Clark College Catalog

2017-2018

Vision

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

Mission

Clark College, in service to the community, guides individuals to achieve their educational and professional goals.

Core Themes

Academic Excellence: Facilitate student learning by providing the conditions for intellectual growth through scholarship, discovery, application, creativity, and critical thinking.

- Implement and institutionalize practices that increase academic performance, retention, and completion.
- Create and sustain an inclusive and dynamic curriculum and environment that reflect our diverse college community.
- Integrate active learning strategies within and across courses, disciplines, and programs with a global perspective.
- Create and advance accessible, integrated, and technology-enriched learning environments.
- Engage faculty, administrators, and staff in professional development experiences that enhance student learning.
- Align curriculum with learning outcomes and apply outcomes assessment evidence to continually advance student learning.

Social Equity: Facilitate student learning by providing the conditions that improve educational outcomes and eliminate systemic disparities among all groups.

- Create and sustain an accessible and inclusive environment by utilizing principles of universal design and social justice so that all students can achieve equitable outcomes.
- Demonstrate improved intercultural competency among employees and students through comprehensive professional development and curricular transformation.
- Institutionalize hiring and retention practices that challenge systems of power, privilege, and inequity.
- Economic Vitality: Facilitate student learning by providing programs, services, and conditions that improve the economic well-being of the students, college, and community.

Improve college affordability for students by expanding access to and information about financial resources, clarifying career and educational goals, providing pathways to success, improving college readiness, increasing financial literacy, and managing costs.

- Align program offerings with regional workforce needs to include technical and work-readiness skills.
- Align, expand, and enrich the relationships with regional industry leaders to increase internships, advisory committee participation, financial support for students' education and programs, hiring pipelines, grant partnerships, mentorships, and apprenticeships.
- Maximize the college's return on investment by responsibly allocating available resources.
- Leverage resources to create and sustain future innovations.

Environmental Integrity: Facilitate student learning by providing the conditions that continually improve the college's physical, virtual, and social environment.

- Incorporate environmental sustainability priorities into all college systems.
- Improve the college's physical and virtual environment to maximize access and appropriate use of space and technology.
- Integrate principles of mutual respect, collaboration, clear communication, and inclusivity in all interactions.

Values

Social Justice – Institutional commitment to produce equitable outcomes and challenge systems of power, privilege, and inequity.

Partnerships – Collaboration with individuals, organizations, and businesses to increase student success and improve the community.

Innovation – Development and implementation of creative and agile strategies to enhance student learning and respond to market needs.

Sustainability – Effective and efficient stewardship of all college resources.

Continuous Improvement – Evaluation and enhancement of all college operations based on data-informed planning and resource allocation.

Shared Governance – Clear communication, inclusive consultation, and respectful consideration of multiple perspectives guide decision-making throughout the college.

Disability Support Services

Clark College and the Disability Support Services (DSS) staff assist those with disabilities in pursuing their educational goals. The DSS staff is committed to assuring 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 letter of all pertinent federal and state mandates.

If you are in need of accommodation due to a disability during any of the entry processes to Clark College or for your classes, contact DSS for assistance. Early contact with DSS personnel is essential.

360-992-2314

360-991-0901 VP

www.clark.edu/DSS

Locations

Main Campus

1933 Fort Vancouver Way

Vancouver, WA 98663

Columbia Tech Center

18700 SE Mill Plain Blvd.

Vancouver, WA 98683

Clark College at WSU Vancouver

14204 NE Salmon Creek Ave.

Vancouver, WA 98686

Disclaimer

Clark College has made reasonable efforts to ensure the accuracy of the information throughout this catalog. However, the college reserves the right to make appropriate changes in procedures, policies, calendars, requirements, programs, courses, and fees. When feasible, changes will be announced prior to their effective dates, but the college assumes no responsibility for giving any particular notice of any such changes. Changes may apply not only to prospective students, but also to those who are currently enrolled. nothing contained in this website shall be construed to create any offer to contract or any contractual rights.

We encourage readers to contact the college or appropriate office to obtain current information.

Section A:
Enrollment, Aid, and College Life

SECTION A: Enrollment, Aid and College Life

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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. Application for admission is available on the Clark College website at 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.

Residency classifications for the purpose of tuition rates are determined by the 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 must complete an admissions application and pay a non-refundable application fee. 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.

Running Start Admission

360-992-2366

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

Transfer Student Admission

Students transferring from other colleges are required to submit an admissions application and pay a non-refundable application fee. Transfer students are required to participate in orientation before they may register for classes.

If a student intends to use previously earned credits toward 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. Students may use previous coursework or course placement to meet the prerequisite for English and or Mathematics. Please visit www.clark.edu/assessment for additional information. 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 Post-secondary 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

Students who are returning to Clark College after an absence of four (4) or more terms 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 must 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.

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 must submit the international student application form, application fee, and supplemental documents. International student admission information can be found on the International Programs web page: 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 term.

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. Exceptions 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.

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 term, 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 term.

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 term.

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 term.

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 term. 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 term 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 term. 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 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: Used 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 Enrollment Services at 360-992-2107 with any questions 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 their 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.

- Enrollment Services
- Clark College employee;
- Classified state employee or Washington Public Higher Education employee;
- Senior Citizen Gold Card;
- 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 and stepchildren.

- High School Completion Office
- High school completion
- Veterans Affairs Office
- Military personnel
- Running Start Office
- Running Start

Course Placement

360-992-2648

Course placement is an important step toward student success. Prior to accessing placement services, students must complete an application for admission and pay the admission application fee. Many courses at Clark College have placement prerequisites for English and Mathematics ability. The course that students place into determines how they progress through their program of study and how long their degree will take. We have a variety of ways to assess skills, one method may not work for all. Visit www.clark.edu/assessment for more information on available placement and retesting options.

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.

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 before 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.

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. 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

The Financial Aid Office helps improve college affordability for students by expanding access to and information about financial resources.

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 four (4) full-time (12 credits or more) terms per academic year. The grant is prorated for less than full-time enrollment. Eligibility is limited to a lifetime maximum of 18 full-time terms.

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 term.

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. Information is available online at www.wsac.wa.gov.

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.

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

- Clark College Grants and Need-Based Tuition Waiver: Awarded to eligible Washington State residents based on financial need. Waivers reduce the amount of tuition costs.

- 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 Associate Dean and the Associate Dean'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 six (6) or more credits per term.

Federal Direct Loans: Federal Direct loans are borrowed funds that students must repay with interest. A federal student loan allows students to borrow money to help pay for college through loan programs supported by the federal government. They have low interest rates and offer flexible repayment terms, benefits, and options. All students must first complete the Free Application for Federal Student Aid (FAFSA). If you are eligible for a loan, an offer will be included on your award letter.

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.

Students who receive their first federal student loan after June 30, 2013, are limited on the maximum period of time they can receive Direct Subsidized Loans. In general, students may only receive Direct Subsidized Loans up to 150% of the published length of their program. This is called the "maximum eligibility period." The Department of Education will determine loan usage and the maximum eligibility based on the length of program, measured in months. For example, a one (1) year certificate is nine (9) months in length and a two (2) year degree is eighteen (18) months in length. Eligibility for subsidized loans will be lost if a student does not complete the program or enrolls in another program of equal or shorter length.

New students receiving a loan for the first time will receive their first loan disbursement on the 31st day of the term. If the disbursement date falls on a weekend or holiday, the disbursement will be available on the following business day. All students receiving a loan for a single term will receive their disbursements in two installments. Previous borrowers will receive the first disbursement at the beginning of the term; new borrowers will receive the first disbursement on the 31st day and the second disbursement at the mid-point of the term. If the disbursement dates fall on a weekend or holiday, the disbursement will be available on the following business day. Students must be enrolled in six (6) or more credits at the time of each disbursement.

Application Process

The annual application process begins by completing the Free Application for Federal Student Aid (FAFSA) online at www.fafsa.gov. The FAFSA is available in October 1st each year. Completing the FAFSA is the first step of the application process. Additional documents will be requested by the Financial Aid Office via student email. A student's financial aid file is considered complete and ready for processing when all requested documents are received by the Financial Aid Office. For priority processing, students planning to attend summer and/or fall term 2017 should complete their financial aid file by May 3, 2017. Priority processing dates for winter 2018 is November 15, 2017 and spring 2018 is March 7, 2018.

Washington Application for State Financial Aid (WASFA)

Eligibility for Washington State financial aid has been expanded to include students who are ineligible for federal financial aid due to immigration status. DREAMers should complete the WASFA online at www.readysetgrad.org/WASFA. Students who qualify may be eligible for state grant aid and work study.

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 sent to their student email account. All grants and tuition waivers included on the award letter are based on full-time (12 credits or more) enroll-

ment. Grants and tuition waivers are prorated down prior to the start of the term for less than full-time enrollment. Loans and work study included on the award letter are offers and require additional application steps.

All financial aid awards are automatically applied toward tuition and fees. If the financial aid award is not sufficient to pay tuition and fees in full, the student is responsible for the 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 term, financial aid disbursements are generally issued one (1) to two (2) business days before the start of the term. To avoid delays in financial aid disbursements, students should finalize their academic schedule at least one week before the start of the term.

BankMobile Refund Selection Kit

Through a partnership with BankMobile, Refund Selection Kits are issued to all Clark College students who apply for financial aid. The kits are mailed by BankMobile to students after they complete their financial aid file. Students should visit www.refundselection.com after receiving their kit to choose how they wish to receive their disbursements each term. Students can choose to have their disbursements deposited into an existing bank account, directly deposited into a BankMobile Vibe account offered by BankMobile, or mailed as a paper check. Additional information about the BankMobile Refund Selection Kit is available online at www.clark.edu/cc/finaid.

Census Date

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

If a student has added classes during the first five (5) days of the term and is entitled to additional funds, the Financial Aid Office will recalculate the student's Pell Grant award and disburse the additional funds to the student's BankMobile option. Students who are eligible to receive additional funds will receive a revised award letter from the Financial Aid Office and notification of disbursement from BankMobile.

A student who has dropped to a lower enrollment level during the first five (5) days of the term may owe a repayment of Pell Grant funds received. The Financial Aid Office will recalculate the student's Pell Grant award and bill the student for an overpayment of funds received. Tuition refunds resulting from a drop in credits will be applied to the Pell Grant overpayment to reduce the amount that must be repaid. Students in overpayment status will receive a bill by the end of the third week of the term via email at their student address.

Students will be held responsible for their original enrollment level at the time of financial aid disbursement and may face financial aid warning or suspension, according to the Satisfactory Academic Progress Policy.

Module Classes

Any class that begins after the official term start date and/or ends before the official term end date is a module class. Credits for these classes are included in a student's enrollment level at the time of financial aid disbursement.

A repayment of Pell Grant funds received may be required if a student does not commence attendance or drops a late start or module class prior to its start date. The Financial Aid Office will recalculate the student's Pell Grant award and bill the student for an overpayment of funds received. Tuition refunds resulting from the drop in credits will be applied to the Pell Grant overpayment to reduce the amount that must be repaid.

Students will be held responsible for the original enrollment level at the time of financial aid disbursement and may be placed on financial aid warning or suspension, according to the Satisfactory Academic Progress Policy.

Pell Grant Overpayments

Students who owe a Pell Grant overpayment will have 45 days to repay their debt in full or make payment arrangements with Clark College Accounting Services. If a student has not repaid the debt in full, or made payment arrangements, the debt will be referred to ED Debt Resolution Services (https://www.myeddebt.ed.gov/) if a student

has not repaid the debt in full or made payment arrangements. Students whose debt has been referred are no longer eligible for financial aid, including grants, loans, and work study. The full Clark College Census Date policy is available at our website.

Financial Aid Satisfactory Academic Progress

Students must meet 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 Policy that are evaluated at the end of each term:

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

II. Maximum Timeframe is measured to ensure students are taking required courses to complete their certificate or degree. Financial aid will be suspended and program progression must be reviewed at 125%. Students will be ineligible for further funding if it is mathematically impossible to complete the program of study within 150% of the length of the program.

III. Pace of Progression Students must complete all financial aid eligible credits funded each term within their enrollment level (as noted on the chart) and 67% of their attempted cumulative credits. Pace of progress that is 66.6% or higher will be rounded to 67%. 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.

Credits registered at the time of disbursement:	You will remain in good standing if you successfully complete:
Full Time (12 -18 credits)	12 credits per term
3/4 Time (9-11 credits)	9 credits per term
1/2 Time (6-8 credits)	6 credits per term
Less Than 1/2 Time (1-5 credits)	All attempted credits per term

Financial Aid Warning Status

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

- Term GPA falls below 2.0 at the end of a term and/or
- Pace of progression is less than 67% and/or
- Not all attempted credits are completed (as noted on the chart)

Credits registered at the time of disbursement:	WARNING will occur if you complete:	SUSPENSION will occur if you complete:
Full Time (12 -19 credits)	Between 6-11 credits	5 credits or less
3/4 Time (9-11 credits)	Between 6-8 credits	5 credits or less
1/2 Time (6-8 credits)	Not Applicable	5 credits or less
Less Than 1/2 Time (1-5 credits)	Not Applicable	Less than all attempted credits

Students on Warning are eligible to receive financial aid the next term of attendance but are in jeopardy of losing their financial aid eligibility. If all Satisfactory Academic Progress requirements are not met at the end of the next term of attendance, financial aid will be suspended. Warning status will be cleared if all Satisfactory Academic Progress requirements are met at the end of the next term of attendance.

Financial Aid Suspension

Students on financial aid suspension are not eligible for future financial aid including grants, work study, and loans. Immediate financial aid suspension will occur when a student:

- Is on Financial Aid Warning/Probation and
- Does not complete the number of credits in their enrollment level and/or
- Does not meet 67% progression and/or
- Term GPA falls below 2.0 at the end the term
- Has a cumulative GPA below a 2.0 at the end of the 6th term of attendance and beyond
- Has attempted 125% of the credits required for the program
- Has failed to meet requirements of their Academic Plan contract
- Not all attempted credits are completed (as noted on the chart below)

Credits registered at the time of disbursement:	SUSPENSION will occur if you complete:
Full Time (12 -19 credits)	5 credits or less
3/4 Time (9-11 credits)	5 credits or less
1/2 Time (6-8 credits)	5 credits or less
Less Than 1/2 Time (1-5 credits)	Less than all attempted credits

Regain Eligibility for Financial Aid

When students lose financial aid due to lack of academic progress, there are two (2) options available to regain eligibility. The options are:

I. Filing a Satisfactory Academic Progress Appeal

II.Submitting a Request for Reinstatement

I. Satisfactory Academic Progress Appeal

Failure to maintain good academic standing may be the result of circumstances beyond the student's control. In cases of student's illness, injury, a death in the family or unusual circumstance, students may appeal to regain financial aid eligibility. Students are limited to two (2) appeals at Clark College. (Maximum Timeframe appeals are excluded from this limit.)

The appeal must include:

1. Satisfactory Academic Progress Appeal Form
2. Typed and signed statement explaining the circumstances AND what has changed AND the steps taken to ensure academic success in the future
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

Appeals are reviewed by the Financial Aid Advisory Committee 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. The student may be required to follow an Academic Plan until satisfactory academic progress is achieved.

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 (2) appeal limit they may submit a Request for Reinstatement when they have satisfied the following conditions:

1. Enrolled in and completed a minimum of 5 program required credits (CAP courses are ineligible) with a term GPA of 2.0 or higher, and
2. Pace of progression is 67% or higher, and
3. Have a cumulative GPA of 2.0 at the sixth term of attendance and beyond

All credits attempted in reinstatement term must be completed. Receiving grades of F (Failed), I (Incomplete), U (Unsatisfactory), W (Withdrawal), Y (In Progress), N (audit), and R (repeat) will hinder eligibility for financial aid reinstatement and may increase the number of credits required to reinstate.

If the reinstatement is approved, aid is reactivated based on available funding at the time the reinstatement is approved and may not reflect the original award. Students may be restricted to specific academic conditions and must remain in good academic standing to receive continued funding. An approved reinstatement does not negate any repayment owed to the financial aid programs or Clark College.

Financial Aid Probation

If the Financial Aid Advisory Committee approves a student's appeal, financial aid will be reactivated on a probationary status. Financial aid suspension will occur if the student does not meet all satisfactory academic progress requirements at the end of the next term of attendance (see warning section for details).

Other Requirements and Limitations

I. Maximum Timeframe

Eligibility for federal aid expires once a student attempts 150% of the published credits required for a program. Maximum credit warning notifications will be issued when a student reached 110% of the credits required for a degree or 100% for a certificate. Once a student has attempted 125% of program credits, financial aid will be suspended until an internal review of program progression has been completed. All credits, regardless of whether they were taken while on financial aid, or credits removed with an approved set-aside petition are used in calculating maximum timeframe. Transfer credits accepted for use towards the current certificate or degree are included. Remedial coursework needed to reach program required classes is counted towards maximum timeframe. Funding of remedial courses is limited to 45 attempted credits. Repeated credits (R grades) are counted as attempted towards maximum timeframe. Once a class has been attempted and credit has been earned, financial aid can only pay for a second attempt. Clark College Financial Aid has the right to request additional documentation at the time of file review. Students that have used 400% or greater of their lifetime Pell eligibility and/or borrowed $30,000 or more in student loans will be required to submit a Maximum Credit Appeal to determine future financial aid eligibility.

II.Program Changes

If a student was approved in a previous appeal with specific academic conditions, those conditions must be met before changing their program. If the student wants to change their program without meeting the appeal's academic conditions, a student must submit a Request for Financial Aid Extension to the Financial Aid Office. If the program change is approved, new conditions will be applied.

Financial Aid Funds Repayment Policy

Students who officially or unofficially withdraw from all classes, or complete zero credits at the end of the term, may owe a repayment of financial aid funds received. The Financial Aid Office is required to determine the percentage of funds earned by the student and is based on the withdrawal date.

Official Withdrawal: The date the student withdrew, according to Clark College Enrollment Services withdrawal procedures.

Unofficial Withdrawal: If the student did not officially withdraw, the date of withdrawal is determined as outlined below. The Financial Aid Office will use the latest date.

- The last date of participation in an academically related activity or the midpoint of the term. The last date of participation is reported by the instructor to Enrollment Services.
- The midpoint of the term in which funds were received.

Repayment of Title IV Funds

Title IV funds include Pell Grant, Supplemental Educational Opportunity Grant (SEOG), Subsidized Loans, and Unsubsidized Loans. Title IV funds are subject to the Department of Education Return of Title IV policy requirements. The amount of Title IV funds a student earns, is equal to the percentage of the term completed.

For example, students who complete 40% of the term are considered to have earned 40% of Title IV funds received, the other 60% is considered unearned aid.

Once 60% or more of the term has been completed, 100% of Title IV funds have been earned, and the student will not owe a repayment.

The formula for calculating the amount of Title IV funds that must be returned is determined as follows:

1. Determine the percentage of Title IV funds earned based on the date of official or unofficial withdrawal.

2. Multiply the percentage of unearned Title IV funds by the amount of Title IV funds received.

Once the repayment amount has been calculated, the Financial Aid Office will determine the College's and student's responsibility in repayment of funds.

Clark College's responsibility in repayment is either the percentage of unearned Title IV funds multiplied by tuition and fee charges or the total repayment amount. The calculation which determines the lowest amount, will be utilized. The amount of unearned Title IV funds which the College is responsible for will be returned 45 days from the date the College determined the student withdrew. The funds will be returned in the following order:

1. Unsubsidized Direct Loans

2. Subsidized Direct Loans

3. Direct PLUS Loans

4. Pell Grants

5. Supplemental Education Opportunity Grants

6. Other Federal, State, Private, or Institutional financial assistance

Any refunds issued as a result of the withdrawal will be applied by the College to the student's repayment amount. Students will be billed by Clark College Accounting Services for the remaining balance of the return.

The student's responsibility in repayment is determined by subtracting the College's repayment from the total repayment amount. Any amount of unearned Pell Grant or SEOG funds that a student must return is considered an overpayment. The student repayment amount is half of the grant funds received.

Students who owe an 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 Department of Education Debt Resolution Services (www.myeddebt.ed.gov). Students who fail to comply with the terms of their agreement to repay will immediately become ineligible for Title IV funds.

Repayment of State Financial Aid

State financial aid funds include Washington State Need Grant and College Bound Scholarship. State financial aid funds are subject to the Washington State Student Achievement Council (WSAC) Repayment policy. This policy goes into effect only if a student withdraws or completes zero credits at the end of the term.

Under this policy, students earn the percentage of State funds received that is equal to the percentage of the term completed. Students who complete 50% or more of the term prior to withdrawing are considered to have earned 100% of Title IV funds received, and will not owe a repayment.

The date of withdrawal and repayment amount are determined according to the same methodology outlined above. Refunds issued as a result of the withdrawal will be applied to reduce the student repayment amount. Students who owe a repayment of State financial aid will receive a bill from Clark College Accounting Services, and will not be eligible to receive additional State financial aid until the repayment has been paid in full. Any unpaid repayments will be referred to the WSAC for collection by June 30, 2018.

Other Educational Resources Available

Scholarships

360-992-2582

http://www.clark.edu/enroll/paying-for-college/scholarships/index.php

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.

Individual scholarships may have their own eligibility criteria where a student must maintain a certain grade point average (GPA) or enrollment level to qualify for funds awarded. Students should refer to their scholarship award letter for the conditions of their award. The scholarship application is separate from the application for financial aid.

The majority of scholarship applications are available 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. An administrative processing fee applies to agencies who fund these student expenses.

Workforce Education Services

Clark College Workforce Education Services administers a variety of programs designed to support students who are pursuing vocational or technical non-transfer degree programs and certificate programs. 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, 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 workforce. 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 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 certification by term 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 our website for a complete checklist of requirements.

The Code of Federal Regulations (38 CFR 21.4201) states VA shall not approve the enrollment of any VA-eligible person, not already enrolled, in any course for any period during which more thn 85 precent of the students enrolled in the course are having all or part of their tuition, fees, or other charges paid to or for them by an Education Insitution or VA. The VA will only pay the monthly stipend/BAH for the period students are enrolled in and attending class(es).

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.

Clark College attempts to limit student enrollment to 85% veteran enrollment per cohort. In the event that a veteran wishes to enroll in a course that has already reached the 85% cap, he or she may do that but will not be eligible for VA funding. Chapter 35 and 31 students may enroll even if the 85% has been realized.

The College's School Certifying Officials can be reached utilizing the contact information below:

Mike Gibson
(P) 360-992-2711
(E) mgibson@clark.edu

Cary Bare
(P) 360-992-2736
(E) cbare@clark.edu

Career Services

360-992-2902

www.clark.edu/cc/careerservices

Online job database system: 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.
- 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.

Financial literacy:

- One-on-one appointments for free financial coaching.
- Free financial management tool for students: https://www.saltmoney.org/index.html.
- Money-themed student success workshops.

Employer services:

- Free on-campus recruiting table.
- 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 boards.
- Equal opportunity guidelines are followed and applicants are referred on a non-discriminatory basis for all possible co-op, internship, volunteer, or job placements.

Cooperative Education/Internship Work Experiences

360-992-2391

Clark College recognizes the value to students of actual experience in a work environment and has developed a nationally recognized program which allows credits to be earned for that experience under controlled conditions.

The purpose of Cooperative Education Work Experience (co-op) is to provide on-the-job experience that complements students' academic career goals and that furnishes an opportunity for career exploration. Co-op involves the faculty, student, and employer in determining learning objectives and evaluating the student's progress in achieving those objectives. Students may use internship experiences to test their interest in a field or their fit in the work environment of a particular industry.

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.

