)  
Nursing  
A.D.N. Carl Sandburg College  
B.S.N., M.N. Oregon Health Sciences University

**Douglas E. Mrazek** (1978)  
French  
B.A. Hope College  
M.A. University of Illinois Diplome Supérieur d'Etudes Françaises, University of Grenoble

## **N**

**Laura Nagel** (2015)<sup>T-T</sup>  
Reference and Instruction Librarian  
B.A. Pacific Lutheran University  
M.A. University of Wisconsin

**Erika L. Nava** (2008)  
Spanish  
B.A. Oregon State University  
M.A. University of Oregon

**Tracy J. Nehnevaj** (1992)  
Mathematics  
B.A., M.S. Eastern Washington University

**Alexis Nelson** (2014)<sup>T-T</sup>  
English  
B.A. University of California  
M.A. Portland State University

**D. Julian Nelson** (2005)  
German  
B.A., M.A. San Francisco State University  
Ph.D. University of California, Davis

**Susan L. Nieman** (2009)  
Nursing  
A.D.N. Clark College  
B.A. Eastern Washington University  
B.S.N. M.S.N. Washington State University, Vancouver

**Nancy E. Novak** (2002)  
English as a Second Language  
B.A. Dartmouth College  
Ed.M. Oregon State University  
TESL Seattle University School of TESL

## O

**Michiyo Okuhara** (2010)  
Japanese  
A.A. Seisen Women's Junior College  
A.A. Clackamas Community College  
B.S. M.E. Portland State University

## P

**Kathleen M. Perillo** (1999)  
Biology  
B.A. University of Delaware  
M.S. University of New Haven

**Tobias Peterson** (2014)<sup>T-T</sup>  
English  
B.A. Texas State University  
M.A. George Mason University

**Mary Ellen Pierce** (2014)<sup>T-T</sup>  
Nursing  
B.S.N. University of Alaska  
M.S.N. University of Phoenix

**Joseph R. Pitkin** (2000)  
English  
B.A. Utah State University  
M.A. New Mexico State University  
M.S. Washington State University

**Kristl Plinz** (1999)  
Computer Graphics Technology  
B.S. California Polytechnic State University  
M.S. Rochester Institute of Technology

## Q

## R

**Richard N. Rausch** (2003)  
Biology  
B.S., Ph.D. Portland State University

**Ethel Reeves** (2011)  
Nursing  
A.S. Portland Community College  
A.S.N. Clark College  
B.S.N., M.N. Washington State University

**Heidi M. Rich** (1997)  
English  
B.A. Lewis and Clark College  
M.A. University of Iowa  
Ph.D. University of Washington

**Leslie J. Rivera** (1997)  
English as a Second Language  
B.A. University of Portland  
M.A. San Francisco State University

**Gail R. Robinson** (1993)  
English  
B.A. Miami University, Ohio  
M.A. Portland State University

**Stephanie Robinson** (2009)<sup>T-T</sup>  
Health Occupations  
A.S. Scott Community College  
B.S. Augustana College

**Marcia R. Roi** (2000)  
Chemical Dependency  
B.S., M.S. Oklahoma State University  
Ph.D. Oregon State University

**Bevyn Rowland** (2011)  
Counseling/Human Development  
B. A. University of Portland  
M.A. PsyD. Pacific University

**S. Layne Russell** (2006)  
Paralegal  
B.A. University of Memphis  
J.D. College of William and Mary, Marshall Wythe School of Law

## S

**Katherine D. Sadler** (2005)  
History  
B.A. Portland State University  
M.A. Ph.D. University of California, Los Angeles

**Jack Sande** (2014)<sup>T-T</sup>  
Network Technology  
A.A. Lower Columbia College  
B.A. Seattle Pacific University  
M.A. Trinity International University