Advising

360-992-2345

www.clark.edu/advising

The mission statement for Clark College advising is:

By providing accurate, timely, and consistent information, Advising personnel, in collaboration with faculty, will 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 the 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

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 types of classes are offered?

eLearning classes are offered in the following formats: online, hybrid, and weekend hybrid. To learn more about eLearning class formats, please go to What is eLearning page. General class descriptions are as follows:

Online – A course that uses web-based tools and where 100% of the instruction and interaction between instructor and student is done online.

Hybrid – A course that displaces some, but not all face-to-face class time with web-based tools.

Web Enhanced – A face-to-face course that does not replace any face-to-face seat time, and access to web-based tools is required.

What types of programs are offered?

Through the eLearning class formats, students have several options to complete a degree through Clark College eLearning:

1. Associate in Arts General Transfer degree (AA DTA): In a combination of formats including online, hybrid, and weekend hybrid.
2. Business Administration DTA/MRP: In a combination of formats including online, hybrid, and weekend hybrid.

How do I start an eLearning class?

eLearning classes follow the same college 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 term for class instruction.

Please visit the eLearning Getting Started page for information about starting an eLearning class.

Technical Requirements and Support

To see if you have appropriate technology for eLearning courses go to the Technical Requirements page.

Technical support is available through the TechHub for:

- 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 further information about TechHub, please visit their website.

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 term of attendance at Clark College, your registration access date/time can be found online prior to the beginning of the registration period for each term. 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 term.

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/current.

Online Registration Services

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

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

You may conveniently enroll online each term by taking advantage of online registration. You will need your SID (student identification number) and your global PIN. Printing your class schedule and changing your address, phone, or e-mail are other convenient options available online at www.clark.edu/current.

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 (3rd) day of the term, instructor permission is required to enroll into any regular starting class. Beginning the tenth (10th) day of the term (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 term (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 term.
- 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 Week 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, which will direct the student appropriately. Students who fail to attend one (1) or more sessions during the first five (5) days of the term 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 term 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 process can be completed online at www.clark.edu/current or in person using a Change of Registration form at the Enrollment Services Office. The dates for dropping and/or withdrawing from classes are available at www.clark.edu/enroll/registration/academic-calendar.php

- A class officially dropped before the tenth (10th) day (eighth day in summer) of the term will not be entered on the student's transcript.
- After the tenth (10th) day and through the eighth (8th) week of the term, regular starting classes formally dropped online or at the Enrollment Services Office will be posted to the student's transcript with a withdrawal grade of "W" assigned to the class. Withdrawals will not be accepted after the last day of the eighth (8th) week of the term.
- For courses with unusual start and end dates, withdrawals will not be accepted after 80% of the class meetings have occurred.
- If the student decides not to attend, it is his/her responsibility to withdraw from all classes. Withdrawals will not be accepted for a class that has ended.

Administrative Withdrawal

Students unable to withdraw by the end of the term due to extenuating circumstances should contact the Enrollment Services 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 Enrollment Services Office. Such changes may be made only with the written consent of the instructor and must be processed by the end of the tenth (10th) day of the term (eighth day in summer).

Student Attendance Status

Clark College considers students enrolled in twelve (12) or more credits to be full-time students. 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 terms

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 term

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 Status

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

- 12 credits or more is considered full-time training for Post 9/11 GI Bill for Fall, Winter, and Spring terms. (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 term 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

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 Enrollment Services Office and online at www.clark.edu.

Tuition and Fees

The first payment due date is three (3) weeks prior to the term 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 tenth (10th) day of the term 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 tenth (10th) day of the term.

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 term.

Students with any outstanding debt owed to the college will:

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

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 the student's class preparation and participation. The store staff understands the financial impact of class materials, and 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 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 its website at 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 Enrollment Services 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 http://www.clark.edu/enroll/registration/refund_policies.php.

Students who believe extenuating circumstances justify an exception to the policy may make a formal request at the Enrollment Services 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.

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 term. Students may access grades at a college student information kiosk or through the Clark College website: 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 term GPA is computed by adding the total number of grade points for the term 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
8 Total Credits		**22.5 Total Grade Points**

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 terms and dividing by the total number of credits attempted in the courses that received a letter grade.

Incomplete Grades

An incomplete grade may be given if the instructor is satisfied that unavoidable circumstances have prevented the student from completing the course work and the student has requested this option. Faculty must submit the Memorandum of Incomplete Work to Enrollment Services by the grading deadline.

When assigning an incomplete grade, the instructor must provide a date for which the work must be compelted, 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 Enrollment Services office.

Incomplete grades can also effect Financial Aid funding, please refer to the Satisfactory Progress Policy at http://www.clark.edu/enroll/paying-for-college/get-keep/index.php

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) term.

Pass/No Pass

Students may request to enroll in certain courses on a pass/no pass (PNP) basis. Students must contact the Enrollment Services 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 Enrollment Services 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 term 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 Enrollment Services 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 their 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 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 Enrollment Services 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 Enrollment Services 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 term following the term 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, terms 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 Enrollment Services Office.

Transcripts

A transcript of each student's educational record is maintained in the Enrollment Services 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 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; at student information kiosks; or by visiting the Enrollment Services Office in Gaiser Hall.

Vice President's List

A Vice President's List will be compiled at the end of each academic term to recognize outstanding student achievement at Clark College. 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 http://www.clark.edu/enroll/credential-evaluation/index.php or call 360-992-2805.

Credential Evaluation Policies

Academic Standards Petition

Students who believe an error has been made, or who 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 term before they plan to complete all of their requirements. If students do not complete their degree or certificate requirements in the term of application, they must reapply.

The priority processing deadline for graduation applications is the tenth (10th) day of the term 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 term.

Graduation applications received after the priority deadline and through the eighth (8th) week of the term 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 term, provided all degree or certificate requirements have been fulfilled.

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

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 individuals 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 www.clark.edu/enroll/credential-evaluation/clep.php. 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 term in which the scores were submitted as long as the student is enrolled in that term.

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

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:

There is a specific Clark College course for which the student believes that the learning outcomes can be met, and

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 be 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 term 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 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.

Clark College meets the requirements of RCW 28B.10.057 by awarding academic credit for military training. The academic credit awarded for prior military training is granted only for training that is applicable to the student's de-

gree or certificate requirements. The individual must be enrolled in Clark College and have successfully completed any military training course or program as part of the military service that is:

- Recommended for credit by a national higher education association that provides credit recommendations for military training programs;
- Included in the individual's military transcript issued by any branch of the armed services;
- Documented military training or experience that is substantially equivalent to any course or program offered by the institution of higher education.

Clark College enrolled students who are veterans of any branch of the United States armed services who wish to receive transfer credit must provide an official Joint Services Transcript (JST) through the armed services in which he/she served, from the Community College of the Air Force or any other college/university attended. Upon receipt of the official transcript the following actions will occur:

- Within ten (10) business days of transcript receipt, the Credentials Evaluations Office will evaluate the transcript for reading, English, and mathematics placement and any academic (general education) credits earned, posting to the student record as applicable.
- Technical classes that require more review to determine a direct equivalency will be forwarded to appropriate program faculty along with the course description and the accompanying ACE (American Council on Education) course recommendation.
- Military credit recommendations that are direct equivalents to Clark course offerings may be articulated to that specific course. If direct course equivalents do not exist, elective credit (non-direct equivalent) will be awarded when possible. Both direct and non-direct equivalents must be applicable toward the veteran's program of study.
- The Credentials Evaluations Office will post the credit to the student record and then notify the student of credits accepted with directions on how to access their Degree Audit so they may view credit applicability to their program of study.
- In the case of a change of program, the veteran must notify the Credential Evaluations Office so the transfer credit may be re-evaluated and applied to the student record as applicable.
- Per the Veteran's Administration, all veteran student transfer credit must be evaluated within two (2) terms of program start. After the third term, if the student does not submit all transcripts, he/she may be decertified for the use of VA education benefits.
- Veteran students using education benefits are not permitted to opt out of transfer credit evaluation.

Military credit will not be granted for:

- Non-credit courses and workshops;
- Remedial or college preparatory courses;
- Sectarian religious studies.

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 ceremony is 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 2018 summer term 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.

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 course 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. 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:

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).

Has met the entire Communication Skills, Quantitative Skills, or Distribution Requirement of a transfer degree, according to the sending institution's degree criteria.

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 for 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

The College develops and enforces academic standards for all credit students. The purpose of academic standards is to quickly identify and alert students with low academic achievement and to provide those students assistance for improving their academic performance, such as advising them to utilize student support services. In some cases, students who fail to make satisfactory progress will not be allowed to enroll.

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

Academic Standards Procedure

Academic Concern

The first time the term grade point average (GPA) falls below 2.0, students will be placed on Academic Concern.

- The college will send an e-mail to students' Clark e-mail accounts that offers information about the Academic Standards process and explains what happens at each stage.
- Students will receive a listing of college resources and a recommendation to take advantage of services.

Academic Intervention

The second time the term grade point average (GPA) falls below 2.0, students will be placed on Academic Intervention.

- By the third week of the subsequent term, students must attend a group workshop or meet with a designated staff member.
- Students must complete an academic success plan that outlines steps for improving academic performance.
- Students may lose the ability to carry a full course load.
- If students do not attend the workshop or meet with a designated staff member, they will be blocked from registering for classes.

One (1) Term Academic Dismissal

If students have previously been placed on Academic Concern and Academic Intervention statuses, and both their term and cumulative grade point averages (GPA) are below 2.0, they will be placed on One-Term Academic Dismissal.

- Students will be blocked from registering for classes while on One-Term Academic Dismissal status.
    - Students may appeal One-Term Academic Dismissal.
    - Students may appeal to the Academic Standards Committee for immediate reinstatement.
    - The college will send an e-mail to students' Clark e-mail accounts that outlines the appeal process. The Appeal Form for One-Term Dismissal is available online.
    - Students must submit a personal statement and all documents requested, and any documentation that supports their statements. The Academic Standards Committee's decisions will be made and communicated to students before the first day of classes.
    - Factors considered in determining an appeal may include academic aptitude, change of major, extenuating circumstances, lapse of time, and relevant experience since suspension that will predict academic success.
- If students do not appeal, or if their appeals are denied, they will be administratively dropped from classes and paid tuition will be refunded.
- Students will receive information about how to return from One-Term Academic Dismissal. They must complete a Request to Return to College Form no later than three weeks before the first day of classes for the term in which they plan to return. Students will be notified about the process, expectations, and timeline to make an appointment with a designated staff member. Students must prepare a written plan in advance that includes the following items for discussion with the staff member:
    - Short-term educational goals;
    - Specific plans to overcome barriers and improve academic progress;
    - A proposed course schedule.
    - The designated staff member will review the plan with the student and outline specific conditions he or she must meet for return from One-Term Academic Dismissal. Once the plan is finalized, the student will be placed on Return from One-Term Academic Dismissal status.
- Upon returning from One-Term Academic Dismissal, students must earn a term grade point average (GPA) of 2.0 or higher in order to be approved to register for the subsequent term. If they do not earn a term grade point average (GPA) of 2.0 or higher upon return from One-Term Academic Dismissal, they will be placed on Four-Term Academic Dismissal.

Four (4) Term Academic Dismissal

If students have previously been placed on Academic Concern, Academic Intervention, and One-Term Academic Dismissal statuses, and both their term and cumulative grade point averages (GPA) remain below 2.0, they will be placed on Four-Term Academic Dismissal.

- Students will be blocked from registering for classes while on Four-Term Academic Dismissal.

- There is no appeal process for Four-Term Academic Dismissal.
- Students will be administratively dropped from registered classes and paid tuition will be refunded.
- Students will receive information about how to return from Four-Term Academic Dismissal. They must complete a Request to Return to College Form no later than three weeks before the first day of classes for the term in which they plan to return. Students will be notified about the process, expectations, and timeline to make an appointment with a designated staff member. Students must prepare a written plan in advance that includes the following items for discussion with the staff member:
    - Short-term educational goals;
    - Specific plans to overcome barriers and improve your academic progress;
    - A proposed course schedule.
    - The designated staff member will review the plan with the student and outline specific conditions he or she must meet for return from Four-Term Academic Dismissal. Once the plan is finalized, the student will be placed on Return from Four-Term Academic Dismissal status.

Upon returning from Four-Term Academic Dismissal, students must earn a term grade point averages (GPA) of 2.0 or higher in order to be approved to register for the subsequent term. If they do not earn a term grade point averages (GPA) of 2.0 or higher upon return from Four-Term Academic Dismissal, they will be placed on One-Term Academic Dismissal.

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

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-term students, and students moving from Transitional Studies 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

AEW is a resource that enables instructors to communicate with their students early in the term 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.

College Life

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 Conference (NWAC). The NWAC is the parent organization and coordinates and regulates both men's and women's athletics for thirty-six (36) community colleges located in Idaho, Oregon, Washington, and British Columbia. 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, 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 term 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

The Clark College Bookstore, owned and operated by the College, is located in Gaiser Hall and provides shipments or reservations from the store website. The store stocks required textbooks and supplies as requested by classroom instructors and vigorously supports students' interest by maintaining the lowest possible price for textbooks of any college in the region. Additionally, the store facilitates numerous solutions to help Clark students stretch their educational budgets including a comparison shopping tool, textbook and calculator rentals, peer-to-peer textbook exchange, and more.

The bookstore supports the interests of the broader community by selling specialty and educational items, logo items, apparel, gifts, cards, food and beverages, various reference and test preparation items, and more. Personal services available in store include faxing, notary public, special orders, Clark College Theatre and event tickets, USPS stamps, C-Tran bus passes, payment for parking and student IDs and more.

Information regarding accepted payment methods, returns/exchanges, and more can be obtained by visiting us in store or online at www.clarkbookstore.com.

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. 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

Facebook: Clark College Student Life

Instagram & Twitter: clarkstudents

Penguin Union Building 160

The Office of Student Life coordinates programs, support services, and activities that enhance the educational experience of a diverse student population and fosters 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);
- 50-plus events and activities each year including Welcome Week, Involvement Fair, and Spring Thing – see 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, and more;
- FREE student planner;
- Free one-time legal consultation services;
- Discounted C-Tran bus passes;
- Discounted Fitness Center passes;
- Student-use lockers;
- Filtered water 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, or connect with us on social media.

Student Clubs and Programs

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

Clubs and programs provide students an opportunity to develop leadership skills, responsibility, and apply academic, vocational and/or personal learning through involvement on campus and in the community. With more than 50 clubs and programs to choose from, students are bound to find something to match their interests. Clubs and programs may have an educational, national, cultural, political, activity and/or religious focus.

Student Government – Associated Students of Clark College (ASCC)

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, oversight of the Services

and Activities (S&A) fees, and keeping students informed about legislative policies that directly affect them. All enrolled students are members of ASCC and are thus eligible to participate in events.

Activities Programming Board (APB)

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

With the motto, "We run the fun!" this five-member group is charged with the creation of a comprehensive events calendar to include awareness, cultural, educational, family, and social events for Clark students. Hosting 40+ 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, 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 terms 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
- Bauer Hall, Rm. 101
- Cannell Library, Rm. 203
- Scarpelli Hall, Rm. 135 and Rm. 023
- Clark College at WSUV, Rm. 129
- Clark College at Columbia Tech Center, Rm. 203 and Rm. 219
- Pathways Center, TBG, Rm. 226

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 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. 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 help students choose appropriate courses to help them achieve computer proficiency.

Counseling and Health Center

360-992-2614

chc@clark.edu

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

http://www.clark.edu/campus-life/student-support/counseling/health_services/services.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. A Nurse Practitioner is also available to provide low-cost health services during limited hours. Services, pricing, and office hours are available on their websites listed above. Self-care items (bandages, 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 (DSS)

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

www.clark.edu/DSS

Clark College and Disability Support Services (DSS) staff help those with disabilities pursue 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 ensure 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

The College's emergency procedures are displayed on posters 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 interior loudspeakers. Additional notifications are also available to students and employees through text messages and email with a free subscription to RAVE. Emergency Building Coordinators are posted in every building to assist with emergency protocols.

Exercises (drills) will be conducted several times each year to ensure 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

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 term 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;
- Alumni Association members, sixteen (16) years old and older.

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

Food Service

Food carts serving various cuisines are located in the center of campus between Foster/Hanna Hall 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

http://www.clark.edu/campus-life/student-support/counseling/health_services/insurance.php

Information about how to obtain health coverage through the Washington Health Benefits Exchange and the Affordable Care Act can be found at the link above.

Health insurance is required for all international students, who 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 terms, 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 allow students to obtain books quickly and easily.

From the Libraries' website (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 78 electronic databases. Consult the Library website or call 360-992-2151 for hours of service and other library information.

Office of Diversity and Equity

360-992-2292

The function of the Office of Diversity and Equity is to support the goals of Clark's Social Equity Plan. We assist in the accomplishment of these goals through serving as a resource on related issues, providing training and educational programs, inviting speakers and performers, and providing opportunities for individuals to feel connect with those who have felt disconnected in the past and with their community. The Office of Diversity and Equity is committed to serving systemically non-dominant communities as they navigate Clark College. We support Clark College's goal of recruiting and retaining a diverse student body and workforce.

The Diversity Center is a welcoming and safe place for the entire Clark community (students, faculty, staff, and community members) to learn about and engage in conversations regarding diversity, inclusion, power, privilege, inequity, and social justice.

Parking and Traffic Rules

360-992-2133

http://www.clark.edu/about/governance/public-disclosure-and-records/adminProcedures/500/530/index.php

Traffic and parking regulations at the College are authorized by the Board of Trustees and codified under the Washington Administrative Code (132N-156 WAC). 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 or metered 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 college parking and traffic rules and regulations 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 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 term. 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

http://www.clark.edu/campus-life/student-support/security/index.php

The Clark College Security/Safety Department 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 is

comprised of 25 full and part-time non-sworn officers and support staff. An officer can be reached 24 hours a day/7 days a week/365 days a year. The department is charged with protecting life and property, providing service and assisting students, staff, and community members. The Security/Safety Department strives to offer proactive protection services to the college community by stressing prevention above response, planning above reaction, education above enforcement, and service above all.

The Security/Safety Department can provide informational and directional assistance, aid to stranded motorists, including jump starts and lockout service, security escorts across campus, crime prevention advice, and other general assistance to students, staff, faculty and guests of the college 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.

The Department provides all information required by the Clery Act, which is published in an annual security report each October 1. For more information about the Annual Crime and Security Report please visit: http://www.clark.edu/campus-life/student-support/security/report.php

Student Ambassadors and the Campus Visit Program

360-992-2078

Student Ambassadors are current Clark College students who assist 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

Annual Clark College student photo ID cards can be purchased in the Clark College Bookstore, Gaiser Hall, for a minimal fee. Current registration and valid photo ID are required to obtain a Clark College student ID (being on wait list is not considered registered). ID cards are not required by the College but do provide free or discounted admission to College events and may qualify for student discounts offered by many local businesses.

Student 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 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.

Transitional Studies Tutoring Center

360-992-2750

The Transitional Studies Tutoring Center, at TBG 228, supports CAP 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 and world languages offered at Clark. All services are available on a drop-in or appointment basis.

Science, Technology, Engineering, & Math Centers

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 Center

Located in Applied Arts 4 (AA4), room 106. Tutoring assistance is available for all levels of accounting and for 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(CTC) in room 336. Tutoring assistance is available in a variety of subjects that varies by term. 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 http://www.etutoring.org/index.cfm, click the login icon, select "Western eTutoring Consortium," then "Clark College," and follow the instructions.

Veterans Resource Center

360-992-2073

vetresources@clark.edu

www.clark.edu/cc/veterans

Located in Gaiser Hall, room 216, the Veterans Resource Center is available to help veterans and their dependents connect with the resources and networks of support available to them at Clark College and in the local community. We provide a welcoming staff, mentoring from student veterans, and tools to succeed academically and personally. The VRC also provides a math tutor, computer stations, printers, TV, and a comfortable environment to relax. Veterans are encouraged to visit the center to receive information and assistance regarding:

- Benefit Applications and Procedures
- GI Bill Certification
- Veterans Advocacy

- Community Support
- Transition Services
- Campus & Community Resources
- Specialized Programs and Workshops
- Veterans Club

Clark College does not and will not provide any commission, bonus, or other incentive payment based directly or indirectly on success in securing enrollment or financial aid to any persons or entities engaged in any student recruiting or admissions activities, or in making decisions regarding the award of student financial assistance.

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

College Academic Preparation (CAP)

360-992-2741

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

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 tuition charge to students each term. 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 term tuition charge.

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.

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

360-992-2939

The Department of Economic & Community Development is the region's premier provider of continuing education, offering customized training for local employers and community education programs for individual residents of Southwest Washington. This department is dedicated to building community through community education, mature learning, and professional development, as well as forging partnerships in support of regional economic development.

Customized Learning and Development

360-992-2466

Customized Learning and Development delivers high-quality workforce training, leadership development, and technical and business analysis tools to manufacturing, healthcare, business, nonprofit, and government organizations. Clark's expert team assesses business needs, analyzes human and technical resources available, and builds a customized plan to deliver the training and leadership needed to meet organizations' current objectives and future needs. Customized Learning and Development provides manufacturing, healthcare, business, nonprofit, and government organizations with highly relevant training that directly affects the economy, employment opportunities, and workforce development in Southwest Washington.

Professional Development

360-992-2939

Professional Development offers regularly scheduled classes, workshops, and certification programs for individuals to develop knowledge and skills and increase their productivity and value to employers. A wide range of topics, such as accounting, health care, programming, web design, graphic arts, Microsoft office, and small business, are available to everyone wanting to take that next step. One-day "fast track" learning sessions and flexible online classes are available.

Community Education

360-992-2939

Community Education offers a wide variety of personal enrichment and lifelong learning opportunities 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 each term, including topics such as world language, recreation and wellness, healthy living, and home and gardening. The cooking school in the kitchen classroom at Columbia Tech Center campus 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.

Mature Learning

360-992-2239

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 is offered including fitness, art, writing, computers, sciences, history, creative writing, health, humanities, and more. 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.

Workforce Education

360-992-2780

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 is offered including fitness, art, writing, computers, sciences, history, creative writing, health, humanities, and more. Most classes meet two hours a week, either on the main Clark College campus, at Columbia Tech Center campus, 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.

Section B:
Degree and Certificate Requirements

SECTION B: Degree and Certificate Requirements

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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; the Associate in Applied Technology degree, for completion of a program of study in an occupational program; and the Bachelor of Applied Science (BAS) in Dental Hygiene or Applied Management degrees. 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 2.0. 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 2.0. 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 2.0. 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 receive 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:

Bachelor 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.

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 service members 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 service members 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 3.4. Honors for the Associate in Arts degree and the Associate in Science – Transfer degree are based on the cumulative college-level GPA, while the Bachelor of Science, Associate in Applied Science, Associate of Applied Technology and Certificate of Proficiency are based on the cumulative GPA. Students in the Bachelor of Science and associate degree programs will earn the designation of "with honors" for a GPA of 3.4 to 3.89, and the designation of "with highest honors" for a GPA of 3.9 or higher. Certificates of Proficiency will be granted the designation of "with merit" for a GPA of 3.4 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 term. 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.

CA	Written Communication Skills (AAS and CP only)
CP	Computational Skills
CT	Written Communication Skills (AAT only)
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

WC Written Communication Skills (Transfer only)

Title IV Student Complaint Process

The Higher Education Act (HEA) prohibits an institution of higher education from engaging in a "substantial misrepresentation of the nature of its educational program, its financial charges, or the employability of its graduates." 20 U.S.C. §1094(c)(3)(A). Further, each State must have "a process to review and appropriately act on complaints concerning the institution including enforcing applicable State laws." 34 C.F.R. § 600.9. The Washington State Board for Community and Technical Colleges (SBCTC) maintains a process to investigate complaints of this nature brought by community and technical college students in the State of Washington. For more information, contact the SBCTC Student Services Office at 360-704-4315.

Transfer Degree Distribution List

Communication [C] - 10 credits

Please refer to specific degree for details regarding specified communication requirements

Quantitative Skills/Symbolic Reasoning [Q] - 5 credits

Please refer to specific degree for details regarding specified quantitative skills requirements

Health & Physical Education [PE/HPE] - 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, 212
  - PE activity
- Option Two: Complete three (3) credits from one (1) of the courses listed below:
  - HPE 258, or 266

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 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.

Department	HA	HB
American Sign Language	ASL& 121, 122, 123, 221, 222, 223	ASL 125
Art	ART 131, 151, 172, 220, 221, 222, 223, 225, 226, 250, 272	ART 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& 102, 210, 220, 230	CMST 216, 240
Drama	DRMA& 101	DRMA 140, 141, 142, 150, 152, 154, 171, 172, 173, 240, 250, 271, 272, 273

Department	HA	HB
English	ENGL 131, 132, 133, 140, 143, 145, 150, 156,173, 175, 176, 254, 260, 261, 262, 264, 265, 266, 267, 268, 269, 270, 272	ENGL 121, 125, 126, 127, 275, 276, 277
Japanese	JAPN& 121, 122, 123, 221, 222, 223	
Journalism	JOUR 101, 111	
Music	MUSC& 104, 128, 141, 142, 143, 231, 232, 233	MUSC 100, 116, 117, 118, 125, 127, 135
Philosophy	PHIL& 101, 120	PHIL 215, 216, 217, 240, 251, 280
Spanish	SPAN& 121, 122, 123, 221, 222, 223	SPAN 141
Women's Studies	WS 101, 201, 210	

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.

Department	
Addiction Counseling	ACED 101
Anthropology	ANTH& 204, 206, 215
Communication Studies	CMST& 230
Economics	ECON& 201, 202 ECON 101, 110, 120
English	ENGL 175
Environmental Science	ENVS 231
Geography	GEOG& 100, 102, 200, 207 GEOG 205
History	HIST& 126, 127, 128, 146, 147, 148
	HIST 231, 251, 252
Political Science	POLS& 203 POLS 111, 131, 141, 231
Psychology	PSYC& 100, 200 PSYC 203
Sociology	SOC& 101, 201 SOC 121, 131, 220
Women's Studies	WS 101, 201, 210, 220, 225

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. ***Please refer to specific degree for details regarding specified science requirements for AST-1 and AST-2***

Department	AA-DTA
Anthropology	ANTH& 215L, 245
Astronomy	ASTR& 101L
Biology	BIOL& 100L, 160L, 221L, 222L, 223L, 241L, 242L, 251L, 252L, 253L, 260L BIOL 101L, 105L, 139, 140, 141, 142, 143, 145, 150L, 164, 165L, 167, 168L, 180, 208L, 224L
Chemistry	CHEM& 110L, 121L, 131L, 141, 142, 143, 151L, 152L, 153L, 241, 242, 243, 251L, 252L, 253L
Engineering	ENGR& 104
Environmental Science	ENVS& 101L
	ENVS 109L, 218L
Geology	GEOL& 101L, 103L GEOL 102L, 218
Meteorology	METR 101L
Nutrition	NUTR& 101
Physical Science	PHSC 101L, 102L, 104L, 106, 110L
Physics	PHYS& 100, 101L, 124L, 125L, 126L, 134, 135, 136, 231L, 232L, 233L, 241, 242, 243

Elective Requirements

Complete a total of twenty-seven (27) credits from courses numbered 100 and above. The two areas of electives are listed below.

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).

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.

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

Communication Studies – excluding 280

Computer Science & Engineering

Computer Technology – CTEC 100, 120, 121, 122 only

Drama

Early Childhood Education – ECED& 105, 120; and EDUC& 115 only

Economics

Education – EDUC& 201 only

Engineering

English

Environmental Science

Forensic Science

Geography

Geology

Health – excluding HLTH 120, 121, 123

Health & Physical Education – excluding HPE 220, 280, 290

History

Human Services Substance Abuse – HSSA& 101

Japanese

Journalism – JOUR 101, 111 only

Mathematics

Meteorology

Music

Nutrition

Philosophy

Physical Education**

Physical Science

Physics

Political Science

Psychology

Sociology

Spanish

Women's Studies

***A maximum of two (2) credits in PE activity can apply toward this area.*

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.

Coursework in FLPC cannot apply to the AA degree program.

No more than 15 credits can be taken from the General Elective area.

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:
- Credits may be awarded only if the learning experiences fall within the outcomes of the regular curriculum of the college.
- Academic transcripts will indicate other credits awarded.
- Credits cannot duplicate credits already awarded.
- 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.

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 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 term credits toward general education requirement(s) at any other public and most private higher education institutions in the state.[1]

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 disciplines2) – PHIL& 101, MUSC& 105, DRMA& 101, or ENGL& 111
- 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, ENVS& 100, ENVS& 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.

[1]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.

[2]Disciplines are sometimes called "subjects" or "subject matter areas" and designated by a prefix (i.e., PHIL for Philosophy and POLS for Political Science).

Transfer Degree Overview

Associate in Arts (AA)

Associate in Arts – Major Related Program (MRP)

Associate in Fine Arts (AFA)

Associate in Science - Track 1 (AST1)

Associate in Science - Track 2 (AST2)

Associate in Applied Science - Transfer Degree (AAS-T)

"Washington 45" - List of One Year Transfer Courses

General Transfer Degree Requirements:

In addition to completing all of the major or distribution area requirements, students must also:

Complete a minimum of ninety (90) college-level credits.

Maintain a minimum cumulative college-level grade point average (GPA) of 2.00 or higher.

Thirty (30) credits minimum must be completed at Clark College to meet Academic Residency.

General Transfer Degree Credit Restrictions:

- Cooperative Work Experience: No more than fifteen (15) credits may be applied to an associate degree.
- Course Challenge: Students may use credits earned from successful course challenges toward their degree or certificate, but the credits will not meet the academic residency requirements.
- Standardized Tests: Advanced Placement (AP), College Level Examination Program (CLEP), 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.
- Pass/Fail Grading Option: Sixty (60) credits maximum in courses with Pass/Fail grading option can apply toward the degree.
- 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.
- Special Projects: No more than fifteen (15) credits in Special Projects will be allowed toward the Associate in Arts (AA) degree.

General Information on the 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 grade point average (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). A grade of "D-" may not apply toward a completion of a transfer degree or Bachelor of Applied Science at Clark College. Nontraditional grading practices require special handling, depending on the nature and circumstances of the program from which and to which a students is transferring, but receiving institutions shall take steps to assure all students equitable treatment.

Associate in Arts (AA)-Direct Transfer Agreement (DTA)

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. The AA-DTA is a statewide agreement between the Washington State community and technical colleges and Washington State public universities, as well as some private colleges and universities. The agreement outlines transferability of coursework and standing; in most cases students who have completed an AA-DTA will also have satisfied general education requirements at the baccalaureate institution and will have junior standing. Students should review their baccalaureate institution to see if they are part of the DTA in Washington State.

AA-DTA General Education Requirements

Communication Skills [C, OC, WC] –10 credits

- To fulfill the Communications Skills requirement for the AA-DTA transfer degree, students must complete

ENGL& 101 for five (5) credits and another five (5) credit English composition course or take another three (3) credit English composition course and take a qualifying five (5) credit Oral Communication (OC) studies course.

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

- To fulfill the quantitative skills requirement for the AA general transfer degree, students must complete five (5) credits of college level mathematics (Q) or symbolic reasoning (Q) coursework.

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

- To fulfill the Health and Physical Education requirements for the AA general transfer degree, students must complete two (two) qualifying credits for Health [HE] and one (1) credit of any college-level Physical Education [PE] activity course, or HPE 258 or 266.

Humanities [HA, HB] –15 credits

- To fulfill the Humanities requirement for the AA general transfer degree students must complete 15 credits of humanities coursework from at least two (2) subject areas. Students may include no more than ten (10) credits from any one subject area. A maximum of five (5) credits of the "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

- To fulfill the Social Science requirements for the AA general transfer degree students must complete fifteen (15) credits of social science coursework from at least three (3) subject areas. Students may include no more than ten (10) credits from any one subject area.

Natural Sciences [NS] - 15 credits

- To fulfill the natural Sciences requirement for the AA general transfer degree students must complete fifteen (15) credits of natural science coursework from at least two subject areas. Students may include no more than ten (10) credits from one subject area. Students must include at least one (1) lab science.

Specified Elective Requirements [SE] - 12 credits

- To fulfill the Specified Elective requirements fo the AA general transfer degree students must complete twelve (12) credits of Specified Electives. A maximum of two (2) credits in Physical Education (PE) activity can apply.

General Electives [GE] - 15 credits

- Additional credits may be taken at college level to reach the minimum ninety (90) credit total for the AA general transfer degree. Note: Coursework in CAP, ESL, or FLPC cannot apply to the AA transfer degree.

Oral Communication [OC]

- Clark students must complete either CMST&210, 220, or 230 to fulfill the Oral Communication requirement. 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 or General Elective.

College Preparation (COLL)

- Clark students must complete College 101 (COLL 101). Students may apply this course in General Electives for the AA general transfer degree.

AA-DTA General Education Credit Restrictions

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

- A course can apply toward the only one (1) distribution requirement (i.e. Communication Skills, Quantitative Skills/Symbolic Reasoning Skills, Humanities, Social Sciences, and Natural Sciences). The exception is for the Oral communication and College 101 requirements, which are local degree requirements. When

meeting these requirements, the same course can be applied to the degree requirement and to the distribution area.

- 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 Specified or General Elective Requirements.

Associate in Arts – Major Related Programs (AA - DTA/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[1] in:

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

[1]For specific program requirements please see the programs section of the catalog.

AA- DTA/MRP General Education Requirements:

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, DTA/MRP degrees differ from the Associate in Arts degree in the following ways:

- Health and Physical Education [HE,PE,HPE] is not required;
- College Preparation (COLL 101) is not required;
- Oral Communication [OC] is not required;
- Social Sciences [SS] may be completed with two (2) subject areas;
- Specific coursework is identified and required for program completion.

Clark students are encouraged to take Health and Physical Education [HPE], College 101 [COLL] and Oral Communication [OC] courses, where appropriate, in case their degree choice changes.

Associate in Fine Arts (AFA)

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, so students need to be aware of requirements of the receiving senior institution. Currently, Clark College offers two (2) Associate in Fine Arts degrees: Graphic Design and Studio Art. Please contact the Art Department for advising information.

AFA General Education Requirements

Communication Skills [C] – 5 credits

- To fulfill the communication skills requirement for the AFA degree students must complete ENGL& 101 for five (5) credits. Students who complete ENGL& 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 [C] or Oral Communications [OC] as defined within the Associate of Arts distribution requirements.

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

- To fulfill the quantitative skills requirement for the AFA degree, students must complete five (5) credits of college level mathematics.

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

- To fulfill the Health and Physical Education requirement for the AFA degree, students must complete two (2) qualifying credits of Health and one (1) credit of any college-level Physical Education [PE] activity course, or HPE 258 or 266.

Humanities [HA] – 5 credits

- To fulfill the Humanities requirement for the AFA degree students must complete five (5) credits of coursework from the Humanities [HA] Associate of Arts distribution list. Courses must be List A courses. The course completed cannot be part of the AFA major requirements.

Social Sciences [SS] – 5 credits

- To fulfill the Social Science requirement for the AFA degree students must complete five (5) credits of coursework from the Social Sciences [SS] Associate of Arts distribution list. The course completed cannot be part of the AFA major requirements.

Natural Sciences [NS] – 5 credits

- To fulfill the Natural Science requirement for the AFA degree students must complete five (5) credits of coursework from the Natural Sciences Associate of Arts distribution list. The course completed must include a lab. The course completed cannot be part of the AFA major requirements.

Major Area 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 (AST)

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.

Associate in Science – Track 1 (AST1)

The AST1 degree track is for students intending to transfer into programs in:

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

- Geology

AST1 General Education Requirements:

Communication Skills [C] – 5 credits

- To fulfill the communication skills requirement for the AST1 degree students must complete ENGL& 101 for five (5) credits. Students who complete ENGL& 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 [C] or Oral Communications [OC] as defined within the Associate of Arts distribution requirements.

Quantitative Skills/Symbolic Reasoning Skills – 10 credits

- To fulfill the Quantitative Skills requirement for the AST1 degree students must complete MATH&151 and 152, or Math courses that have MATH&152 as a prerequisite.

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

- To fulfill the Health and Physical Education requirement for the AST1 degree, students must complete two (2) qualifying credits of Health [HE] and one (1) credit of any college-level Physical Education [PE] activity course, or HPE 258 or 266.

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

- To fulfill the Quantitative Skills requirement for the AST1 degree students must complete five (5) credits of coursework from Humanities [HA,HB], five (5) credits of coursework from Social Sciences [SS], 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 the "B" list coursework may be applied.

Pre-Major Sequence – 45 to 50 credits

- All students planning to earn the AST1 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 intended transfer school to select sequences.

Chemistry sequence – 15 credits

To fulfill the chemistry sequence requirement students may take either:

  - CHEM&141/151, CHEM& 142/152 and CHEM& 143/153
  - Or
  - CHEM& 241/251, CHEM& 242/252 and CHEM& 243/253

Biology or Physics sequence – 15 credits

- To fulfill the biology or physics sequence requirement students may take either:
  - BIOL& 222, 221 and 223
  - Or
  - PHYS& 124/134/091, PHYS& 125/135/092 and PHYS& 126/136/093.

Additional mathematics courses– 5 or 6 credits

- To fulfill the additional mathematics requirement students may take either:
  - MATH& 146 or MATH& 153

Students should consult with intended transfer school to select correct path.

Science Electives – 10 to 15 credits

- Complete an additional ten (10) to fifteen (15) credits (preferably in a two or three-term sequence) in physics, geology, organic chemistry, biology or mathematics consisting of courses normally taken for science majors to better prepare for major.

Electives

- Students should complete sufficient additional college-level credits so that total credits earned is at least 90 term 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:

AST2 - 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

- To fulfill the communication skills requirement for the AST1 degree students must complete ENGL& 101 for five (5) credits. Students who complete ENGL& 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 [WC] or Oral Communications [OC] as defined within the Associate of Arts distribution requirements.

Quantitative Skills/Symbolic Reasoning Skills – 10 credits

- To fulfill the Quantitative Skills requirement for the AST2 degree students must complete MATH&151 and 152, or Math courses that have MATH&152 as a prerequisite.

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

- To fulfill the Health and Physical Education requirement for the AST2 degree, students must complete two (2) qualifying credits of Health [HE] and one (1) credit of any college-level PE [PE] activity course, or HPE 258 or 266.

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

- To fulfill the Quantitative Skills requirement for the AST2 degree students must complete five (5) credits of coursework from Humanities [HA,HB], five (5) credits of coursework from Social Sciences [SS], 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 "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 follow-

ing 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. Physics sequence – 15 credits

- PHYS& 124/134/091, PHYS& 125/135/092 and PHYS& 126/136/093
- Or
- PHYS& 231/241/094, PHYS& 232/242/095, PHYS& 233/243/096*

**Calculus based required for engineering majors*

Chemistry with Lab – 5 credits

- CHEM& 141, 151 (required for engineering majors); other majors should select 5 credits of science based on specific faculty or program advising.

Additional mathematics coursework - 5 credits

- MATH& 146 or MATH& 153

Elective Requirements – 35 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 Majors should choose from the courses listed below, in consultation with an advisor, based on the requirements of the specific discipline at the baccalaureate institution the student selects to attend.:

- 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 Majors should choose from the courses listed below, in consultation with an advisor, based on the requirements of the specific discipline at the baccalaureate institution the student selects to attend:

- 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& 101L
- ENVS 109L, 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 term credits toward general education requirement(s) at any other public and most private higher education institutions in the state.[1] 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 (not all offered at Clark College):

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 disciplines2) – 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, ENVS& 100, ENVS& 101, PHYS& 114, GEOL& 101 with lab.

Additional 5 credits in a different discipline can be taken from any category listed above.

Professional and Technical Degrees and Certificates Distribution Lists

Associate in Applied Science (AAS)

Associate in Applied Technology (AAT)

Certificate of Proficiency (CP)

Certificate of Achievement (CA)

Certificate of Completion (CC)

Degree and 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
  - Associate in Applied Sciences (AAS): 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): 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 of major-related requirements.
- Certificate of Proficiency: Forty-five (45) credits minimum
- Certificate of Achievement: Twenty-one (21) credits minimum
- Maintain a minimum cumulative grade point average (GPA) of 2.0 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" (2.0) or higher in each major area requirement and specifically listed courses unless otherwise noted in the department requirements for all courses taken at Clark College.

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 twenty five percent (25%) of the degree or certificate.
- 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 Evaluations Office at Clark College for further information.

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.

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.
- General Education Requirements

Note: Some specific requirements of a program may also meet the General Education requirements.

Communication Skills [CA, CT]:

***Communication Studies courses cannot be counted toward the first three (3) credits of Communication Skills [CA,CT]*

Department	AAS – 6 credits minimum [CA]	AAT – 5 credits minimum [CT]	CP – 3 credits minimum [CA]
Business	BUS 211	BUS 211	BUS 211
Business Technology	BTEC 107	BTEC 107	BTEC 106, 107
Communication Studies**	CMST& 210**, 220**, 230**		
English	ENGL 098, 108, 109, 110 ENGL 097, 098, 108, 109, 110	ENGL& 101, 102, 235 ENGL& 101, 235	ENGL& 101, 235
Management	MGMT 107		MGMT 107
Professional Technical Writing	PTWR 135	PTWR 135	PTWR 135

Note: Pharmacy Technician students may meet the Communication Skills requirement by achieving the following:

- *Completion of ENGL 098 or equivalent with a grade of "C" or better (2.0) or placement into ENGL& 101.*
- *Health & Physical Education [HE, HPE, PE, PEDNC, PEMAR] – 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, or 212
- PE activity

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

- HPE 220, 258, or 266

Computational Skills [CP]:

Department	AAS – 3 credits minimum	AAT – 5 credits minimum	CP – 3 credits minimum
Business	BUS 102	BUS 102	BUS 102
Business Technology Medical Office	BMED 103, 105	BMED 103, 105	BMED 103
Chemistry		CHEM 095	
Computer Science	CS& 131, 141		
	CS& 141		
Computer Science & Engineering	CSE 121, 222, 223, 224		CSE 121, 222, 223, 224
Computer Technology	CTEC 121	CTEC 121	CTEC 121
Environmental Science			ENVS 135
Mathematics	All MATH/MATH& courses numbered 030 or higher EXCEPT MATH 096, 199, or 290	MATH 103, 105, 111 MATH& 107, 146 Or any MATH/MATH& course for which these courses are a prerequisite	All MATH/MATH& courses numbered 030 or higher EXCEPT MATH 096, 199 or 290
Professional Technical Computer Skills	PTCS 110	PTCS 110	PTCS 110

A placement into or eligibility for MATH 089 or 090 or higher will satisfy this requirement for certain designated programs.

Human Relations [HR]:

Department	AAS – 6 credits minimum [CA]	AAT – 5 credits minimum [CT]	CP – 3 credits minimum [CA]
Addiction Counseling	ACED 101, 201	ACED 101, 201	ACED 101, 201
Business Technology	BTEC 148	BTEC 148	BTEC 148
Business Medical	BMED 166, 225, 226	BMED 166, 225, 226	BMED 166, 225, 226
Business	BUS& 101	BUS& 101	BUS& 101
Communication	CMST& 210, 230	CMST& 210, 230	CMST& 210, 230
College	COLL 101	COLL 101	COLL 101
Human Development	HDEV 103, 105, 123, 155, 175, 186, 195, 198, 200	HDEV 103, 105, 123, 155, 175, 186, 195, 198, 200	HDEV 103, 105, 123, 155, 175, 186, 195, 198, 200
Management	MGMT 101, 106, 110, 112, 120, 122, 125, 128, 132	MGMT 101, 106, 110, 112, 120, 122, 125, 128, 132	MGMT 101, 106, 110, 112, 120, 122, 125, 128, 132

Department	AAS – 6 credits minimum [CA]	AAT – 5 credits minimum [CT]	CP – 3 credits minimum [CA]
Psychology	PSYC& 100, 200 PSYC 203	PSYC 203 PSYC& 100, 200	PSYC& 100, 200 PSYC 203
Sociology	SOC& 101, 201 SOC 121, 131, 220	SOC 121, 131, 220 SOC& 101, 201	SOC& 101, 201 SOC 121, 131, 220
Women's Studies	WS 101	WS 101	WS 101

Humanities [HA, HB] – 3 credits for AAS only

Department	HA	HB
American Sign Language	ASL& 121, 122, 123, 221, 222, 223	ASL 125
Art	ART 131, 151, 172, 220, 221, 222, 223, 225, 226, 250, 272	ART 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& 102, 210, 220, 230	CMST 216, 240
Drama	DRMA& 101	DRMA 154 DRMA 140, 141, 142, 150, 152, 171, 172, 173, 240, 250, 271, 272, 273
English	ENGL 131, 132, 133, 140, 143, 145, 150, 156,173, 175, 176, 252 , 254, 260, 261, 262, 264, 265, 266, 267, 268, 269, 270, 272	ENGL 121, 125, 126, 127, 275, 276, 277
Japanese	JAPN& 121, 122, 123, 221, 222, 223	
Journalism	JOUR 101, 111	
Music	MUSC& 104, 128, 141, 142, 143, 231, 232, 233	MUSC 100, 116, 117, 118, 125, 127, 135
Philosophy	PHIL& 101, 120	PHIL 215, 216, 217, 240, 251, 280
Spanish	SPAN& 121, 122, 123, 221, 222, 223	SPAN 141
Women's Studies	WS 101, 201, 210	

Social Sciences [SS] – 3 credits for AAS only

Department	
Addiction Counseling	ACED 101
Anthropology	ANTH& 204, 206, 215
Communication Studies	CMST& 230
Economics	ECON& 201, 202 ECON 101, 110, 120
English	ENGL 175

Department	
Environmental Science	ENVS 231
Geography	GEOG& 100, 102, 200, 207 GEOG 205
History	HIST& 126, 127, 128, 146, 147, 148 HIST 231, 251, 252
Political Science	POLS& 203 POLS 111, 131, 141, 231
Psychology	PSYC& 100, 200 PSYC 203
Sociology	SOC& 101, 201 SOC 121, 131, 220
Women's Studies	WS 101, 201, 210, 220, 225

Natural Sciences [NS] – 3 credits for AAS only

Department	
Addiction Counseling	ACED 101
Anthropology	ANTH& 204, 206, 215
Communication Studies	CMST& 230
Economics	ECON& 201, 202 ECON 101, 110, 120
Anthropology	ANTH& 215L, 245
Astronomy	ASTR& 101L
Biology	BIOL& 100L, 160L, 221L, 222L, 223L, 241L, 242L, 251L, 252L, 253L, 260L BIOL 101L, 105L, 139, 140, 141, 142, 143, 145, 150L, 164, 165L, 167, 168L, 180, 208L, 224L
Chemistry	CHEM& 110L, 121L, 131L, 141, 142, 143, 151L, 152L, 153L, 241, 242, 243, 251L, 252L, 253L CHEM 095
Engineering	ENGR& 104
Environmental Science	ENVS& 101L ENVS 109L, 218L
Geology	GEOL& 101L, 103L
	GEOL 102L, 218
Meteorology	METR 101L
Nutrition	NUTR& 101
Physical Science	PHSC 090, 101L, 102L, 104L, 106, 110L
Physics	PHYS& 100, 101L, 124L, 125L, 126L, 134, 135, 136, 231L, 232L, 233L, 241, 242, 243

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 grade point average (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 (CC)

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.