**Erin K. Schoenlein** (2013)<sup>T-T</sup>  
Adult Basic Education  
B.B.A., M.A.T. University of Portland

**Mitzi Schrag** (1997)  
English  
A.A. Clark College  
B.A. Reed College  
M.A. Ph.D. University of Washington

**Robert Schubert** (2011)  
Anthropology  
B.A. University of Illinois  
M.A. Ph.D. Ohio State University

**Patricia A. Serrano** (1981)

Business  
B.A. Portland State University  
M.B.A. University of Portland

**Patricio Sevier** (2010)  
Machining

**Richard T. Shamrell** (1999)  
Physics  
B.S. US Air Force Academy, Colorado  
M.A. Webster College  
M.S. Southern Illinois University

**Nicoleta Sharp** (2008)  
Physics  
B.S., M.S. Universitatea Alexandru Ioan Cuza

**Dawn M.U. Shults** (2009)  
Pharmacy  
C.Ph.T. Clark College

**Gerard M. Smith** (1991)  
English  
B.S. Bowling Green State University  
M.A. University of Toledo  
Ph.D. Bowling Green State University

**Suzanne Southerland** (2011)  
Communication Studies  
B.S. University of Portland  
M.S. Portland State University

**Keith R. Stansbury** (1999)  
Computer Aided Design & Drafting  
B.S. Iowa State University

**Erin Staples** (2011)  
Health & Physical Education  
B.S. University of North Texas  
M.P.H. Portland State University

**Senseney L. Stokes** (2007)  
Art/Photography  
B.F.A. Rhode Island School of Design  
M.F.A. University of New Mexico

**Marina B. Stull** (1996)  
Mathematics  
B.S., Ph.D. University of Novosibirsk, Russia

**Kimberly A. Sullivan** (1992)  
English  
B.A. Belhaven College  
M.A. Mississippi State University

**Roxane Y. Sutherland** (1987)  
Communication Studies  
A.A. Clark College  
B.A. The Evergreen State College  
M.S. Portland State University

## T

**Kristina Taylor** (2010)  
Dental Hygiene  
A.A.S. Clark College  
B.S. Eastern Washington University

**Sarah J. Theberge** (2000)  
Early Childhood Education/Family Studies  
A.A.S. Clark College

B.A., M.A. Pacific Oaks College

**Nancy J. Thompson** (2007)

English

B.A. Portland State University

M.A. University at Albany

M.F.A. Goddard College

**Sally A. Tomlinson** (2007)

Art History

B.A. University of California, Berkeley

M.A. University of Victoria, Canada

Ph.D. University of North Carolina

**Elizabeth R. Torgerson** (2010)

Nursing

A.A. Clackamas Community College

B.S.N. OHSU School of Nursing

M.S.N. Washington State University, Vancouver

**Ruth Trejo** (2011)

Chemistry

B.S., M.S. University of California, San Diego

## U

**Elizabeth C. Ubiergo** (2008)

Spanish

B.A., M.A. University of Oregon

**Dian R. Ulner** (2001)

Women's Studies

B.A. Northern Illinois University

M.S. Minnesota State University

## V

**Linda Valenzuela** (2009)

Nursing

A.S. College of Sequoias

B.S.N. California State University

M.P.H. Portland State University

## W

**Stephen J. Walsh** (2000)

Business Administration

B.A., M.B.A. University of Portland

Psy.D. Pacific University

**Brenda K. Walstead** (2006)

Dental Hygiene

A.A. Clark College

B.S. Concordia University

M.S. Portland State University

**Kathryn S. Washburne** (2008)

Adult Basic Education

B.A. California Polytechnic State University

M.A. United States International University

**Bruce F. Wells** (2000)

Machine Technology

A.G.S. Clackamas Community College

**Robert Weston** (2015)<sup>T-T</sup>

Mathematics

B.S. Oregon State University

M.S. The City College of New York



**Caleb N. White** (2013)<sup>T-T</sup>  
Welding  
A.O.S. Universal Technical Institute

**Lora Whitfield** (2014)<sup>T-T</sup>  
Early Childhood Education  
A.A.S. Clark College  
B.A., M.A. Pacific Oaks College

**Alan Wiest** (2012)<sup>T-T</sup>  
Health & Physical Education  
A.S. Lane Community College  
B.S., M.S. University of Oregon