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.

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.
- 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), Certificate of Achievement (CA):

- Up to fifteen (15) credits may be earned through course challenge, CLEP, special projects, and cooperative work experience, 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, or special projects, 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.

Bachelor of Applied Sciences

General Degree Requirements:

In addition to completing a two year degree (AA, AFA, AAS, AAT, AAS-T, AST1, AST2) students must also:

- Complete all of the major or distribution area requirements:
- Complete a minimum of one hundred and eighty (180) college-level credits
- Minimum of sixty (60) upper division (300 or 400 level) credits
- Maintain a minimum cumulative college-level grade point average (GPA) of 2.00 or higher
- Thirty (30) credits minimum must be completed at Clark College to meet Academic Residency.

General Degree Credit Restrictions:

- Course Challenge: Students may use credits earned from successful course challenges toward their degree or certificate, but the credits will not meet the academic residency requirements.
- Standardized Tests: Advanced Placement (AP), College Level Examination Program (CLEP), 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.
- Pass/Fail Grading Option: Sixty (60) credits maximum in courses with Pass/Fail grading option can apply toward the degree.
- 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.
- Special Projects: No more than fifteen (15) credits in Special Projects will be allowed toward the Bachelor of Applied Science (BAS) degree.

General Information on the 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 grade point average (GPA). Courses completed with a grade of "D" or above may be accepted in transfer. A grade of "D-" may not apply toward a completion of a Bachelor of Applied Science at Clark College. Nontraditional grading practices require special handling, depending on the nature and circumstances of the program from which and to which a students is transferring, but receiving institutions shall take steps to assure all students equitable treatment.

General BAS degree requirements

I. Students must earn a cumulative grade point average (GPA) of at least 2.0, as calculated by the degree awarding institution. Please refer to specific program for additional GPA requirements.

II. The general education courses will include courses earned at either/both the associate degree and/or applied bachelor's degree level, based on the total required 180 term hours of credit.

Basic Requirements

A. Communication Skills (10 credits)

- Must include at least two communication courses to include a minimum of one English composition course; e.g. ENGL& 101. Remaining credits may be an additional composition course or designated writing-intensive courses or courses in basic speaking skills (e.g. speech, rhetoric, or debate).

B. Quantitative/Symbolic Reasoning Skills (5 credits)

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

- or -

- 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.

Distribution Requirements

A. Humanities (10 credits)

- A maximum of five (5) credits of List B (performance) Humanities coursework can be applied. A maximum of five (5) credits of 100-level world language can be applied.

B. Social Science (10 credits)

C. Natural Sciences (10 credits)

- At least five (5) credits in physical, biological and/or earth sciences. Shall include at least one laboratory course.

Additional General Education Courses (15 credits)

Remaining general education courses needed to achieve the required 60 credits shall be selected from the Basic and Distribution Requirements listed above.

300 and 400 Level General Education Courses

In addition to 100/200 level courses, colleges may elect to develop 300/400 level general education courses that best suit the curriculum needed of the baccalaureate degree. These courses must be selected from the Basic and Distribution Requirements listed above.

Refer to the specific degree requirements for further information.

Procedure for Requesting AP Credits

Currently recognized AP examinations and their direct equivalencies are listed below. For any AP test that is not listed below, a score of 3 or better must be earned in order to receive 5 credits of Specified Electives. Credit is posted with an "S" grade at the end of the quarter for which the score report was received, once a transcript record has been established. No credits will be awarded for an examination if the student has already earned credit in a duplicate course; a maximum of sixty (60) credits in AP coursework can apply towards degree/certificate requirements.

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

Art History	Grade: 3, 4 or 5	Action: ART 151 (3 credits)
Art: Drawing, 2D Design or 3D Design	Grade: 4 or 5	Action: Humanities Distribution (5 credits)
Biology	Grade: 3, 4 or 5	Action: BIOL& 100 (5 credits)
Calculus AB Exam	Grade: 3, 4 or 5	Action: MATH& 151 (5 credits)
Calculus BC Exam	Grade: 3, 4 or 5	Action: MATH& 151 and 152 (10 credits)
Chemistry	Grade: 3, 4 or 5	Action: CHEM& 141, 151 (5 credits)
Chinese Language & Culture	Grade: 3, 4 or 5	Action: CHIN& 121 (5 credits)
Computer Science (Exam A)	Grade: 3, 4 or 5	Action: CS& 141 (5 credits)
Computer Science Principles (AP CSP)	Grade: 3, 4 or 5	Action: CSE 101 (1 credit)
Economics (Macro)	Grade: 3, 4 or 5	Action: ECON& 202 (5 credits)
Economics (Micro)	Grade: 3, 4 or 5	Action: ECON& 201 (5 credits)
English (Language and Composition Exam)	Grade: 4 or 5	Action: ENGL& 101* (5 credits) **A 4 or 5 on each exam will award ENGL& 101 and 102*
English (Composition and Literature Exam)	Grade: 4 or 5	Action: ENGL& 101* (5 credits) **A 4 or 5 on each exam will award ENGL& 101 and 102*
Environmental Science	Grade: 3, 4, or 5	Action: ENVS& 101 (5 credits)
European History	Grade: 3, 4 or 5	Action: Social Science Distribution (5 credits)
French Language & Culture	Grade: 3, 4 or 5	Action: World Language (5 credits)
Geography	Grade: 5	Action: GEOG&100 (5 Credits)
German Language & Culture	Grade: 3, 4 or 5	Action: World Language (5 credits)
Government and Politics (US)	Grade: 4 or 5	Action: POLS 111 (5 credits)
Government and Politics (Comparative)	Grade: 4 or 5	Action: Social Science Distribution (5 credits)
Human Geography	Grade: 3, 4, or 5	Action: GEOG& 200 (5 credits)
Italian Language & Culture	Grade: 3, 4 or 5	Action: World Language (5 credits)
Japanese Language	Grade: 3, 4 or 5	Action: JAPN& 121 (5 credits)
Latin Literature & Culture	Grade: 4 or 5	Action: World Language (5 credits)
Music Listening/Literature	Grade: 3, 4 or 5	Action: MUSC& 104
Music Theory	Grade: 3, 4 or 5	Action: MUSC& 141
Physics 1 or 2 (formerly Physics B Exam)	Grade: 3, 4, or 5	Action: PHYS& 124, 134 (5 credits)
Physics (Physics C Mechanics Exam)	Grade: 3, 4 or 5	Action: PHYS& 124, 134 (5 credits)
Psychology	Grade: 4 or 5	Action: PSYC& 100 (5 credits)
Spanish Language & Culture*	Grade: 3, 4 or 5	Action: SPAN& 121 (5 credits) **A 4 or 5 on Spanish Literature & Culture will award 5 credits of World Language*
Statistics	Grade: 3, 4 or 5	Action: MATH& 146

U.S. History	Grade: 3, 4 or 5	Action: HIST& 146, 147, and148 (15 credits)
World History	Grade: 3, 4 or 5	Action: HIST& 126, 127 and 128 (15 credits)

Where to Get AP Scores

The College Board: Advanced Placement Program

PO Box 6671

Princeton, NJ 08541-6671

Phone: 609-771-7300

TTY: 609-882-4118

www.collegeboard.org

Non-Traditional Credit

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 term in which the scores were submitted as long as the student is enrolled in that term.

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

Art History	Grade: 3, 4 or 5	Action: ART 151 (3 credits)
Art: Drawing, 2D Design or 3D Design	Grade: 4 or 5	Action: Humanities Distribution (5 credits)
Biology	Grade: 3, 4 or 5	Action: BIOL& 100 (5 credits)
Calculus AB Exam	Grade: 3, 4 or 5	Action: MATH& 151 (5 credits)
Calculus BC Exam	Grade: 3, 4 or 5	Action: MATH& 151 and 152 (10 credits)
Chemistry	Grade: 3, 4 or 5	Action: CHEM& 141, 151 (5 credits)
Chinese Language & Culture	Grade: 3, 4 or 5	Action: CHIN& 121 (5 credits)
Computer Science (Exam A)	Grade: 3, 4 or 5	Action: CS& 141 (5 credits)
Computer Science Principles (AP CSP)	Grade: 3, 4 or 5	Action: CSE 101 (1 credit)
Economics (Macro)	Grade: 3, 4 or 5	Action: ECON& 202 (5 credits)
Economics (Micro)	Grade: 3, 4 or 5	Action: ECON& 201 (5 credits)
English (Language and Composition Exam)	Grade: 4 or 5	Action: ENGL& 101* (5 credits) **A 4 or 5 on each exam will award ENGL& 101 and 102*
English (Composition and Literature Exam)	Grade: 4 or 5	Action: ENGL& 101* (5 credits) **A 4 or 5 on each exam will award ENGL& 101 and 102*
Environmental Science	Grade: 3, 4, or 5	Action: ENVS& 101 (5 credits)
European History	Grade: 3, 4 or 5	Action: Social Science Distribution (5 credits)
French Language & Culture	Grade: 3, 4 or 5	Action: World Language (5 credits)
Geography	Grade: 5	Action: GEOG&100 (5 Credits)
German Language & Culture	Grade: 3, 4 or 5	Action: World Language (5 credits)
Government and Politics (US)	Grade: 4 or 5	Action: POLS 111 (5 credits)
Government and Politics (Comparative)	Grade: 4 or 5	Action: Social Science Distribution (5 credits)
Human Geography	Grade: 3, 4, or 5	Action: GEOG& 200 (5 credits)
Italian Language & Culture	Grade: 3, 4 or 5	Action: World Language (5 credits)
Japanese Language	Grade: 3, 4 or 5	Action: JAPN& 121 (5 credits)
Latin Literature & Culture	Grade: 4 or 5	Action: World Language (5 credits)
Music Listening/Literature	Grade: 3, 4 or 5	Action: MUSC& 104
Music Theory	Grade: 3, 4 or 5	Action: MUSC& 141
Physics 1 or 2 (formerly Physics B Exam)	Grade: 3, 4, or 5	Action: PHYS& 124, 134 (5 credits)
Physics (Physics C Mechanics Exam)	Grade: 3, 4 or 5	Action: PHYS& 124, 134 (5 credits)
Psychology	Grade: 4 or 5	Action: PSYC& 100 (5 credits)
Spanish Language & Culture*	Grade: 3, 4 or 5	Action: SPAN& 121 (5 credits) **A 4 or 5 on Spanish Literature & Culture will award 5 credits of World Language*

Statistics	Grade: 3, 4 or 5	Action: MATH& 146
U.S. History	Grade: 3, 4 or 5	Action: HIST& 146, 147, and148 (15 credits)
World History	Grade: 3, 4 or 5	Action: HIST& 126, 127 and 128 (15 credits)

Where to Get AP Scores

The College Board: Advanced Placement Program

PO Box 6671

Princeton, NJ 08541-6671

Phone: 609-771-7300

TTY: 609-882-4118

www.collegeboard.org

Credit Hours and Credit Load

320.001 CREDIT HOURS and CREDIT LOAD

The State Board for Community and Technical Colleges has established rules for how community and technical colleges determine course credit hours. These rules are based on the type of instructor contact hours and the ratio of those hours to the number of weeks in a quarter. "Credit hours" are defined as the unit by which an institution measures its course work. The number of credit hours assigned to a course is defined by the number of hours per week in class and the number of hours per week in out of class preparation. Clark College uses these rules to establish credit hours assigned to each course offered by the College. Credit loads are determined based on the credit hours for which a student enrolls.

Credit ratios for five categories of instruction are:

Lecture/discussion, 1:1 - One (1) hour of lecture or classroom discussion per week and a minimum of two (2) additional hours of out-of-class assignments per classroom contact hours earns one (1) credit hour.

Laboratory/applied learning, 2:1 - Two (2) hours of laboratory work per week and a minimum of one additional hour for out-of-class assignments earns one (1) credit hour.

Work site educational experience, 3:1 - Three (3) hours of work per week including a required one-hour-per-week seminar or discussion group under the intermittent supervision of the instructor - and also includes working with professional practitioners - earns one credit hour.

Online classes, 1:1 - One (1) hour per week of reviewing recorded lectures, viewing Power Point presentations, reading resources providing by the instructor in the course shell, participating in discussion forums and/or completing online assignments and assessments. In addition, a minimum of two (2) additional hours of out-of-class assignments (off or online) earns one (1) credit hour.

Hybrid classes, 1:1 - One (1) hour per week classroom time will be divided between the virtual LMS classroom and time spent in an actual physical classroom. There is an expectation of two (2) additional hours a week to complete out-of-class assignments.

Exceptions are noted in the quarterly schedule (some classes are not scheduled in the usual College class periods.)

Credit loads are defined under three categories as:

Full-time credit load. A full-time student credit load is generally defined as twelve to nineteen (12-19) credit hours. However, students who are enrolled under government-sponsored programs (e.g., financial aid, veterans, social

security) should check with the appropriate agency's financial services office for specific credit load requirements.

Part-time credit loads. A three-quarter load is defined as nine to eleven (9-11) credit hours; a half-time load is six to eight (6-8) credit hours, and a less-than-half-time load is one to five (1-5) credit hours.

Overload. 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.

The credit load definitions do not apply to dual-enroll students.

This policy will be reviewed by Executive Cabinet according to the program review policy schedule.

New Policy/Procedure Approved by Executive Cabinet

August 27, 2013

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Degrees and Certificates

SECTION C: Degrees and Certificates

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Accounting

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.

Accounting Clerk (CP)

This Accounting Clerk certificate is designed to prepare the student for an entry-level position as an accounting clerk or bookkeeper. The student records transactions and prepares the basic essential financial statements which contribute to vital operational policies and decisions. Student learning takes place in both manual and computerized environments.

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.

General Education Requirements

Communication Skills

BTEC 106	APPLIED OFFICE ENGLISH	3 cr.
or ENGL&101	ENGLISH COMPOSITION I	5 cr.

Computational Skills

BUS 102	BUSINESS MATH APPLICATIONS	5 cr.

Human Relations

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 http://www.clark.edu/academics/catalog/gainful-employment 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:

- Accurately create and maintain payroll records required under federal and state laws.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Accurately prepare, interpret, and analyze financial statements for service and merchandising businesses manually as well as using computer systems.
- Perform all steps of the accounting cycle, using both general and specialized journals.

Accounting (AAS)

The Accounting Associate of Applied Science degree is a two-year degree designed to provide knowledge in accounting to prepare the graduate for entry-level employment in private or public sectors as a bookkeeper or para-accountant. The student records, analyzes, and interprets transactions, including preparation of essential financial statements. In addition, the student will learn how to assist decision makers in understanding and applying payroll, tax, and legal rules and regulations. Student learning takes place in both manual and computerized environments.

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.

Completion of Certificate of Proficiency in Marketing, Small Business Management, Accounting Clerk or Supervisory Management accounts for 56-60 of necessary credits.

General Education Requirements

Communication Skills

CMST&220	PUBLIC SPEAKING	5 cr.
or		
CMST&230	SMALL GROUP COMMUNICATION	5 cr.

Health & Physical Education (3 credits required)

Humanities (3 credits required)

Natural Sciences **3 cr.**

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.
ACCT&202	PRINCIPLES OF ACCOUNTING II	5 cr.
ACCT&203	PRINCIPLES OF ACCOUNTING III	5 cr.
BUS 130	COMPUTERIZED ACCOUNTING	3 cr.
BUS& 201	BUSINESS LAW	5 cr.

BUS 203	DESCRIPTIVE STATISTICS	3 cr.
BTEC 135	10-KEY CALCULATOR	1 cr.
BTEC 170	EXCEL FOR BUSINESS	3 cr.

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:

- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Accurately prepare, interpret, and analyze financial statements for service and merchandising businesses manually as well as using computer systems.
- 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.
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)

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.

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

Communication Skills

ENGL&101	ENGLISH COMPOSITION I	5 cr.

Human Relations

PSYC&100	GENERAL PSYCHOLOGY	5 cr.

Computational Skills **3 cr.**

Major Area Requirements

ACED 101	SURVEY OF ADDICTIONOLOGY *	3 cr.
or		
HSSA&101	INTRO TO ADDICTIVE DRUGS	5 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	3 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: 59-61

**For non-majors also.*

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment 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:

- Understand and participate in addiction placement, continuing care, and discharge of patients and clients with addictions.
- Treat substance abuse clients in multiple settings including individual and group counseling situations.
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- 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 Washington State Chemical Dependency Professional exam.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)

Addiction Counselor Education (AAS)

Summer Term (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	3 cr.

General Education Requirements

Communication Skills (6 credits required)

ENGL&101	ENGLISH COMPOSITION I	5 cr.

Health & Physical Education	**3 cr.**
Computational Skills	**3 cr.**

Human Relations

PSYC&100	GENERAL PSYCHOLOGY **	5 cr.

Humanities	**3 cr.**
Social Sciences	**3 cr.**
Natural Sciences	**3 cr.**

Major Area Requirements

ACED 101	SURVEY OF ADDICTIONOLOGY *	3 cr.
or		
HSSA&101	INTRO TO ADDICTIVE DRUGS	5 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	3 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.

Total Required Credits: 90

**For non-majors also.*
***May count for both Human Relations or 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:

- Understand and participate in addiction placement, continuing care, and discharge of patients and clients with addictions.
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- 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 Washington State Chemical Dependency Professional exam.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Treat substance abuse clients in multiple settings including individual and group counseling situations.

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

Communication Skills (10 credits required)

ENGL&101	ENGLISH COMPOSITION I	5 cr.

Oral Communication	**5 cr.**
Quantitative Skills	**5 cr.**

Health & Physical Education		**3 cr.**
Humanities**		**15 cr.**
Social Sciences (15 credits required)		
PSYC&100	GENERAL PSYCHOLOGY	5 cr.
and		
Additional credits from two other departments.		10 cr.
Natural Sciences		**15 cr.**
Must include a lab science		

Major Area Requirements

ACED 101	SURVEY OF ADDICTIONOLOGY	3 cr.
or		
HSSA&101	INTRO TO ADDICTIVE DRUGS	5 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

Total Required Credits: 90-92

** For non-majors also.*

***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.*

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:

- Understand and participate in addiction placement, continuing care, and discharge of patients and clients with addictions.
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- 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 Washington State Chemical Dependency Professional exam.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Treat substance abuse clients in multiple settings including individual and group counseling situations.

Administrative Assistant and Management

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.

Clark College's Business Technology program teaches basic skills for the office professional in every business, industry, and agency. Choose the training plan that best fits your educational goals, work schedule, and family commitments. Learn business English, keyboarding and fundamental computer skills in programs like Excel, Access and Word.

A complete two-year course of study is available for those entering the professional world for the first time, as well as one-, two-, or three-quarter programs and individual classes designed to update office skills.

Front Office Assistant (CA)

Front office assistants are versatile office workers who perform many clerical duties important to the smooth operation of an office. They may file records; tabulate and post data; prepare and mail receipts, invoices, and similar items; operate calculators, copiers, and computers; receive customers; and perform other customer service activities. 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 certificate.

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 http://www.clark.edu/academics/catalog/gainful-employment Gainful Employment Program Information page.

Office Assistant (CP)

An office assistant gathers and inputs data into a computer to perform clerical duties and to maintain business records and reports. The office assistant typically performs a variety of other duties, including filing, sorting mail, answering the telephone, posting data, and doing calculations on desk top calculators.

General Education Requirements

Communication Skills (3 credits required)

BTEC 107	BUSINESS ENGLISH	5 cr.

Computational Skills (3 credits required)

BUS 102	BUSINESS MATH APPLICATIONS	5 cr.

Human Relations (3 credits required)

BTEC 148	BUSINESS PROFESSIONAL SELF DEVELOPMENT	3 cr.
CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or		
CMST&230	SMALL GROUP COMMUNICATION	5 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 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.

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 101 or 103 is required for this program; once registered for BTEC 100 students will be placed in the appropriate class as skill indicates.*

***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 http://www.clark.edu/academics/catalog/gainful-employment 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.
- 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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Produce and edit business documents implementing proper grammar, spelling, word usage, and sentence structure.

Administrative Assistant (AAT)

The administrative assistant is a key member of the office team performing a wide variety of duties which enable management to focus on management functions. These duties may include coordinating work flow, keeping projects on schedule, handling phones, composing correspondence, setting up meetings, including agenda and minutes, greeting and screening visitors, making travel arrangements, managing data storage and retrieval, and supervising and hiring clerical support staff. Students seeking an administrative assistant degree may choose to focus their studies on general office or medical office. During the last few quarters of attendance, students will complete a cooperative work experience. 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 degree.

General Education Requirements

Communication Skills (5 credits required)

BTEC 107	BUSINESS ENGLISH	5 cr.

Computational Skills (5 credits required)

BUS 102	BUSINESS MATH APPLICATIONS	5 cr.

Human Relations (5 credits required)

CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or		
CMST&230	SMALL GROUP COMMUNICATION	5 cr.

BTEC Core Requirements

BTEC 100	KEYBOARDING *	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 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.

Office Administration Concentration Course List

BTEC 155	INTRODUCTION TO OFFICE PUBLISHING TOOLS	3 cr.
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.
BTEC 207	INTRODUCTION TO SHAREPOINT	3 cr.
BUS& 101	INTRODUCTION TO BUSINESS	5 cr.
CTEC 102	INTRODUCTION TO WINDOWS	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.

Medical Office Administration Concentration

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.
BUS 110	CUSTOMER SERVICE	3 cr.
HEOC 104	HEALTH CARE DELIVERY & CAREER EXPLORATION	3 cr.
HEOC 130	PHARMACOLOGY FOR HEALTH ASSISTANTS	3 cr.

Total Required Credits: 90-95

**BTEC 101 or 103 is required for this program; once registered for BTEC 100 students will be placed in the appropriate class as skill indicates.*

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.
- Solve quantitative problems and interpret the solutions.
- 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
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate interpersonal/human relations skills. (GE)

Office Management (AAT)

This program is designed for individuals who have experience working in an office setting and wish to move up into a management role. Students will prepare for assuming a management position by taking a variety of classes in management, accounting, administrative office procedures, and software applications. The program will give students a broad educational base and prepare them to manage an office administrative support team. 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 degree.

General Education Requirements

Communication Skills (5 credits required)

ENGL&101	ENGLISH COMPOSITION I	5 cr.
BUS 211	BUSINESS COMMUNICATIONS	3 cr.

Computational Skills (5 credits required)

MATH&146	INTRODUCTION TO STATISTICS	5 cr.

Human Relations (5 credits required)

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.
ElectivesTake 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 120	SUPERVISOR AS A TRAINER COACH	3 cr.
MGMT 122	LEADERSHIP PRINCIPLES	3 cr.
MGMT 125	TEAM BUILDING AND GROUP BEHAVIOR (strongly recommended)	3 cr.
MGMT 132	LEGAL ISSUES IN EMPLOYEE RELATIONS (strongly recommended)	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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)

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

Communication Skills (10 credits required)

ENGL&101	ENGLISH COMPOSITION I	5 cr.
ENGL&102	ENGLISH COMPOSITION II	5 cr.

Quantitative Skills (5 credits required)

MATH&107	MATH IN SOCIETY (recommended)	5 cr.

Health & Physical Education (3 credits required)

HPE 258	FITNESS-WELLNESS	3 cr.
or HPE 266	MIND BODY HEALTH	3 cr.

Oral Communication (5 credits required)

CMST&230	SMALL GROUP COMMUNICATION **	5 cr.

Humanities (15 credits required) *, ****

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.

Social Sciences (15 credits required)

From at least three different departments.

Natural Sciences (15 credits required)

From at least two different departments and must include a lab science.

Additional Requirements

COLL 101	COLLEGE ESSENTIALS: INTRODUCTION TO CLARK	2 cr.

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.

**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:

- Obtain, evaluate, and ethically use information. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Analyze and interpret quantitative information presented verbally, graphically, numerically, and/or symbolically. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Analyze patterns of power, privilege, and inequity in the United States. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Apply communication theory to demonstrate effective oral communication skills. (GE)

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

Communication Skills (10 credits required)

ENGL&101	ENGLISH COMPOSITION I	5 cr.
ENGL&102	ENGLISH COMPOSITION II	5 cr.

Quantitative Skills (5 credits required)

MATH&107	MATH IN SOCIETY	5 cr.

Health & Physical Education (3 credits required)

HPE 258	FITNESS-WELLNESS	3 cr.
or HPE 266	MIND BODY HEALTH	3 cr.

Oral Communication (5 credits required)

CMST&230	SMALL GROUP COMMUNICATION *	5 cr.

Humanities (15 credits required) **

ART 140	DARKROOM PHOTOGRAPHY	4 cr.
ART 223	ART IN THE TWENTIETH CENTURY	5 cr.

Social Sciences (15 credits required)

From at least three different departments.

Natural Sciences (15 credits required)

From at least two different departments and must include a lab science.

Additional Requirements

COLL 101	COLLEGE ESSENTIALS: INTRODUCTION TO CLARK	2 cr.

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.
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:

- Obtain, evaluate, and ethically use information. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Analyze and interpret quantitative information presented verbally, graphically, numerically, and/or symbolically. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Analyze patterns of power, privilege, and inequity in the United States. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Apply communication theory to demonstrate effective oral communication skills. (GE)

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

Communication Skills (5 credits required)

ENGL&101	ENGLISH COMPOSITION I (recommended)	5 cr.

Quantitative Skills (5 credits required)

MATH&107	MATH IN SOCIETY (recommended)	5 cr.
or any college level Math class		

Health & Physical Education (3 credits required)

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.

Humanities (5 credits required)

Choose from department other than Art. Must be A-list distribution(s)*

Social Sciences (5 credits required) (must NOT be a part of a major requirement)

CMST&230	SMALL GROUP COMMUNICATION (recommended)	5 cr.
or any Social Science distribution		

Natural Sciences (5 credits required)

(must be a lab science)

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 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.

Computer Graphics Technology

CGT 101	PHOTOSHOP RASTER GRAPHICS	4 cr.
CGT 102	ILLUSTRATOR VECTOR GRAPHICS	4 cr.
CGT 103	INDESIGN PAGE LAYOUT	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 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 272	GRAPHIC DESIGN HISTORY	5 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:

- 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.
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Obtain, evaluate, and ethically use information. (GE)
- Analyze and interpret quantitative information presented verbally, graphically, numerically, and/or symbolically. (GE)
- Evaluate claims about the natural world using scientific methodology. (GE)
- Analyze patterns of power, privilege, and inequity in the United States. (GE)
- Apply communication theory to demonstrate effective oral communication skills.(GE)

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

Communication Skills (5 credits required)

ENGL&101	ENGLISH COMPOSITION I	5 cr.

Quantitative Skills (5 credits required)

Social Sciences (5 credits required)

Humanities (5 credits required)

choose from AA distribution list of Humanities A-list classes, cannot be an Art class

Natural Sciences (5 credits required)

Must include a lab course

Health & Physical Education (3 credits required)

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 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 203	THE HUMAN FIGURE I	4 cr.
ART 215	PORTFOLIO DEVELOPMENT	3 cr.

Art History

Choose 2 from List A and 1 more from either list A or B (15 credit required)

List A

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.

List 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.
ART 272	GRAPHIC DESIGN HISTORY	5 cr.

Studio Concentration **11**

Select a minimum of 11 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 11 credit concentration)

Photography: 140, 141, 142, 145, 146

Ceramics: 180, 181, 182

Drawing/Painting: 104, 105, 203, 204, 257, 258, 259, 260, 261, 262

Electives **7 cr.**

Select an additional 7 credits from AA distribution list of general 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:

- 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.
- Synthesize design skills, contextual awareness, technique and craftsmanship to create innovative, coherent works.
- Analyze and interpret quantitative information presented verbally, graphically, numerically, and/or symbolically. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Evaluate claims about the natural world using scientific methodology. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Analyze patterns of power, privilege, and inequity in the United States. (GE)
- Obtain, evaluate, and ethically use information. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Apply communication theory to demonstrate effective oral communication skills.(GE)

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. The AA-DTA is a statewide agreement between the Washington State community and technical colleges and Washington State public universities as well as some private colleges and universities. The agreement outlines transferability of coursework and standing; in most cases students who have completed an AA-DTA will also have satisfied general education requirements at the baccalaureate institution and will have junior standing. Students should review their baccalaureate institution to see if they are part of the DTA in Washington State.

AA - DTA Degree Options:

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.

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 ‚ÄòD' or above shall normally be accepted in transfer (except at The Evergreen State College, where a minimum of 2.0 or ‚ÄòC' 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.

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 - General Transfer (AA)

General Education Requirements

Communication Skills (10 credits required)

ENGL&101	ENGLISH COMPOSITION I	5 cr.

and

ENGL&102	ENGLISH COMPOSITION II	5 cr.
or ENGL&235	TECHNICAL WRITING	5 cr.
or ENGL 109	WRITING ABOUT THE SCIENCES	5 cr.
or ENGL 110	COMPOSITION FOR LITERATURE	5 cr.

or

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 BUS 211	BUSINESS COMMUNICATIONS	3 cr.
and CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or CMST&220	PUBLIC SPEAKING	5 cr.
or CMST&230	SMALL GROUP COMMUNICATION	5 cr.

Quantitative Skills/Symbolic Reasoning Skills (5 credits required)*

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&146	INTRODUCTION TO STATISTICS	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.

Health & Physical Education (3 credits required) **3 cr.**

Option One

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 108	HAPPINESS 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.
HLTH 212	CANNABIS AND YOUR HEALTH	2 cr.

and PE activity

Option Two

HPE 258	FITNESS-WELLNESS	3 cr.
or HPE 266	MIND BODY HEALTH	3 cr.

Oral Communication (5 credits required)

CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or CMST&220	PUBLIC SPEAKING	5 cr.
or CMST&230	SMALL GROUP COMMUNICATION	5 cr.

Additional Requirements

COLL 101	COLLEGE ESSENTIALS: INTRODUCTION TO CLARK	2 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

**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.*

**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.*

**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.*

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, evaluate, and ethically use information. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Analyze and interpret quantitative information presented verbally, graphically, numerically, and/or symbolically. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Analyze patterns of power, privilege, and inequity in the United States. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Apply communication theory to demonstrate effective oral communication skills. (GE)

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

Associate in Science Transfer - Track 1 (AST1)

General Education Requirements

Communication Skills (10 credits required)

ENGL&101	ENGLISH COMPOSITION I	5 cr.
or		
College-level Composition Course		5 cr.

Quantitative Skills

MATH&151	CALCULUS I	5 cr.

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.

MATH&152	CALCULUS II	5 cr.
or		
Math courses that have MATH&152 as a prerequisite		

Health & Physical Education (3 credits required)

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	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 108	HAPPINESS 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.
or		
HLTH 212	CANNABIS AND YOUR HEALTH	2 cr.
and		
PE activity	1	
Option two:		
HPE 258	FITNESS-WELLNESS	3 cr.

or

HPE 266	MIND BODY HEALTH	3 cr.

Humanties [HA] [HB] and Social Sciences [SS] course(s) **15 cr.**

Humanities [HA] Course	5 cr.
Social Science [SS] Course	5 cr.
Additional Humanities [HA] or [HB] or Social Science[SS] course	5 cr.

Pre-major Program Requirements - 46 to 52 credits MUST consult with faculty or advising to pick the correct sequences.

General Chemistry Sequence - 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.

Biology Sequence - 15 credits

BIOL&221	MAJORS ECOLOGY/EVOLUTION	5 cr.
BIOL&222	MAJORS CELL/MOLECULAR	5 cr.
BIOL&223	MAJORS ORGANISMAL PHYS	5 cr.

or

Physics Sequence - 15 credits

100 level:

PHYS&124	GENERAL PHYSICS LAB I	1 cr.
PHYS&125	GENERAL PHYSICS LAB II	1 cr.
PHYS&126	GENERAL PHYSICS LAB III	1 cr.
PHYS&134	GENERAL PHYSICS I	4 cr.
PHYS&135	GENERAL PHYSICS II	4 cr.
PHYS&136	GENERAL PHYSICS III	4 cr.

or

200 level:

PHYS&231	ENGINEERING PHYSICS LAB I	1 cr.
PHYS&232	ENGINEERING PHYSICS LAB II	1 cr.
PHYS&233	ENGINEERING PHYSICS LAB III	1 cr.
PHYS&241	ENGINEERING PHYSICS I	4 cr.
PHYS&242	ENGINEERING PHYSICS II	4 cr.
PHYS&243	ENGINEERING PHYSICS III	4 cr.

Additional mathematics course(s) - 5 or 6 credits*

MATH&153	CALCULUS III	5 cr.

or

MATH&146	INTRODUCTION TO STATISTICS	5 cr.

Additional requirements for intended major - 10 to 15 credits**

BIOL 101	ENVIRONMENTAL BIOLOGY	5 cr.

BIOL 105	SMALL WORLD ANTIBIOTICS RESEARCH 1	5 cr.
BIOL 139	INTRODUCTION TO WILDLIFE	3 cr.
BIOL 140	MAMMALS OF THE NORTHWEST	3 cr.
BIOL 141	BIRDS OF THE PACIFIC NORTHWEST	3 cr.
BIOL 142	FRESHWATER FISHES OF THE PACIFIC NORTHWEST	3 cr.
BIOL 143	INTRODUCTION TO FORESTRY	3 cr.
BIOL 145	REPTILES & AMPHIBIANS OF THE PACIFIC NW	3 cr.
BIOL 167	HUMAN GENETICS	3 cr.
BIOL 168	HUMAN GENETICS LABORATORY	2 cr.
BIOL 208	FIELD STUDIES IN BIOLOGY	1-10 cr.
BIOL&221	MAJORS ECOLOGY/EVOLUTION	5 cr.
BIOL&222	MAJORS CELL/MOLECULAR	5 cr.
BIOL&223	MAJORS ORGANISMAL PHYS	5 cr.
BIOL 224	FLOWERING PLANTS OF THE PACIFIC NORTHWEST	5 cr.
BIOL&241	HUMAN ANATOMY AND PHYSIOLOGY I	5 cr.
BIOL&242	HUMAN ANATOMY AND PHYSIOLOGY II	5 cr.
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&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.
ENVS 218	FIELD STUDIES IN ENVIRONMENTAL SCIENCE	1-7 cr.
ENVS 221	ENVIRONMENTAL SCIENCE: PROBLEM SOLVING	5 cr.
GEOL 102	INTRO TO GEOL II: EARTH'S SURFACE PROCESSES	5 cr.
GEOL 218	FIELD STUDIES IN GEOLOGY	1-6 cr.
GEOL&101	INTRO PHYSICAL GEOLOGY	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.
PHYS&124	GENERAL PHYSICS LAB I	1 cr.
PHYS&125	GENERAL PHYSICS LAB II	1 cr.
PHYS&126	GENERAL PHYSICS LAB III	1 cr.
PHYS&134	GENERAL PHYSICS I	4 cr.
PHYS&135	GENERAL PHYSICS II	4 cr.
PHYS&136	GENERAL PHYSICS III	4 cr.
PHYS&231	ENGINEERING PHYSICS LAB I	1 cr.

PHYS&232	ENGINEERING PHYSICS LAB II	1 cr.
PHYS&233	ENGINEERING PHYSICS LAB III	1 cr.
PHYS&241	ENGINEERING PHYSICS I	4 cr.
PHYS&242	ENGINEERING PHYSICS II	4 cr.
PHYS&243	ENGINEERING PHYSICS III	4 cr.

Remaining Credits - 10 to 15 credits Sufficient additional college-level credits so that the total credits earned are at least 90 term credits. these remaining credits may include prerequisites for major courses, additional major coursework, or specific general education or other university requirements as approved by the advisor. A maximum of five (5) General Elective (GE) credits will apply.

Total Required Credits: 90

**Check with chosen 4-year school*

***Preferably a 3-quarter sequence; check with chosen 4-year school regarding course selection to better prepare for major*

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 scientific methodologies to develop and answer questions about the natural world.
- Demonstrate understanding of the derivative as an instantaneous rate of change and the definite integral as a limit of a sum.
- Analyze and solve multi-step problems using techniques through single-variable calculus.
- Acquire scientific information from appropriate sources to analyze issues, claims or situations.
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Obtain, evaluate, and ethically use information. (GE)
- Analyze patterns of power, privilege, and inequity in the United States. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Apply communication theory to demonstrate effective oral communication skills.(GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)

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

Associate in Science - Track 2 (AST2)

General Education Requirements

Communication Skills

ENGL&101	ENGLISH COMPOSITION I	5 cr.

Quantitative Skills/Symbolic Reasoning Skills

MATH&151	CALCULUS I	5 cr.

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.

and

MATH&152	CALCULUS II	5 cr.

or

Any Math courses that have MATH& 152 as a prerequisite	10 cr.

Health & Physical Education (3 credits required)

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	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.
or		
HLTH 212	CANNABIS AND YOUR HEALTH	2 cr.
PE activity		1 cr.

Option two:

HPE 258	FITNESS-WELLNESS	3 cr.
or		
HPE 266	MIND BODY HEALTH	3 cr.

Humanities & Social Sciences (15 credits required)

Humanities		5 cr.
Social Sciences		5 cr.
Additional Humanties [HA] or [HB] or Social Sciences [SS] course(s)		5 cr.

A maximum of five (5) credits of Humanities B (HB) coursework may be applied.

Additional Math Courses 5 or 6 credits

MATH&153	CALCULUS III	5 cr.
or		
MATH&146	INTRODUCTION TO STATISTICS	5 cr.

Pre-major Program Requirements - 25 creditsAll 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

CHEM&141	GENERAL CHEMISTRY I	4 cr.
CHEM&151	GENERAL CHEMISTRY LABORATORY I	1 cr.
PHYS&231	ENGINEERING PHYSICS LAB I	1 cr.
PHYS&232	ENGINEERING PHYSICS LAB II	1 cr.
PHYS&233	ENGINEERING PHYSICS LAB III	1 cr.
PHYS&241	ENGINEERING PHYSICS I	4 cr.
PHYS&242	ENGINEERING PHYSICS II	4 cr.
PHYS&243	ENGINEERING PHYSICS III	4 cr.

Non-engineering Major One of the Physics sequences ,Äî Consult with the baccalaureate institution to see which sequence is required ,Äî 15 credits

PHYS&124	GENERAL PHYSICS LAB I	1 cr.
and		
PHYS&125	GENERAL PHYSICS LAB II	1 cr.
and		
PHYS&126	GENERAL PHYSICS LAB III	1 cr.
and		
PHYS&134	GENERAL PHYSICS I	4 cr.
and		
PHYS&135	GENERAL PHYSICS II	4 cr.
and		
PHYS&136	GENERAL PHYSICS III	4 cr.
or		
PHYS&231	ENGINEERING PHYSICS LAB I	1 cr.
and		
PHYS&232	ENGINEERING PHYSICS LAB II	1 cr.
and		
PHYS&233	ENGINEERING PHYSICS LAB III	1 cr.
and		

PHYS&241	ENGINEERING PHYSICS I	4 cr.
and		
PHYS&242	ENGINEERING PHYSICS II	4 cr.
and		
PHYS&243	ENGINEERING PHYSICS III	4 cr.
CHEM&141	GENERAL CHEMISTRY I	4 cr.
CHEM&151	GENERAL CHEMISTRY LABORATORY I	1 cr.
Non-engineering additional MATH courses		
MATH&153	CALCULUS III	5 cr.

Elective Requirements - 32 credits

Engineering Major

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.
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.
CSE 101	ENGINEERING AND COMPUTER SCIENCE ORIENTATION	1 cr.
CSE 120	INTRO TO ELECTRICAL/COMPUTING	5 cr.
CSE 121	INTRODUCTION TO C	5 cr.
CSE 215	DISCRETE STRUCTURES	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.
CSE 290	SPECIAL PROJECTS	1-5 cr.
CS& 131	COMPUTER SCIENCE I C++	5 cr.
CS& 141	COMPUTER SCIENCE I JAVA	5 cr.
ENGR&104	INTRODUCTION TO DESIGN	5 cr.
ENGR&215	DYNAMICS	5 cr.
ENGR&224	THERMODYNAMICS	5 cr.
ENGR&225	MECHANICS OF MATERIALS	5 cr.
ENGR 101	ENGINEERING AND COMPUTER SCIENCE ORIENTATION	1 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 150	BASIC SOLIDWORKS	4 cr.
ENGR 208	FUNDAMENTALS OF FLIGHT	3 cr.
ENGR 221	MATERIALS SCIENCE	5 cr.
ENGR 239	MANUFACTURING PROCESSES	5 cr.
ENGR 240	APPLIED NUMERICAL METHODS FOR ENGINEERS	4 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.
MATH&254	CALCULUS IV	5 cr.
MATH 215	LINEAR ALGEBRA	5 cr.
MATH 221	DIFFERENTIAL EQUATIONS	5 cr.

Non-engineering Major

BIOL&100	SURVEY OF BIOLOGY	5 cr.
BIOL&221	MAJORS ECOLOGY/EVOLUTION	5 cr.
BIOL&222	MAJORS CELL/MOLECULAR	5 cr.
BIOL&223	MAJORS ORGANISMAL PHYS	5 cr.
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.
BIOL 101	ENVIRONMENTAL BIOLOGY	5 cr.
BIOL 164	HUMAN BIOLOGY	4 cr.
BIOL 165	HUMAN BIOLOGY LAB	1 cr.
BIOL 167	HUMAN GENETICS	3 cr.
BIOL 168	HUMAN GENETICS LABORATORY	2 cr.
BIOL 208	FIELD STUDIES IN BIOLOGY	1-10 cr.
BIOL 224	FLOWERING PLANTS OF THE PACIFIC NORTHWEST	5 cr.
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.
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.
CSE 120	INTRO TO ELECTRICAL/COMPUTING	5 cr.
CSE 121	INTRODUCTION TO C	5 cr.

CSE 215	DISCRETE STRUCTURES	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.
CSE 290	SPECIAL PROJECTS	1-5 cr.
CS& 131	COMPUTER SCIENCE I C++	5 cr.
CS& 141	COMPUTER SCIENCE I JAVA	5 cr.
ENGR&104	INTRODUCTION TO DESIGN	5 cr.
ENGR&215	DYNAMICS	5 cr.
ENGR&224	THERMODYNAMICS	5 cr.
ENGR&225	MECHANICS OF MATERIALS	5 cr.
ENGR 101	ENGINEERING AND COMPUTER SCIENCE ORIENTATION	1 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 150	BASIC SOLIDWORKS	4 cr.
ENGR 221	MATERIALS SCIENCE	5 cr.
ENGR 239	MANUFACTURING PROCESSES	5 cr.
ENGR 240	APPLIED NUMERICAL METHODS FOR ENGINEERS	4 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.
ENVS&101	INTRODUCTION TO ENVIRONMENTAL SCIENCE	5 cr.
ENVS 109	INTEGRATED ENVIRONMENTAL SCIENCE	5 cr.
ENVS 218	FIELD STUDIES IN ENVIRONMENTAL SCIENCE	1-7 cr.
ENVS 221	ENVIRONMENTAL SCIENCE: PROBLEM SOLVING	5 cr.
MATH&153	CALCULUS III	5 cr.
MATH&254	CALCULUS IV	5 cr.
MATH 103	COLLEGE TRIGONOMETRY	5 cr.
MATH 111	COLLEGE ALGEBRA	5 cr.
MATH 215	LINEAR ALGEBRA	5 cr.
MATH 221	DIFFERENTIAL EQUATIONS	5 cr.
PHYS&231	ENGINEERING PHYSICS LAB I	1 cr.
PHYS&232	ENGINEERING PHYSICS LAB II	1 cr.
PHYS&233	ENGINEERING PHYSICS LAB III	1 cr.
PHYS&241	ENGINEERING PHYSICS I	4 cr.

PHYS&242	ENGINEERING PHYSICS II	4 cr.
PHYS&243	ENGINEERING PHYSICS III	4 cr.

Total Required Credits: 90

**Check with chosen 4-year school*

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 an instantaneous rate of change and the definite integral as a limit of a sum.
- 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.
- Demonstrate progress toward healthier behaviors. (GE)
- Obtain, evaluate, and ethically use information. (GE)
- 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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Analyze patterns of power, privilege, and inequity in the United States. (GE)
- Analyze and interpret quantitative information presented verbally, graphically, numerically, and/or symbolically. (GE)
- Apply communication theory to demonstrate effective oral communication skills.(GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)

Automotive Technology

Clark College has two automotive program offerings:

- Toyota T-TEN
- HiTECC (Dealer Ready)

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 term; the format is a two-year program of a term of instruction on campus followed by a term of on-the-job learning. This means that for the two years that they are in the program, students alternate one term of full-time classroom and lab practice with one term as a full-time dealership apprentice.

HiTECC (Dealer Ready)

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.

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 the Automotive Technology programs, contact Michaela Loveridge, Student Recruitment and Retention Specialist, 360-992-2551 or mloveridge@clark.edu.

T-TEN Automotive (CP)

General Education Requirements

Communication Skills (3 credits required)

BTEC 106	APPLIED OFFICE ENGLISH (recommended)	3 cr.

Computational Skills (3 credits required)

Human Relations (3 credits required)

Major Area Requirements

AUTO 250	TOYOTA CLIMATE CONTROL	8 cr.
AUTO 150	INTRODUCTION TO TOYOTA	5 cr.
AUTO 151	TOYOTA ELECTRICAL I	8 cr.
AUTO 152	TOYOTA ELECTRICAL II	8 cr.
AUTO 153	TOYOTA BRAKES	8 cr.
AUTO 154	TOYOTA INTERNSHIP I	8 cr.
AUTO 155	TOYOTA STEERING AND SUSPENSION	8 cr.
AUTO 156	TOYOTA ENGINE PERFORMANCE I	8 cr.
AUTO 157	TOYOTA ENGINE PERFORMANCE II	8 cr.
AUTO 251	TOYOTA INTERNSHIP II	8 cr.
AUTO 252	TOYOTA ENGINE MECHANICAL	8 cr.
AUTO 253	TOYOTA MANUAL TRANSMISSION	8 cr.
AUTO 254	AUTOMATIC TRANSMISSIONS	8 cr.
AUTO 255	TOYOTA INTERNSHIP III	8 cr.

Total Required Credits: 118

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/712A/Gedt.html

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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)

T-TEN Automotive (AAT)

General Education Requirements

Communication Skills (5 credits required)

ENGL&101	ENGLISH COMPOSITION I (recommended)	5 cr.

Computational Skills (5 credits required)

College-Level Math Required

MATH 103	COLLEGE TRIGONOMETRY (recommended)	5 cr.
or MATH&107	MATH IN SOCIETY (recommended)	5 cr.

Human Relations (5 credits required)

SOC& 101	INTRO TO SOCIOLOGY (recommended)	5 cr.