**Christine J. Wilkins** (2002)  
Business Technology  
B.A. Oregon State University  
M.S. Troy State University

**Jim Wilkins-Luton** (2003)  
English  
B.A. Whitworth University  
M.A. Gonzaga University

**Sandra E. Woodward** (1988)  
English  
B.A. Park College  
M.A. University of Kansas

X

Y

**Tess Yevka** (2015)<sup>T-T</sup>  
Psychology  
B.S. Marylhurst University  
M.S. Portland State University

Z

**Joan Zoellner** (2009)  
Mathematics  
B.A. Humboldt State University  
M.A. Indiana University

Tenure Track is indicated by <sup>T-T</sup>

## Clark College Foundation

**Vivian Cheadle Manning, CFRE** (2010)  
Director of Giving & Alumni Relations  
B.A. Southern Methodist University  
C.F.M. IUPUI/School of Philanthropy

**Karen Hagen** (1994)  
Director of Advancement Services

**Lisa Gibert, CPA, CFRE** (1998)  
Clark College Foundation President/CEO  
B.S. University of Oregon  
M.B.A. University of California, Irvine

**P. Constance Grecco** (2013)  
Development Officer  
B.S. Washington State University

**Rhonda Morin** (2012)  
Director of Communications  
B.S. Journalism, University of Maine  
M.L.S. Eastern Michigan University  
E.M.T. Maine Community College

**Daniel Rogers, CPA** (2010)  
Chief Financial Officer  
B.A. Washington State University

**Shirley Schwartz** (1999)  
Scholarship Program/Stewardship Manager  
A.A., B.A. West Coast Christian College

Alphabetical Quick Dial Phone List: <http://www.clark.edu/directories/quick-dial/index.php>

Employee Directory Phone List: <https://www.clark.edu/employee-directory/phone-list/>

ASCC Officers Phone List: <http://www.clark.edu/directories/quick-dial/ascc.php>

Clark College at Columbia Tech Center (CTC) Phone List: <http://www.clark.edu/directories/quick-dial/ctc.php>

Fax Numbers Phone List: <http://www.clark.edu/directories/quick-dial/fax.php>

Clark College at Washington State University Vancouver (WSUV) Phone List:  
<http://www.clark.edu/directories/quick-dial/wsuv.php>

# Clark College 2015-2016 Academic Calendar

## SUMMER QUARTER 2015

July 4<sup>th</sup> Holiday ..... July 3 (F)  
 Classes Begin ..... July 6 (M)  
 End of 1<sup>st</sup> 4-week session ..... July 31 (F)  
 2<sup>nd</sup> 4-week session begins ..... August 3 (M)  
 Last day of 2<sup>nd</sup> 4-week session ..... August 28 (F)  
 Last day of 8-week session ..... August 28 (F)

## WINTER QUARTER 2016

New Year's Day ..... January 1 (F)  
 Classes Begin ..... January 4 (M)  
 Martin Luther King Holiday ..... January 18 (M)  
 Last Day of Classes ..... March 11 (F)  
 Final Exams ..... March 14-17 (M-T-W-Th)  
 Faculty Workday ..... March 18 (F)  
 Faculty Workday ..... March 21 (M)

## FALL QUARTER 2015

Labor Day Holiday ..... September 7 (M)  
 Classes Begin ..... September 21 (M)  
 Faculty Workday (no classes) ..... October 9 (F)  
 Veteran's Holiday ..... November 11 (W)  
 Faculty Workday (no classes) ..... November 25 (W)  
 Thanksgiving Holiday ..... November 26-27 (Th-F)  
 Last Day of Classes ..... December 4 (F)  
 Final Exams December ..... 7-10 (M-T-W-Th)  
 Faculty Workday ..... December 11 (F)  
 Faculty Workday ..... December 14 (M)  
 Christmas Holidays ..... December 24-25 (Th-F)

## SPRING QUARTER 2016

Classes Begin ..... April 4 (M)  
 Memorial Day Holiday ..... May 30 (M)  
 Last Day of Classes ..... June 10 (F)  
 Final Exams ..... June 13-16 (M-T-W-Th)  
 Graduation ..... June 16 (Th)  
 Faculty Workday ..... June 17 (F)  
 Faculty Workday ..... June 20 (M)