Major Area Requirements

AUTO 150	INTRODUCTION TO TOYOTA	5 cr.
AUTO 151	TOYOTA ELECTRICAL I	8 cr.
AUTO 152	TOYOTA ELECTRICAL II	8 cr.
AUTO 153	TOYOTA BRAKES	8 cr.
AUTO 154	TOYOTA INTERNSHIP I	8 cr.
AUTO 155	TOYOTA STEERING AND SUSPENSION	8 cr.
AUTO 156	TOYOTA ENGINE PERFORMANCE I	8 cr.
AUTO 157	TOYOTA ENGINE PERFORMANCE II	8 cr.
AUTO 250	TOYOTA CLIMATE CONTROL	8 cr.
AUTO 251	TOYOTA INTERNSHIP II	8 cr.
AUTO 252	TOYOTA ENGINE MECHANICAL	8 cr.
AUTO 253	TOYOTA MANUAL TRANSMISSION	8 cr.
AUTO 254	AUTOMATIC TRANSMISSIONS	8 cr.
AUTO 255	TOYOTA INTERNSHIP III	8 cr.

Total Required Credits: 124

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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)

HiTECC Automotive Technology (CP)

General Education Requirements

Communication Skills (3 credits required)		**3 cr.**
BTEC 106	APPLIED OFFICE ENGLISH (recommended)	3 cr.
Computational Skills (3 credits required)		**3 cr.**
Human Relations (3 credits required)		**3 cr.**

Major Area Requirements

AUTO 160	INTRODUCTION TO DEALERSHIP OPERATIONS	5 cr.
AUTO 161	ELECTRICAL I	8 cr.
AUTO 162	ELECTRICAL II	8 cr.
AUTO 163	BRAKES	8 cr.
AUTO 164	INTERNSHIP I	8 cr.
AUTO 165	STEERING AND SUSPENSION	8 cr.
AUTO 166	ENGINE PERFORMANCE I	8 cr.
AUTO 167	ENGINE PERFORMANCE II	8 cr.
AUTO 260	CLIMATE CONTROL	8 cr.
AUTO 261	INTERNSHIP II	8 cr.
AUTO 262	ENGINE MECHANICAL	8 cr.
AUTO 263	MANUAL TRANSMISSION	8 cr.
AUTO 264	AUTOMATIC TRANSMISSIONS	8 cr.
AUTO 265	INTERNSHIP III	8 cr.

Total Required Credits: 118

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/712D/Gedt.html

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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate interpersonal/human relations skills. (GE)

HiTECC Automotive Technology (AAT)

General Education Requirements

Communication Skills (5 credits required)		**5 cr.**
ENGL&101	ENGLISH COMPOSITION I (recommended)	5 cr.

Computational Skills (5 credits required)		**5 cr.**
Human Relations (5 credits required)		
SOC& 101	INTRO TO SOCIOLOGY (recommended)	5 cr.

Major Area Requirements

AUTO 160	INTRODUCTION TO DEALERSHIP OPERATIONS	5 cr.
AUTO 161	ELECTRICAL I	8 cr.
AUTO 162	ELECTRICAL II	8 cr.
AUTO 163	BRAKES	8 cr.
AUTO 164	INTERNSHIP I	8 cr.
AUTO 165	STEERING AND SUSPENSION	8 cr.
AUTO 166	ENGINE PERFORMANCE I	8 cr.
AUTO 167	ENGINE PERFORMANCE II	8 cr.
AUTO 260	CLIMATE CONTROL	8 cr.
AUTO 261	INTERNSHIP II	8 cr.
AUTO 262	ENGINE MECHANICAL	8 cr.
AUTO 263	MANUAL TRANSMISSION	8 cr.
AUTO 264	AUTOMATIC TRANSMISSIONS	8 cr.
AUTO 265	INTERNSHIP III	8 cr.

Total Required Credits: 124

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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate interpersonal/human relations skills. (GE)

Bioengineering and Chemical Engineering

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.

Bioengineering and Chemical Pre-Engineering (AST2)

Distribution Requirements

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.

Communication Skills		**5 cr.**
Clark Equivalent:		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
Mathematics		**10 cr.**
MRP Requirements: Calculus I, II, III - 15 credits		
Differential Equations - 5 credits		
Clark College Equivalents:		
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.		
MATH&151	CALCULUS I	5 cr.
MATH&152	CALCULUS II	5 cr.
MATH&153	CALCULUS III	5 cr.
MATH 221	DIFFERENTIAL EQUATIONS	5 cr.
Physics		**15 cr.**
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&241	ENGINEERING PHYSICS I (requires concurrent enrollment in PHYS094)	4 cr.
and		
PHYS&231	ENGINEERING PHYSICS LAB I	1 cr.
PHYS&242	ENGINEERING PHYSICS II (requires concurrent enrollment in PHYS095)	4 cr.
and		
PHYS&231	ENGINEERING PHYSICS LAB I	1 cr.
PHYS&243	ENGINEERING PHYSICS III (requires concurrent enrollment in PHYS096)	4 cr.
and		

PHYS&233	ENGINEERING PHYSICS LAB III	1 cr.

Chemistry with Lab

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 Equivalents:

CHEM&141	GENERAL CHEMISTRY I	4 cr.
and		
CHEM&151	GENERAL CHEMISTRY LABORATORY I	1 cr.
CHEM&142	GENERAL CHEMISTRY II	4 cr.
and		
CHEM&152	GENERAL CHEMISTRY LABORATORY II	1 cr.
CHEM&143	GENERAL CHEMISTRY III	4 cr.
and		
CHEM&153	GENERAL CHEMISTRY LABORATORY III	2 cr.
CHEM&241	ORGANIC CHEMISTRY I	4 cr.
and		
CHEM&251	ORGANIC CHEMISTRY LABORATORY I	1 cr.
CHEM&242	ORGANIC CHEMISTRY II	4 cr.
and		
CHEM&252	ORGANIC CHEMISTRY LABORATORY II	1 cr.
or		
BIOL&221	MAJORS ECOLOGY/EVOLUTION	5 cr.

Humanities/Fine Arts/English and Social Science **15 cr.**

Humanities **5 cr.**

Social Science **5 cr.**

ECON&201	MICRO ECONOMICS (recommended)	5 cr.
or		
ECON&202	MACRO ECONOMICS	5 cr.

Additional Humanities or Social Science

PHIL&120	SYMBOLIC LOGIC (recommended)	5 cr.

Electives

Generic Requirements: The remaining term 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 Required Credits: 90-103

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:

- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Analyze and solve multi-step problems using techniques through single-variable calculus.
- Apply scientific and technological knowledge and methodologies to creatively solve technological or scientific problems.
- Demonstrate understanding of the derivative as an instantaneous rate of change and the definite integral as a limit of a sum.
- 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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Obtain, evaluate, and ethically use information. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Apply communication theory to demonstrate effective oral communication skills.(GE)
- Analyze and interpret quantitative information presented verbally, graphically, numerically, and/or symbolically. (GE)
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Analyze patterns of power, privilege, and inequity in the United States. (GE)

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.

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

Communication Skills (5 credits required)

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 Sciences (15 credits required)

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	INFERENTIAL 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:

- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Analyze patterns of power, privilege, and inequality.
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Acquire scientific information from appropriate sources to analyze issues, claims or situations.
- Apply scientific methodologies to develop and answer questions about the natural world.
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Obtain, evaluate, and ethically use information. (GE)
- Analyze and interpret quantitative information presented verbally, graphically, numerically, and/or symbolically. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Apply communication theory to demonstrate effective oral communication skills. (GE)

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.

Generic DTA Requirement

A. Basic Requirements

1. Communications Skills	10 cr.
Select Communication Skills [C] courses as identified and approved in the General AA DTA; may be individualized based on transfer intent.	
2. Quantitative/Symbolic Reasoning Requirement	5 cr.
Intermediate algebra proficiency is required.	

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 [HB] classes are allowed.	
2. Social Sciences	15 cr.
Select coursework from at least two (2) areas of discipline; no more than 10 credits per discipline area.	
3. Natural Sciences (minimum of 15 cr.)	15 cr.

MRP Requirements

A. Basic Requirements

1. English Composition	10 cr.

Select Communication Skills [C] courses as identified and approved in the General AA DTA; may be individualized based on transfer intent.

2. Mathematics or Statistics		5 cr.
Calculus I		

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 [HB] classes are allowed.		
2. Social Sciences		15 cr.
Select coursework from at least two (2) areas of discipline; no more than 10 credits per discipline area.		
3. 30 term credits, including:		30
a. General Chemistry Sequence - 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.
b. Biology Sequence - 15 credits		
BIOL&221	MAJORS ECOLOGY/EVOLUTION	5 cr.
BIOL&222	MAJORS CELL/MOLECULAR	5 cr.
BIOL&223	MAJORS ORGANISMAL PHYS	5 cr.

C. Electives

1. 13-15 additional term credits		13 - 15 cr.
Students should consult with their advisor and/or intended transfer institution to select appropriate electives to reach the 90 credit minimum credits needed for degree completion.		

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&151	CALCULUS I	5 cr.
or		
MATH&146	INTRODUCTION TO STATISTICS *	5 cr.
or		
MATH&148	BUSINESS CALCULUS	5 cr.
or		
MATH 140	CALCULUS FOR LIFE SCIENCES	6 cr.

B. Distribution Requirements

1. Humanities		15 cr.

2. Social Sciences		15 cr.
3. Natural Sciences		
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.

C. Electives

1. 14 additional term credits (note: Clark's chemistry sequence has 16 credits) 14

*check with transfer institution to see if MATH 147 will also be necessary.

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.

** Check with transfer institution to see if MATH 147 will also be necessary*

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:

- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Analyze patterns of power, privilege, and inequality.

- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Acquire scientific information from appropriate sources to analyze issues, claims or situations.
- Apply scientific methodologies to develop and answer questions about the natural world.
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Obtain, evaluate, and ethically use information. (GE)
- Analyze and interpret quantitative information presented verbally, graphically, numerically, and/or symbolically. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Apply communication theory to demonstrate effective oral communication skills. (GE)

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)

This program is designed for the student who wishes to complete a general, broad-based program. This degree requires a balanced core of business courses to introduce professional careers in business, with additional courses that can be structured to meet a student's individual needs. This program enables a student to acquire skills for entry-level positions in both the profit and non-profit sectors.

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.

Completion of Certificate of Proficiency in Marketing, Small Business Management, Accounting Clerk or Supervisory Management accounts for 56-60 of necessary credits.

General Education Requirements

Communication Skills (5 credits required)

CMST&220	PUBLIC SPEAKING	5 cr.
or CMST&230	SMALL GROUP COMMUNICATION	5 cr.

Health & Physical Education (3 credits required)

Natural Sciences (3 credits required)

Humanities (3 credits required)

Computational Skills- satisfied in the CPs.

Human Relations - satisfied in the CPs.

Social Sciences - satisfied in the CPs.

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 ElectivesComplete 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:

- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- 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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Demonstrate customer skills (internal and external) to establish a customer-centered business organization.
- Identify and demonstrate professional traits and behaviors that apply to job performance in real-world environments.
- Use micro- and macroeconomic concepts to analyze domestic and global business situations.

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:

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

Generic DTA Requirements

A. Basic Requirements

1. Communications Skills	10 cr.
2. Quantitative/Symbolic Reasoning Requirement	5 cr.
Intermediate algebra proficiency is required.	

B. Distribution Requirements

1. Humanities	15 cr.
2. Social Sciences	15 cr.
3. Natural Sciences	0

C. Major Requirements

1. Business courses

D. Electives

1. Elective courses

MRP Requirements

A. Basic Requirements

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
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 term 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	INFERENTIAL STATISTICS *	3 cr.

or MATH 204	INFERENTIAL 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.

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.

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.

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 in U.S. business law.

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:

- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Analyze patterns of power, privilege, and inequity in the United States. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Obtain, evaluate, and ethically use information. (GE)
- Evaluate claims about the natural world using scientific methodology. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Analyze and interpret quantitative information presented verbally, graphically, numerically, and/or symbolically. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Apply communication theory to demonstrate effective oral communication skills. (GE)

Business Technology 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.

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.

Students will be required to work part-time in an office during their last term.

Students must maintain a cumulative grade point average of 2.00 to receive this certificate.

General Education Requirements

Communication Skills

BTEC 107	BUSINESS ENGLISH	5 cr.

Computational Skills

BUS 102	BUSINESS MATH APPLICATIONS	5 cr.

Human Relations

BTEC 148	BUSINESS PROFESSIONAL SELF DEVELOPMENT	3 cr.

BTEC Core Requirements

BTEC 101	BEGINNING KEYBOARDING	1-3 cr.
or		
BTEC 103	REFRESHER KEYBOARDING	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.

Additional Major Area Requirements

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 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 207	INTRODUCTION TO SHAREPOINT	3 cr.
CTEC 101	COMPUTING ESSENTIALS	2 cr.
CTEC 130	MICROSOFT MTA WINDOWS OS FUNDAMENTALS	3 cr.

Total Required Credits: 54

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/517A/Gedt.html

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.
- 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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Use common office software to solve problems and present the results in a 'business ready' manner.

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 provides skills in a variety of computer software including Internet, as well as a basic knowledge of business.

General Education Requirements

Communication Skills (5 credits required)

BTEC 107	BUSINESS ENGLISH	5 cr.

Computational Skills (5 credits required)

BUS 102	BUSINESS MATH APPLICATIONS	5 cr.

Human Relations (5 credits required)

CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or CMST&230	SMALL GROUP COMMUNICATION	5 cr.

BTEC Core Requirements

BTEC 101	BEGINNING KEYBOARDING	1-3 cr.
or		
BTEC 103	REFRESHER KEYBOARDING	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 169	INTRODUCTION TO EXCEL	3 cr.
BTEC 114	INTRODUCTION TO OUTLOOK	1 cr.

Additional Major Area Requirements (from Cert. of Proficiency)

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 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 207	INTRODUCTION TO SHAREPOINT	3 cr.
CTEC 101	COMPUTING ESSENTIALS	2 cr.
CTEC 130	MICROSOFT MTA WINDOWS OS FUNDAMENTALS	3 cr.

Additional Major Area Requirements

BTEC 211	ADMINISTRATIVE PROCEDURES	5 cr.
BUS& 101	INTRODUCTION TO BUSINESS	5 cr.
CTEC 105	INTRODUCTION TO THE INTERNET	3 cr.
CTEC 131	MICROSOFT MTA NETWORKING FUNDAMENTALS	3 cr.
CTEC 106	INFORMATION TECHNOLOGY FUNDAMENTALS	5 cr.

Electives (minimum of 15 credits of the following)

BUS 211	BUSINESS COMMUNICATIONS	3 cr.
CTEC 103	INTRODUCTION TO MAC/OS	3 cr.
CTEC 110	COMMAND LINE ESSENTIALS FOR WINDOWS AND UNIX	3 cr.
CTEC 200	PC HELP DESK WORK EXPERIENCE	1-5 cr.
ECON 101	INTRODUCTION TO ECONOMICS	3 cr.
CHEM&141	GENERAL CHEMISTRY I	4 cr.
and		
CHEM&151	GENERAL CHEMISTRY LABORATORY I	1 cr.
CMST 216	INTERCULTURAL COMMUNICATION	5 cr.
HIST&146	UNITED STATES HISTORY I	5 cr.
MATH 103	COLLEGE TRIGONOMETRY	5 cr.
or		
MATH&107	MATH IN SOCIETY	5 cr.
PHIL&117	TRADITIONAL LOGIC	5 cr.
or		
PHIL&120	SYMBOLIC LOGIC	5 cr.
PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.

Total Required Credits: 90

***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:

- Demonstrate progress toward healthier behaviors. (GE)
- 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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)

Business/Applied Management

The Bachelor of Applied Science (BAS) in Applied Management is a two-year, 90-credit program that combines technical and academic courses. This degree is designed for professional and technical education (PTE) students, to qualify them for the program with a junior standing, after completing an associate degree. The BAS in Applied Management program combines 300-and 400-level general education and managerial courses, to prepare

technically skilled students to enter their respective career fields with a bachelor's degree, allowing them to obtain managerial- level positions or to start their own businesses.

Application Process & Preliminary Requirements

Preliminary requirements must be satisfied to qualify to apply prior to program entry. Clark College reserves the right to determine admissions status. Please note: completion of the preliminary requirements does not guarantee entrance into the Bachelor of Applied Science in Applied Management Program.

To meet preliminary program entrance requirements, candidates must:

- Complete an associate degree or higher from an accredited domestic college or university, or international equivalent, with a minimum cumulative GPA of 2.0.
- Complete the following preliminary courses with a 2.0 grade point average or above:

1. Communication skills (5 credits required)

English Composition, 100 college-level or higher

2. Computer Literacy (3-5 credits required)

BTEC 149 or 150 or an equivalent computer literacy course

3. College-level Math (5 credits required)

Math &146 Introduction to Statistics or equivalent math course(s)

4. A minimum of 30 credits of general education requirements, with a minimum of 5 credits in each of the following areas: communication studies, quantitative skills, humanities, social science, and natural science

Submit 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. If you earned your degree or all your credits from Clark College, you do not need to include a transcript.

Apply to the program by completing the Clark College application packet for BAS in Applied Management. Submit the packet to the Clark College Enrollment Services in Gaiser Hall before the enrollment deadline, along with the non-refundable program application fee.

Upon completion of the preliminary requirements, all qualified applicants will be notified in writing of final acceptance into the program. The payment of a non-refundable deposit will reserve a position for the program's next entry date. Students not selected for entry are welcome to reapply for the next cohort start date but are encouraged to seek advising before doing so. Students must formally comply with the published application and admission criteria for that year and cohort.

Selective criteria and current fee amounts are subject to change.

For complete, updated information, please visit the Applied Management (BAS) website at www.clark.edu/cc/BASAM.

Bachelor of Applied Science in Applied Management (BAS)

General Education Requirements

Communication Skills (5 credits required)

CMST 310	ORGANIZATIONAL COMMUNICATION	5 cr.

Human Relations (5 credits required)

PSYC 315	ORGANIZATIONAL BEHAVIOR	5 cr.

Social Sciences (5 credits required)

ECON 405	MANAGERIAL AND GLOBAL ECONOMICS	5 cr.

Humanities (5 credits required)

PHIL 420	ETHICS IN MANAGEMENT	5 cr.

Natural Science (5 credits required)

ENVS 430	SUSTAINABILITY & ENVIRONMENTAL PRACTICES	5 cr.

Major Area Requirements

BASAM301	FOUNDATIONS OF MANAGEMENT	5 cr.
BASAM305	SOCIAL MEDIA IN BUSINESS	5 cr.
BASAM320	BUSINESS RESEARCH APPLICATIONS	5 cr.
BASAM325	BUSINESS PRINCIPLES	5 cr.
BASAM330	ACCOUNTING PRINCIPLES FOR MANAGERS	5 cr.
BASAM335	LEGAL ISSUES IN MANAGEMENT	5 cr.
BASAM340	MARKETING FOR MANAGERS	5 cr.
BASAM400	HUMAN RESOURCE MANAGEMENT	5 cr.
BASAM410	PROJECT MANAGEMENT	5 cr.
BASAM415	FINANCIAL MANAGEMENT	5 cr.
BASAM425	OPERATIONS AND LOGISTICS	5 cr.
BASAM440	CAPSTONE: STRATEGIC MANAGEMENT & POLICY	5 cr.
BASAM450	APPLIED MANAGEMENT INTERNSHIP	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:

- Describe the complexities that affect successful trading in domestic and global markets, utilizing information, data, and technologies to support effective decision making.
- Recognize and apply effective communication strategies, appropriate to organizational settings.
- Analyze and apply managerial functions, roles, styles, and effective strategies for stability and change, to be used in various managerial and leadership situations.
- Analyze legal issues for risk management and responsible oversight.
- Interpret financial models for business decision-making to support organizational goals.
- Evaluate and develop organizational structures and operating procedures to foster continuous improvement, innovation, and quality results.
- Balance theoretical and practical strategies and policies for a productive, quality, and motivated workforce, including managing diversity, ethics, and social responsibility.
- Develop and apply a marketing strategy, based on an integrated marketing plan, to produce and distribute products at optimum operational levels.

Business/Supervisory 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.

Supervisory Management (CP)

The Supervisory Management Certificate presents concepts that help the student understand various management theories, management functions and their interrelationships, and the competitive strategies that a business needs to establish and maintain. The student will learn and apply the concepts of planning, organizing, leading, and controlling as well as other topics essential to the structure of this basic management certificate. Additionally, the student learns the essentials of human resource management, teamwork, consensus building, technology and information management, decision making, leading change, and the value of ethics and social responsibility.

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.

General Education Requirements

Communication Skills (3 credits required)

BTEC 106	APPLIED OFFICE ENGLISH	3 cr.

Computational Skills (5 credits required)

BUS 102	BUSINESS MATH APPLICATIONS	5 cr.

Human Relations (3 credits required)

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.
MGMT 103	APPLIED MANAGEMENT SKILLS	3 cr.
MGMT 110	CREATIVE PROBLEM SOLVING	3 cr.
MGMT 128	HUMAN RESOURCES MANAGEMENT	3 cr.
MGMT 199	COOPERATIVE WORK EXPERIENCE **	1-5 cr.
Additional Area Requirements Select a minimum of 9 credits from the Management courses		

Total Required Credits: 54

***Minimum of 5 credits must be earned in Cooperative Work Experience*

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/545A/Gedt.html

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 apply managerial techniques for decision making, problem solving, and managing change.
- Apply the understating of human resources issues and functions, identifying applicable laws.
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Effectively manage people and resources to meet organizational and institutional goals.

Supervisory Management (AAS)

The Supervisory Management Associate of Applied Science degree emphasizes the important role required of supervisory managers of getting work completed by leading, managing, and motivating people This comprehensive training program includes courses that deal with solutions to supervisory problems regularly encountered on the job. Current and potential supervisors learn and apply the basic principles of business management to increase and broaden their on-the-job performance levels and to advance into more responsible career 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.

Completion of Certificate of Proficiency in Marketing, Small Business Management, Accounting Clerk or Supervisory Management accounts for 56-60 of necessary credits

General Education Requirements

Communication Skills (5 credits required)

CMST&220	PUBLIC SPEAKING	5 cr.
or		
CMST&230	SMALL GROUP COMMUNICATION	5 cr.

Health and Physical Education (3 credits required) **3 cr.**

Humanities (3 credits required)

Natural Sciences (3 credits required) **3 cr.**

Computational Skills- satisfied in the CPs.

Human Relations- satisfied in the CPs.

Social Science- satisfied in the CPs.

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 a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Design a comprehensive management project with given criteria, using software.
- Describe the U.S. legal system and the legal environment of business by outlining the basic principles of law that apply to business transactions.
- Apply the understanding of human resource issues and functions, identifying applicable laws.
- Communicate effectively using business terminology in written and verbal language.
- Demonstrate progress toward healthier behaviors. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Effectively manage people and resources to meet organizational and institutional goals.
- Apply techniques to improve production and to decrease waste.

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.

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

Communication Skills (5 credits required)

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 Sciences (15 credits required)

CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or CMST&220	PUBLIC SPEAKING	5 cr.
or CMST&230	SMALL GROUP COMMUNICATION	5 cr.

Pre-Major Program 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.

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.
or Foreign 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:

- Apply scientific methodologies to develop and answer questions about the natural world.
- Demonstrate understanding of the derivative as an instantaneous rate of change and the definite integral as a limit of a sum.
- Analyze and solve multi-step problems using techniques through single-variable calculus.
- Acquire scientific information from appropriate sources to analyze issues, claims or situations.
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Obtain, evaluate, and ethically use information. (GE)
- Analyze patterns of power, privilege, and inequity in the United States. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Apply communication theory to demonstrate effective oral communication skills.(GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)

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 prepared 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.

Architectural Computer-Aided Drafting/Design (CP)

General Education Requirements

Communication Skills (3 credits required)

ENGL&235	TECHNICAL WRITING	5 cr.

Computational Skills (3 credits required)

MATH 103	COLLEGE TRIGONOMETRY	5 cr.

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 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	2 cr.

Total Required Credits: 54

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/783A/Gedt.html

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 interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- 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.
- Create and manipulate architectural drawings and models in a multitude of CADD applications (core CADD skills).
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)

Architectural Computer-Aided Drafting/Design (AAS)

General Education Requirements

Communication Skills (6 credits required)

ENGL&101	ENGLISH COMPOSITION I	5 cr.
ENGL&235	TECHNICAL WRITING	5 cr.

Health & Physical Education (3 credits required)

Computational Skills (3 credits required)

MATH 103	COLLEGE TRIGONOMETRY	5 cr.

Human Relations

HDEV 198	PORTFOLIO DEVELOPMENT	1 cr.
HDEV 200	PROFESSIONAL DEVELOPMENT	2 cr.

Social Sciences (3 credits required)

Humanities (3 credits required) **3 cr.**

Natural Sciences (3 credits required) **5 cr.**

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.

Additional 4 credits required using one of the following courses:

ART 115	TWO-DIMENSIONAL DESIGN	4 cr.
ART 117	THREE-DIMENSIONAL DESIGN	4 cr.
CGT 101	PHOTOSHOP RASTER GRAPHICS	4 cr.
CGT 102	ILLUSTRATOR VECTOR GRAPHICS	4 cr.
CGT 103	INDESIGN PAGE LAYOUT	4 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 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.
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)

Civil Computer-Aided Drafting/Design (CP)

General Education Requirements

Communication Skills (3 credits required)

ENGL&235	TECHNICAL WRITING	5 cr.

Computational Skills (3 credits required)

MATH 103	COLLEGE TRIGONOMETRY	5 cr.

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 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	2 cr.
(formerly ENGR 112, then ENGR&114)		
SURV 102	FUNDAMENTALS OF SURVEY	2 cr.

Total Required Credits: 56

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/798C/Gedt.html

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 and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Create and manipulate civil drawings and models in a multitude of CADD applications (core CADD 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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Fully annotate and print civil drawings (core drafting skills).

Civil Computer-Aided Drafting/Design (AAS)

General Education Requirements

Communication Skills (6 credits required)

ENGL&101	ENGLISH COMPOSITION I	5 cr.
ENGL&235	TECHNICAL WRITING	5 cr.

Health & Physical Education (3 credits required)

Computational Skills (3 credits required)

MATH 103	COLLEGE TRIGONOMETRY	5 cr.

Human Relations

HDEV 198	PORTFOLIO DEVELOPMENT	1 cr.
HDEV 200	PROFESSIONAL DEVELOPMENT	2 cr.

Humanities (3 credits required)

Social Sciences (3 credits required)

Natural Sciences (3 credits required) **5 cr.**

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 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 102	FUNDAMENTALS OF SURVEY	2 cr.
SURV 125	INTRODUCTION TO GIS	3 cr.
SURV 250	ARC GIS I	3 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 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.
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)

Mechanical Computer-Aided Drafting/Design (CP)

General Education Requirement

Communication Skills (3 credits required)

ENGL&235	TECHNICAL WRITING	5 cr.

Computational Skills (3 credits required)

MATH 103	COLLEGE TRIGONOMETRY	5 cr.

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 215	TECHNICAL STATICS & STRENGTHS	3 cr.
CADD 216	INTEGRATED COMPUTATIONAL DESIGN	3 cr.
CADD 240	MECHANICAL DRAFTING 2	3 cr.
ENGR 113	ENGINEERING SKETCHING AND VISUALIZATION	2 cr.
(formerly ENGR 112, then ENGR&114)		
ENGR 115	GEOMETRIC DIMENSIONING AND TOLERANCING	2 cr.

Total Required Credits: 57

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/782B/Gedt.html

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 interpersonal/human relations skills. (GE)
- 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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)

- Create and manipulate mechanical drawings and models in a multitude of CADD applications (core CADD skills).
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)

Mechanical Computer-Aided Drafting/Design (AAS)

General Education Requirements

Communication Skills (6 credits required)

ENGL&101	ENGLISH COMPOSITION I	5 cr.
ENGL&235	TECHNICAL WRITING	5 cr.

Health & Physical Education (3 credits required)

Computational Skills (3 credits required)

MATH 103	COLLEGE TRIGONOMETRY	5 cr.

Human Relations (3 credits required)

HDEV 198	PORTFOLIO DEVELOPMENT	1 cr.
HDEV 200	PROFESSIONAL DEVELOPMENT	2 cr.

Humanities (3 credits required)

Social Sciences (3 credits required)

Natural Sciences (3 credits required) **5 cr.**

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 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 215	TECHNICAL STATICS & STRENGTHS	3 cr.
CADD 216	INTEGRATED COMPUTATIONAL DESIGN	3 cr.
CADD 240	MECHANICAL DRAFTING 2	3 cr.
CADD 299	CADD CAPSTONE PRACTICUM	5 cr.
ENGR&104	INTRODUCTION TO DESIGN	5 cr.
ENGR 113	ENGINEERING SKETCHING AND VISUALIZATION	2 cr.
ENGR 115	GEOMETRIC DIMENSIONING AND TOLERANCING	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.
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)

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.

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.
or		
PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.

Computational Skills (3 credits required)

PTCS 110	PROFESSIONAL TECHNICAL COMPUTATIONAL SKILLS	5 cr.

Human Relations (3 credits required)

CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or CMST&230	SMALL GROUP COMMUNICATION	5 cr.
or		
BUS& 101	INTRODUCTION TO BUSINESS	5 cr.
or		
SOC& 101	INTRO TO SOCIOLOGY	5 cr.

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.
CGT 102	ILLUSTRATOR VECTOR GRAPHICS	4 cr.
CGT 103	INDESIGN PAGE LAYOUT	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 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: 73

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/731A/Gedt.html

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 and clearly explain an effective strategy to solve a quantitative problem. (GE)
- 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.
- 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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Implement tools and technology to realize visual ideas.

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)

PTCS 110	PROFESSIONAL TECHNICAL COMPUTATIONAL SKILLS	5 cr.

Human Relations (3 credits required)

CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or CMST&230	SMALL GROUP COMMUNICATION	5 cr.
or		
BUS& 101	INTRODUCTION TO BUSINESS	5 cr.
or		
SOC& 101	INTRO TO SOCIOLOGY	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.

Web Design

CTEC 122	HTML FUNDAMENTALS	4 cr.
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: 73

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/524B/Gedt.html

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.
- Use written, verbal and visual means to effectively present and communicate web design projects.
- Demonstrate work and business ethics in web design practice.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- 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.

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

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)

PTCS 110	PROFESSIONAL TECHNICAL COMPUTATIONAL SKILLS	5 cr.

Human Relations (5 credits required)

CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or CMST&230	SMALL GROUP COMMUNICATION	5 cr.
or		
BUS& 101	INTRODUCTION TO BUSINESS	5 cr.
or		
SOC& 101	INTRO TO SOCIOLOGY	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 (4 credits required)	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:

- 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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- 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.

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

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

Communication Skills (5 credits required)

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)(HA, HB, SS)

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 an instantaneous rate of change and the definite integral as a limit of a sum.
- 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.
- Demonstrate progress toward healthier behaviors. (GE)
- Obtain, evaluate, and ethically use information. (GE)
- 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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Analyze patterns of power, privilege, and inequity in the United States. (GE)
- Analyze and interpret quantitative information presented verbally, graphically, numerically, and/or symbolically. (GE)
- Apply communication theory to demonstrate effective oral communication skills.(GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)

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 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 an AAT degree in Web Development, which focuses on preparing students for careers that feature web programming skills.

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.

Computer Support Specialist (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

Communication Skills (3 credits required)

PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.
or ENGL&101	ENGLISH COMPOSITION I	5 cr.

Computational Skills (3 credits required)

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.

Major Area Requirements

BTEC 149	COMPUTER APPLICATIONS ESSENTIALS	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 106	INFORMATION TECHNOLOGY FUNDAMENTALS	5 cr.
CTEC 110	COMMAND LINE ESSENTIALS FOR WINDOWS AND UNIX	3 cr.
NTEC 103	IP SUBNETTING	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

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/518A/Gedt.html

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 the ethical and legal issues surrounding access to and use of technology.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- 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.

Computer Support Specialist (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

Communication Skills (6 credits required)

ENGL&101	ENGLISH COMPOSITION I	5 cr.
or		
PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.

Computational Skills (3 credits required)

MATH 030	PRE-ALGEBRA	5 cr.

Health & Physical Education (3 credits required)

Human Relations (3 credits required)

Humanities (3 credits required)

CMST&230	SMALL GROUP COMMUNICATION	5 cr.
or CMST&210	INTERPERSONAL COMMUNICATION	5 cr.

Social Sciences (3 credits required) **3 cr.**

Natural Sciences (3 credits required)

Major Area Requirements

BTEC 149	COMPUTER APPLICATIONS ESSENTIALS	3 cr.
and		
CTEC 106	INFORMATION TECHNOLOGY FUNDAMENTALS	5 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.
NTEC 103	IP SUBNETTING	3 cr.
CTEC 112	PROGRAMMING ESSENTIALS	5 cr.
or		
CTEC 121	INTRO TO PROGRAMMING & PROBLEM SOLVING	5 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.
CTEC 213	COMPTIA A+ FUNDAMENTALS	4 cr.
CTEC 214	COMPTIA A+ OPERATING SYSTEMS & NETWORKING	4 cr.
Related Electives Students must complete at least 7-11 credits approved related electives to meet 90 credits:		
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 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 135	MICROSOFT MTA SOFTWARE DEVELOPMENT WITH C#	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 181	INTRODUCTION TO DATABASE DESIGN USING ACCESS	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: 90-93

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:

- Install, configure, and maintain hardware and software to bring the system to an optimal operational level for the end user.
- Demonstrate progress toward healthier behaviors. (GE)
- 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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Demonstrate broad based understanding of concepts, skills and issues relating to underlying technology and current industry standards involving computer and information technology.

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

Communication Skills (5 credits required)

ENGL&101	ENGLISH COMPOSITION I (recommended)	5 cr.
or		
PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING (recommended)	5 cr.

Computational Skills (5 credits required)

CTEC 121	INTRO TO PROGRAMMING & PROBLEM SOLVING (recommended)	5 cr.

Human Relations (5 credits required)

CMST&210	INTERPERSONAL COMMUNICATION (recommended)	5 cr.
or CMST&230	SMALL GROUP COMMUNICATION (recommended)	5 cr.

Major Area Requirements

Web Foundations

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.

Web Media and Supportive Technologies

CGT 101	PHOTOSHOP RASTER GRAPHICS	4 cr.
CGT 104	WEB MULTIMEDIA CONTENT I	4 cr.
or		
CGT 201	WEB VIDEO PRODUCTION	4 cr.
CTEC 134	MICROSOFT MTA DATABASE ADMIN	5 cr.

Web Design

CGT 105	USER EXPERIENCE DESIGN	4 cr.
CGT 205	WEB DESIGN I	4 cr.
CGT 206	WEB DESIGN II	4 cr.

Web Career Preparation and Experience

CTEC 165	BUSINESS WEB PRACTICES	4 cr.
HDEV 200	PROFESSIONAL DEVELOPMENT	2 cr.
CGT 214	PROFESSIONAL PRACTICES	4 cr.
or CTEC 199	COOPERATIVE WORK EXPERIENCE (3-4 credits required)	1-5 cr.
or CGT 240	CAPSTONE PRACTICUM	4 cr.
CTEC 293	WEB SKILLS PORTFOLIO	3 cr.

Web Development

CTEC 265	APPLIED WEB DEVELOPMENT	5 cr.
or		
CTEC 135	MICROSOFT MTA SOFTWARE DEVELOPMENT WITH C#	5 cr.
CTEC 126	JAVASCRIPT	5 cr.
CTEC 127	PHP WITH SQL I	5 cr.
CTEC 227	PHP WITH SQL II	5 cr.
CTEC 145	WEB SERVER TECHNOLOGY	5 cr.

Total Required Credits: 90-91

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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)

Culinary Arts

The culinary and hospitality industries are experiencing tremendous growth. Employers all over the nation are looking for people who have not only technical skills, but also the ability to manage effectively and solve problems creatively.

At the Tod and Maxine McClaskey Culinary Institute at Clark College, we are building on nearly 60 years of excellence in culinary education to offer newly updated programs that prepare you to meet the growing demand for culinary and hospitality professionals. Our programs emphasize mastery of the fundamentals as well as management and critical thinking skills to prepare you for a range of career opportunities.

Our faculty combine their real-world experience with teaching expertise to help you master the technical, organizational, and management skills you need to stand out to potential employers. In addition, your on-campus experience will help develop skills including teamwork, customer service, merchandising, efficiency, equipment and food safety, production scheduling, and more, all key skills to prepare you for a career in the region's dynamic food and hospitality industry.

Whether you aspire to work in a restaurant, bakery, industrial kitchen, catering service, or your own small business, the McClaskey Culinary Institute will assist in preparing you for a variety of career opportunities.

Baking and Pastry Arts Fundamentals (CA)

This program is built on a competency model focused on developing the fundamental knowledge, skills and abilities to work in a bakery or pastry shop environment.

Major Area Requirements

PBAK 110	ARTISAN BREADS	9 cr.
PBAK 111	EARLY MORNING PRODUCT	5 cr.
PBAK 120	VIENNOISERIE	9 cr.
PBAK 121	COOKIES, BROWNIES, BARS AND QUICK BREADS	5 cr.
PBAK 130	CAKES, DESSERTS AND TORTES	9 cr.
PBAK 131	RETAIL OPERATIONS AND BARISTA	5 cr.

Total Required Credits: 42

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/847E/Gedt.html

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 processes of baking, including concepts of ingredient cause and effect, in daily routine.
- Accurately follow a formula, with notes, to completion.
- Perform accurate mathematical operations appropriate to baking.
- Operate commercial baking equipment and tools using standard safety and sanitation procedures.
- Demonstrate accurate use of both digital and balance scales.
- Demonstrate effective time management.

Professional Baking & Pastry Arts Management (AAT)

This program of study will delve deeply into the science of baking and then apply that theoretical knowledge in a hands-on production focused lab environment. During the course of their studies students will learn all aspects of artisan breads, laminated doughs, cakes, tortes, French pastries, and merchandising. While developing these

key industry competencies students will simultaneously be developing work place skills such as team work, food costing, customer service, efficiency, speed and accuracy, equipment and food safety, and production scheduling.

General Education Requirements

Communication Skills

PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.

Computational Skills

PTCS 110	PROFESSIONAL TECHNICAL COMPUTATIONAL SKILLS	5 cr.

Human Relations **5 cr.**

Major Area Requirements

PBAK 110	ARTISAN BREADS	9 cr.
PBAK 111	EARLY MORNING PRODUCT	5 cr.
PBAK 120	VIENNOISERIE	9 cr.
PBAK 121	COOKIES, BROWNIES, BARS AND QUICK BREADS	5 cr.
PBAK 130	CAKES, DESSERTS AND TORTES	9 cr.
PBAK 131	RETAIL OPERATIONS AND BARISTA	5 cr.
PBAK 200	APPLIED PROFESSIONAL DEVELOPMENT	9 cr.
PBAK 210	PRODUCTION BAKING	9 cr.
PBAK 211	CHOCOLATE LAB	5 cr.
PBAK 220	PASTRY CHEF/RESTAURANT BAKING	9 cr.
PBAK 221	RETAIL/MERCHANDISING, INVENTORY/PURCHASING	5 cr.
PBAK 230	CAPSTONE PROJECT	6 cr.
PBAK 231	INDUSTRY INTERNSHIP	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:

- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Apply processes of baking, including concepts of ingredient cause and effect, in a daily routine.
- Accurately follow a formula, with notes, to completion.
- Perform accurate mathematical operations appropriate to baking.
- Operate commercial baking equipment and tools using standard safety and sanitation procedures.
- Demonstrate accurate use of both digital and balance scales.
- Demonstrate effective time management.
- Demonstrate effective bakery management skills.

Cuisine Fundamentals (CA)

This program is designed to provide a solid foundation of necessary skills and practices for entry level employment.

Major Area Requirements

CUIS 110	CULINARY FUNDAMENTALS I	5 cr.
CUIS 111	PROFESSIONAL COOKING I	8 cr.
CUIS 120	CULINARY FUNDAMENTALS II	5 cr.
CUIS 121	PROFESSIONAL COOKING II	8 cr.
CUIS 130	CULINARY FUNDAMENTALS III	5 cr.
CUIS 131	PROFESSIONAL COOKING III	8 cr.
Specialized Short coursesIn addition to the courses listed above, students must complete a minimum of four (4) credits from the classes listed below.		
CUIS 140	CLASSIC AND MODERN SOUPS AND SAUCES	2 cr.
CUIS 141	MEAT CUTTING AND FABRICATION	3 cr.
CUIS 142	WINE, BEER, SPIRITS AND FOOD PAIRINGS	2 cr.
CUIS 143	RESTAURANT BAKING	2 cr.
CUIS 144	BANQUET AND BUFFET PLANNING AND EXECUTION	2 cr.
CUIS 145	WINE APPRECIATION	3 cr.

Total Required Credits: 43

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/850D/Gedt.html

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 basics of classical, modern, and healthy cooking techniques.
- Identify and describe a variety of food ingredients and specifications with focus on sustainable, organic, nutritional needs; specialty diets; and aspects of vegetarian and veganism.
- Demonstrate proper kitchen sanitation, safety and professionalism in the workplace.
- Identify and demonstrate proper use of kitchen tools and equipment.
- Demonstrate basic measuring, conversion, food costing and yield management practices.
- Demonstrate cook to order practices with American and International cuisine.
- Apply teamwork, workplace ethics, customer service and communications in the workplace.

Cuisine Management (AAT)

This program prepares students for a wide variety of employment opportunities in the food service and hospitality industries. Some of these employment venues include restaurants, resorts, assisted living communities and hospital environments. This program is designed to provide a solid foundation of necessary skills and practices for entry level employment. The curriculum is delivered in a competency based format with a focus on skill development, production and customer service. In addition to skill development the curriculum also includes a focus on healthy cooking options, special dietary needs, international cuisine, food cost management, industry trends and sustainable production.

General Education Requirements

Communication Skills

PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.

Computational Skills

PTCS 110	PROFESSIONAL TECHNICAL COMPUTATIONAL SKILLS	5 cr.

Human Relations **5 cr.**

Major Area Requirements

CUIS 110	CULINARY FUNDAMENTALS I	5 cr.
CUIS 111	PROFESSIONAL COOKING I	8 cr.
CUIS 120	CULINARY FUNDAMENTALS II	5 cr.
CUIS 121	PROFESSIONAL COOKING II	8 cr.
CUIS 130	CULINARY FUNDAMENTALS III	5 cr.
CUIS 131	PROFESSIONAL COOKING III	8 cr.
CUIS 200	APPLIED PROFESSIONAL DEVELOPMENT	9 cr.
CUIS 210	ADVANCED CULINARY FUNDAMENTALS	5 cr.
CUIS 211	ADVANCED CULINARY PRACTICES	8 cr.
CUIS 220	MANAGEMENT AND BANQUET THEORY	5 cr.
CUIS 221	MANAGEMENT PRACTICES	8 cr.
CUIS 230	CUISINE CAPSTONE	6 cr.
CUIS 231	INDUSTRY INTERNSHIP	4 cr.

Specialized Short Courses

In addition to the courses listed above, students must complete a minimum of six (6) credits from the classes listed below.

CUIS 140	CLASSIC AND MODERN SOUPS AND SAUCES	2 cr.
CUIS 141	MEAT CUTTING AND FABRICATION	3 cr.
CUIS 142	WINE, BEER, SPIRITS AND FOOD PAIRINGS	2 cr.
CUIS 143	RESTAURANT BAKING	2 cr.
CUIS 144	BANQUET AND BUFFET PLANNING AND EXECUTION	2 cr.
CUIS 145	WINE APPRECIATION	3 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:

- Apply the basics of classical, modern, and healthy cooking techniques.
- Identify and describe a variety of food ingredients and specifications with focus on sustainable, organic, nutritional needs; specialty diets; and aspects of vegetarian and veganism.
- Demonstrate proper kitchen sanitation, safety and professionalism in the workplace.
- Identify and demonstrate proper use of kitchen tools and equipment.
- Demonstrate basic measuring, conversion, food costing and yield management practices.
- Demonstrate cook to order practices with American and International cuisine.
- Apply teamwork, workplace ethics, customer service and communications in the workplace.
- Demonstrate effective management skills.
- Demonstrate professional cooking skills and skills in menu and recipe interpretation and conversion, proper cooking methods, plating and saucing principles to carry out complete dinner and/or banquet service.
- Demonstrate advanced storeroom inventory, management, purchasing and quality control.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly

credited evidence, and a command of Standard English. (GE)

- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate interpersonal/human relations skills. (GE)

Dental Hygiene

A career as a dental hygienist offers a wide range of opportunities. Services provided by dental hygienists include patient assessment procedures, managing and treating periodontal conditions, providing pain management for patients, 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.

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.

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.

About the Program

For Financial Aid purposes, the Bachelor of Applied Science in Dental Hygiene is open enrollment which enables all students who wish to pursue this degree to complete the "Dental Hygiene Degree Requirements" (courses in the areas of English, Biological Sciences, Psychology, etc.). The "Dental Hygiene Degree Requirements" provide the foundation for the subsequent "Dental Hygiene Core" classes (classes with "DH" prefix). Due to clinical space limitations, although the program of study for the dental hygiene degree is open enrollment, there is a competitive application process for students to be able to begin the "Dental Hygiene Core" classes. The instructions in the Dental Hygiene Program Guide explain the Dental Hygiene Degree requirements and the competitive application process to be able to begin the Dental Hygiene Core classes.

The Dental Hygiene Program Guide is posted on the Dental Hygiene website at: www.clark.edu/dentalhygiene

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. 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.

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 term of application year

ENGL&102	ENGLISH COMPOSITION II	5 cr.

or

ENGL 109	WRITING ABOUT THE SCIENCES	5 cr.

Humanities (10 credits required)

CMST&210	INTERPERSONAL COMMUNICATION	5 cr.

or

CMST&220	PUBLIC SPEAKING	5 cr.

or

CMST&230	SMALL GROUP COMMUNICATION	5 cr.

Social Sciences (10 credits required)

PSYC&100	GENERAL PSYCHOLOGY	5 cr.
SOC& 101	INTRO TO SOCIOLOGY	5 cr.

College-level Math (5 credits required)

MATH&146	INTRODUCTION TO STATISTICS (recommended)	5 cr.

Natural Sciences (30 credits required)

All science courses must be seven (7) years current upon program entry.

BIOL&251	HUMAN A & P I	5 cr.

and

BIOL&252	HUMAN A & P II	5 cr.

and

BIOL&253	HUMAN A & P III	5 cr.

or

BIOL&241	HUMAN ANATOMY AND PHYSIOLOGY I	5 cr.

and

BIOL&242	HUMAN ANATOMY AND PHYSIOLOGY II	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&101	NUTRITION	3 cr.

Physical Education (1 credits required)**

**MUST be fitness/activity course

Junior Year

Fall Term

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.

Winter Term

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.

Spring Term

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

Summer Term

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 451	SPECIAL NEEDS POPULATIONS I	1 cr.
DH 471	NITROUS OXIDE SEDATION	1 cr.

Fall Term

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.

Winter Term

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.

Spring Term

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, non-verbal, and written language with patients, colleagues, the public, diverse populations, and other healthcare providers.
- Analyze professional behaviors and make appropriate decisions guided by ADHA 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

Communication Skills

PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING (recommended)	5 cr.

Computational Skills

PTCS 110	PROFESSIONAL TECHNICAL COMPUTATIONAL SKILLS (recommended)	5 cr.

Human Relations

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.

Total Required Credits: 110

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/775A/Gedt.html

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 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 powered Industry.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Evaluate and use technical information from a variety of resources.

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.

General Education Requirements

Communication Skills (6 credits required)*

PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.

Health & Physical Education (3 credits required)

Computational Skills (3 credits required)

PTCS 110	PROFESSIONAL TECHNICAL COMPUTATIONAL SKILLS	5 cr.

Human Relations

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)

*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.
DIES 226	DIESEL PROCEDURES	10 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 powered Industry.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate interpersonal/human relations skills. (GE)

- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Demonstrate progress toward healthier behaviors. (GE)

Diesel Technologies (AAT)

General Education Requirements

Communication Skills

PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.

Computational Skills

PTCS 110	PROFESSIONAL TECHNICAL COMPUTATIONAL SKILLS	5 cr.

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.

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:

- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- 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 powered Industry.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Evaluate and use technical information from a variety of resources.

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.

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.

State Initial Early Childhood Education 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:

- PROMOTING CHILD DEVELOPMENT AND LEARNING: Students will apply developmental knowledge to create learning environments and meaningful activities.

Short State 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:

- PROMOTING CHILD DEVELOPMENT AND LEARNING: Students will apply developmental knowledge to create learning environments and meaningful activities.

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:

- PROMOTING CHILD DEVELOPMENT AND LEARNING: Students will apply developmental knowledge to create learning environments and meaningful activities.

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:

- PROMOTING CHILD DEVELOPMENT AND LEARNING: Students will apply developmental knowledge to create learning environments and meaningful activities.

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:

- PROMOTING CHILD DEVELOPMENT AND LEARNING: Students will apply developmental knowledge to create learning environments and meaningful activities.

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:

- PROMOTING CHILD DEVELOPMENT AND LEARNING: Students will apply developmental knowledge to create learning environments and meaningful activities.

State Early Childhood Education Certificate (statewide) (CP)

General Education Requirements

Communication Skills

ENGL 098	WRITING FUNDAMENTALS	5 cr.
or		
ENGL 103	ADVANCED ENGLISH COMPOSITION	3 cr.
or		
PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.
or		
ENGL&101	ENGLISH COMPOSITION I	5 cr.
or		
ENGL&102	ENGLISH COMPOSITION II	5 cr.
or		
ENGL&235	TECHNICAL WRITING	5 cr.

Computational Skills **5 cr.**

Human Relations

EDUC&150	CHILD/FAMILY/COMMUNITY	3 cr.

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&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.
or		
EDUC&136	SCHOOL AGE CARE	3 cr.
or		
ECED&132	INFANTS/TODDLERS CARE	3 cr.
or		
ECED&134	FAMILY CHILD CARE	3 cr.
or		
ECED&139	ADMIN EARLY LRNG PROG	3 cr.

Total Required Credits: 47

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/46EA/Gedt.html

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:

- POWER, PRIVILEGE AND INEQUITY: Students will analyze and evaluate their awareness of equity pedagogy and create strategies for implementing cultural competence in their work with children and their families.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- PROMOTING CHILD DEVELOPMENT AND LEARNING: Students will apply developmental knowledge to create learning environments and meaningful activities.
- TEACHING AND LEARNING: Students will apply developmentally appropriate practices when implementing meaningful curriculum in the classroom.

Early Childhood Education (AAS)

General Education Requirements

Communication Skills (6 credits required)

ENGL&101	ENGLISH COMPOSITION I	5 cr.

Health & Physical Education (3 credits required)

Computational Skills (3 credits required)

MATH 030	PRE-ALGEBRA (or COMPASS Placement in MATH 090)	5 cr.

Human Relations (3 credits required)

EDUC&150	CHILD/FAMILY/COMMUNITY	3 cr.

Humanities (3 credits required)

Social Sciences (3 credits required)

Natural Sciences (3 credits required)

ENVS 109	INTEGRATED ENVIRONMENTAL SCIENCE	5 cr.

Major Area Requirements

ECE 102	SCIENCE AND MATHEMATICS FOR YOUNG CHILDREN	3 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 (3 credits required)	1-3 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: 96

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:

- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- PROMOTING CHILD DEVELOPMENT AND LEARNING: Students will apply developmental knowledge to create learning environments and meaningful activities.
- BUILDING FAMILY AND COMMUNITY RELATIONSHIPS: Students will recognize, support and partner with families and communities in learning environments and with meaningful activities.
- OBSERVING, DOCUMENTING AND ASSESSING TO SUPPORT YOUNG CHILDREN AND FAMILIES: Students will apply the process of observation to diverse, and appropriate assessments of children.
- TEACHING AND LEARNING: Students will apply developmentally appropriate practices when implementing meaningful curriculum in the classroom.
- BECOMING A PROFESSIONAL: Students will apply professional standards and frameworks in early learning classrooms.
- POWER, PRIVILEGE AND INEQUITY: Students will analyze and evaluate their awareness of equity pedagogy and create strategies for implementing cultural competence in their work with children and their families.
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)

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.

Communication Skills (10 credits required)

ENGL&101	ENGLISH COMPOSITION I	5 cr.
ENGL&102	ENGLISH COMPOSITION II	5 cr.

Quantitative Skills (10 credits required)

MATH 105	FINITE MATHEMATICS	5 cr.
MATH&107	MATH IN SOCIETY	5 cr.

Humanities (10 credits required) (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.

Social Sciences (10 credits required) (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.

Natural Sciences (10 credits required)

(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:

Family and Community Relationships

EDUC&150	CHILD/FAMILY/COMMUNITY	3 cr.

Health, Safety and Nutrition

ECED&107	HEALTH/NUTRITION/SAFETY	5 cr.

Professionalism

ECE 215	EARLY CHILDHOOD SEMINAR	2 cr.

Choose 5-6 credits from each content area below for a total of 30 credits:

Child Development and Learning (including Typical and Atypical)		
ECE 100	CHILD DEVELOPMENT: BIRTH TO SIX	3 cr.
EDUC&203	EXCEPTIONAL CHILD	3 cr.
Curriculum Development and Implementation		
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.
Child Guidance		
EDUC&130	GUIDING BEHAVIOR	3 cr.
ECED&105	INTRO EARLY CHILD ED	5 cr.
and ECED&120	PRACTICUM-NURTURING REL (Must take both)	2 cr.
ECED&180	LANG/LITERACY DEVELOP	3 cr.
EDUC&203	EXCEPTIONAL CHILD	3 cr.
ECED&105	INTRO EARLY CHILD ED	5 cr.
and ECED&120	PRACTICUM-NURTURING REL	2 cr.
EDUC&130	GUIDING BEHAVIOR	3 cr.
Practicum/Field Experience (suggested minimum 300 hours)		
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 (3 credits required)	1-3 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:

- POWER, PRIVILEGE AND INEQUITY: Students will analyze and evaluate their awareness of equity pedagogy and create strategies for implementing cultural competence in their work with children and their families.
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- PROMOTING CHILD DEVELOPMENT AND LEARNING: Students will apply developmental knowledge to create learning environments and meaningful activities.
- BUILDING FAMILY AND COMMUNITY RELATIONSHIPS: Students will recognize, support and partner with families and communities in learning environments and with meaningful activities.
- OBSERVING, DOCUMENTING AND ASSESSING TO SUPPORT YOUNG CHILDREN AND FAMILIES: Students will apply the process of observation to diverse, and appropriate assessments of children.
- TEACHING AND LEARNING: Students will apply developmentally appropriate practices when implementing meaningful curriculum in the classroom.
- BECOMING A PROFESSIONAL: Students will apply professional standards and frameworks in early learning classrooms.
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate progress toward healthier behaviors. (GE)

- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)

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.

Students taking this degree should note that a change in transfer institution might change requirements, and advisors at the transfer institution should be consulted. Students are encouraged to visit the WSUV Elementary Education program website for more comprehensive information related to the program admissions requirements, application deadlines and alternative coursework options.

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.

Complete as Many General Electives (GE) courses as needed to reach the total 90 credits required by the degree Recommended

Program Electives

MATH 111	COLLEGE ALGEBRA	5 cr.
HIST&126	WORLD CIVILIZATIONS I	5 cr.
EDUC&201	INTRODUCTION TO EDUCATION	3 cr.
EDUC 210	INTRODUCTORY FIELD EXPERIENCE	3 cr.

General Education Requirements

Communication Skills (10 credits required)

ENGL&101	ENGLISH COMPOSITION I	5 cr.
ENGL&102	ENGLISH COMPOSITION II	5 cr.

Quantitative Skills (5 credits required)

MATH 122	MATH FOR ELEMENTARY TEACHERS	5 cr.

Health & Physical Education (3 credits required)

Humanities (15 credits required)

Social Sciences (15 credits required)

GEOG&100	INTRODUCTION TO GEOGRAPHY	5 cr.
or		
GEOG&102	WORLD REGIONAL GEOGRAPHY	5 cr.
or		
GEOG&200	HUMAN GEOGRAPHY	5 cr.
or		
GEOG 205	PHYSICAL GEOGRAPHY	5 cr.
or		
GEOG&207	ECONOMIC 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.
PSYC&200	LIFESPAN PSYCHOLOGY	5 cr.

Natural Sciences (18 credits required) **18 cr.**

BIOL&100	SURVEY OF BIOLOGY	5 cr.
GEOL&101	INTRO PHYSICAL GEOLOGY	5 cr.
CHEM&110	CHEMICAL CONCEPTS W/LAB (recommended)	5 cr.
ASTR&101	INTRO TO ASTRONOMY (recommended)	5 cr.
PHYS&100	PHYSICS NON-SCI MAJORS (recommended)	4 cr.

Program Requirements

MATH 123	MATH FOR ELEMENTARY TEACHERS	5 cr.
MATH 124	MATH FOR ELEMENTARY TEACHERS	5 cr.
POLS 111	AMERICAN NATIONAL GOVERNMENT AND POLITICS	5 cr.
ECON 101	INTRODUCTION TO ECONOMICS	3 cr.
or		
ECON&201	MICRO ECONOMICS	5 cr.
or		
ECON&202	MACRO ECONOMICS	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:

- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Evaluate claims about the natural world using scientific methodology. (GE)
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Analyze and interpret quantitative information presented verbally, graphically, numerically, and/or symbolically. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Obtain, evaluate, and ethically use information. (GE)
- Analyze patterns of power, privilege, and inequity in the United States. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Apply communication theory to demonstrate effective oral communication skills. (GE)

Electrical and Computer 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.

Electrical and Computer 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.

Generic Requirements

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.

A. Basic Requirements

1. Communication Skills		5 cr.
ENGL&101	ENGLISH COMPOSITION I (MRP Requirement)	5 cr.
2. Mathematics		10 cr.

Two courses at or above introductory calculus level. Third-term calculus or approved statistics course: 5 term 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.

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

Differential Equations - 5 credits

Linear Algebra - 5 credits

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.

Clark College Equivalents:

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.
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.

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

Clark College Equivalents:

PHYS&241	ENGINEERING PHYSICS I (requires concurrent enrollment in PHYS094)	4 cr.
and		
PHYS&231	ENGINEERING PHYSICS LAB I	1 cr.
PHYS&242	ENGINEERING PHYSICS II (requires concurrent enrollment in PHYS095)	4 cr.
and		
PHYS&232	ENGINEERING PHYSICS LAB II	1 cr.
PHYS&243	ENGINEERING PHYSICS III (requires concurrent enrollment in PHYS096)	4 cr.
and		
PHYS&233	ENGINEERING PHYSICS LAB III	1 cr.
4. Chemistry with Laboratory		5 cr.

Clark College Equivalents:

CHEM&141	GENERAL CHEMISTRY I	4 cr.
CHEM&151	GENERAL CHEMISTRY LABORATORY I	1 cr.

5. Required Major Courses

Electrical Circuits Clark College Equivalents:

ENGR&204	ELECTRICAL CIRCUITS	5 cr.

Computer Programming Clark College Equivalents:

CSE 121	INTRODUCTION TO C	5 cr.

B. Distribution Requirements

1. Humanities		5 cr.
2. Social Science		5 cr.
ECON&201	MICRO ECONOMICS (recommended)	5 cr.
or		
ECON&202	MACRO ECONOMICS (recommended)	5 cr.
3. Additional Humanities or Social Science		5 cr.
PHIL&120	SYMBOLIC LOGIC (recommended)	5 cr.

C. Electives

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

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:

- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Obtain, evaluate, and ethically use information. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Analyze and solve multi-step problems using techniques through single-variable calculus.
- Demonstrate understanding of the derivative as an instantaneous rate of change and the definite integral as a limit of a sum.
- Acquire scientific and technological information from appropriate sources to examine issues, claims or situations.
- 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.
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Analyze patterns of power, privilege, and inequity in the United States. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Apply communication theory to demonstrate effective oral communication skills.(GE)
- Analyze and interpret quantitative information presented verbally, graphically, numerically, and/or symbolically. (GE)

- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)

Emergency Medical Services

Emergency Medical Technician

Clark College offers a Certificate of Completion in Emergency Medical Technician-Basic (EMT). A variety of community agencies such as transporting ambulance companies, police and fire departments, and large industries utilize employees with EMT training. This program includes lecture, laboratory, and field experience on an ambulance and fire rescue unit as available.

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) 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

**Students are strongly encouraged to attend the mandatory EMT course orientation held at NWRTC.

Please call the NWRTC office at (360)397-2100 if you have any questions about the above requirements.

Emergency Medical Technician (Accelerated) (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		
EMT 103	EMERGENCY MEDICAL TECHNICIAN (ACCELERATED)	12 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.
Recommended Courses		
BMED 110	MEDICAL TERMINOLOGY I (strongly recommended)	3 cr.
and		
BMED 111	MEDICAL TERMINOLOGY II (strongly recommended)	3 cr.

Total Required Credits: 16-17

** 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, non-verbal, 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

Communication Skills (5 credits required)

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 Sciences (15 credits required)(HA, HB, SS)

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 208	FUNDAMENTALS OF FLIGHT	3 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:

- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Obtain, evaluate, and ethically use information. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Analyze and solve multi-step problems using techniques through single-variable calculus.
- Acquire scientific and technological information from appropriate sources to examine issues, claims or situations.
- Demonstrate understanding of the derivative as an instantaneous rate of change and the definite integral as a limit of a sum.
- 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.
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Analyze patterns of power, privilege, and inequity in the United States. (GE)

- Demonstrate progress toward healthier behaviors. (GE)
- Apply communication theory to demonstrate effective oral communication skills.(GE)
- Analyze and interpret quantitative information presented verbally, graphically, numerically, and/or symbolically. (GE)
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)

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

Communication Skills (5 credits required)

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 Sciences (15 credits required)

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	INFERENTIAL STATISTICS	3 cr.

Program Requirements

ENGL&102	ENGLISH COMPOSITION II	5 cr.
or ENGL 109	WRITING ABOUT THE SCIENCES	5 cr.
ENVS&101	INTRODUCTION TO ENVIRONMENTAL SCIENCE	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:

- Apply scientific methodologies to develop and answer questions about the natural world.
- Demonstrate understanding of the derivative as an instantaneous rate of change and the definite integral as a limit of a sum.
- Analyze and solve multi-step problems using techniques through single-variable calculus.
- Acquire scientific information from appropriate sources to analyze issues, claims or situations.
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)

- Obtain, evaluate, and ethically use information. (GE)
- Analyze patterns of power, privilege, and inequity in the United States. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Apply communication theory to demonstrate effective oral communication skills.(GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)

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

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

Communication Skills (5 credits required)

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)

HPE 258	FITNESS-WELLNESS	3 cr.
or HLTH Health course		2 cr.
and PE Activity Course		1 cr.

Humanities & Social Sciences (15 credits required)

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:

- Obtain, evaluate, and ethically use information. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Analyze and interpret quantitative information presented verbally, graphically, numerically, and/or symbolically. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Analyze patterns of power, privilege, and inequity in the United States. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Apply communication theory to demonstrate effective oral communication skills. (GE)

Health Information, Informatics Management, Medical Billing

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, Health Information Technician and many more.

With the planned implementation of the ICD-10 medical coding system October 1, 2015, the expected need for Coders and Health Information Technicians 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.

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

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)

BMED 103	MATH FOR HEALTH CARE PROFESSIONALS	3 cr.

Human Relations (3 credits required)

CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or CMST&230	SMALL GROUP COMMUNICATION	5 cr.

Major Area Requirements

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.
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.
HEOC 104	HEALTH CARE DELIVERY & CAREER EXPLORATION	3 cr.
HEOC 130	PHARMACOLOGY FOR HEALTH ASSISTANTS	3 cr.
HLTH 124	HEALTHCARE PROVIDER CPR AND FIRST AID	1 cr.

Total Required Credits: 71-72

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/529C/Gedt.html

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 interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- 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. (affective)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)

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.

A health information technician spends the majority of his or her day at a desk working on a computer. They are responsible for the tracking of 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.

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)

BMED 103	MATH FOR HEALTH CARE PROFESSIONALS	3 cr.
and		
BMED 105	STATISTICS FOR HEALTH CARE PROFESSIONALS	2 cr.

Human Relations (5 credits required)

CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or		
CMST&230	SMALL GROUP COMMUNICATION	5 cr.

Major Area Requirements

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.
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 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 228	MEDICAL DOCUMENT MANAGEMENT AND TECHNOLOGY	3 cr.
BMED 233	INTRODUCTION TO PATIENT NAVIGATION & ADVOCACY	5 cr.
BMED 242	INTERMEDIATE ANATOMY AND PHYSIOLOGY	3 cr.
BTEC 100	KEYBOARDING	1-3 cr.
BTEC 149	COMPUTER APPLICATIONS ESSENTIALS	3 cr.
BTEC 169	INTRODUCTION TO EXCEL	3 cr.
HEOC 104	HEALTH CARE DELIVERY & CAREER EXPLORATION	3 cr.
HEOC 130	PHARMACOLOGY FOR HEALTH ASSISTANTS	3 cr.
HI 202	INTRODUCTION TO HEALTH CARE QUALITY	3 cr.
HI 210	INTRODUCTION TO HEALTH SERVICES MANAGEMENT	3 cr.
HLTH 124	HEALTHCARE PROVIDER CPR AND FIRST AID	1 cr.

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
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate interpersonal/human relations skills. (GE)

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 term.

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)

BMED 103	MATH FOR HEALTH CARE PROFESSIONALS	3 cr.

Human Relations (3 credits required)

CMST&210	INTERPERSONAL COMMUNICATION	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	INTRODUCTION TO PATIENT NAVIGATION & ADVOCACY	5 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.
HLTH 124	HEALTHCARE PROVIDER CPR AND FIRST AID	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 http://www.clark.edu/academics/catalog/gainful-employment 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 and clearly explain an effective strategy to solve a quantitative problem. (GE)
- 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 process medical billing claims
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)

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.
or PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.

Computational Skills (5 credits required)

BMED 103	MATH FOR HEALTH CARE PROFESSIONALS	3 cr.
and BMED 105	STATISTICS FOR HEALTH CARE PROFESSIONALS	2 cr.

Human Relations (5 credits required)

CMST&210	INTERPERSONAL COMMUNICATION	5 cr.
or 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 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	INTRODUCTION TO PATIENT NAVIGATION & ADVOCACY	5 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.
HLTH 124	HEALTHCARE PROVIDER CPR AND FIRST AID	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.
- 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.
- Solve quantitative problems and interpret the solutions.
- Communicate with various audiences using a variety of methods.
- Demonstrate interpersonal/human relations skills.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate interpersonal/human relations skills. (GE)

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 higherEligibility 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

Transfer AA Honors Certificate

To earn the Honors Academic Concentration, 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

Honors Certificate (AC)

To earn the Transfer AA Honors Academic Concentration, 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.

20 credits selected from Honors-designated courses.		**20**
HONS 290	SPECIAL PROJECTS: HONORS *	1-6 cr.

*Students must complete at least 3-credits

Total Required Credits: 23

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 knowledge and skills from multiple academic disciplines to produce original academic or artistic works.

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.

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	4 cr.
MTX 105	BASIC HYDRAULICS	3 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: 43

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/768E/Gedt.html

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.

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

Communication Skills

PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.

Computational Skills

PTCS 110	PROFESSIONAL TECHNICAL COMPUTATIONAL SKILLS	5 cr.

Human Relations (5 credits required)

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	4 cr.

MTX 105	BASIC HYDRAULICS	3 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.
and		
WELD 141	GAS METAL ARC FABRICATION	6 cr.
or WELD 144	SHIELDED METAL ARC WELDING	6 cr.
and		
WELD 145	SHIELDED METAL ARC FABRICATION	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 26 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.

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:

- 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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- 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.

- 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.
- Demonstrate the ability to safely use all metal working shop equipment and perform safety inspections of said equipment.
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate interpersonal/human relations skills. (GE)

International Studies

The International Studies concentration option 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 Academic Concentration

For students in World Languages (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 Academic Concentration (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 Academic Concentration 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 (Japanese or Spanish)

Approved International Electives (20 credits required) The International Studies Academic Concentration 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 Academic Concentration 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 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.
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&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

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 Awareness of other cultures.
- Demonstrate world language skills
- Describe the field of international studies.

Journalism

Clark College's Journalism program prepares students who plan to transfer to a four-year institution as well as those seeking success in a workplace that requires clear writing and thoughtful inquiry. Our coursework also helps all students become more responsible consumers of news and information.

We offer a News Media Studies certificate designed to provide students with a clear pathway to greater success and preparation for transfer. Details about the 24- to 25- credit course of study appear below.

The core course is JOUR 101, Introduction to Journalism, a five-credit writing-intensive class that includes a study of the changing news media landscape as well as instruction in the basics of news reporting and writing.

Students looking at careers or further study in journalism, public relations, public affairs, politics, law, and communications should consider taking JOUR 111, which is our Digital News course, and JOUR 110, College News Production. College News Production provides students an opportunity to further develop meaningful hands-on skills by working on the print and online editions of the award-winning student news product, the Independent.

Several paid positions on the Independent are available each quarter for students, ranging from copy and section editors, designers, photography editors, and multimedia editors.

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 provides a foundation for understanding how the media function in our society and is highly recommended. ENGL& 101, 102, and ENGL 103 are designed to improve a student's ability to write and do documented research accurately. Courses in the social sciences (particularly political science), history, literature, and science 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, graphic design, and multimedia production, including photography and video production.

Because course requirements vary at each institution, a student interested in a four-year degree in Journalism should work with advisers at Clark and the transfer institution. Journalism courses typically transfer to four-year institutions. However, a student should contact the transfer institution to clarify each course's transferability.

News Media Studies (AC)

For students who want expertise in journalism and news media, this concentration 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	DIGITAL NEWS	5 cr.
JOUR 110	COLLEGE NEWS PRODUCTION (3 credits required between JOUR 110-130)	1-3 cr.
or		
JOUR 120	COLLEGE NEWS PRODUCTION (3 credits required between JOUR 110-130)	1-3 cr.
or		
JOUR 130	COLLEGE NEWS PRODUCTION (3 credits required between JOUR 110-130)	1-3 cr.
ENGL 127	CREATIVE NONFICTION WRITING	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

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:

- Students who complete the News Media Studies Certificate will be able to explain current news media principles and practices and appropriately apply fundamental news production skills.

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.

Manual Machining (CP)

General Education Requirements

Communication Skills (3 credits required)

PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING (recommended)	5 cr.

Computational Skills (3 credits required)

PTCS 110	PROFESSIONAL TECHNICAL COMPUTATIONAL SKILLS (recommended)	5 cr.

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: 54-58

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/808B/Gedt.html

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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)

Machining Technician (CP)

General Education Requirements

Communication Skills (3 credits required)

PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING (recommended)	5 cr.

Computational Skills (3 credits required)

PTCS 110	PROFESSIONAL TECHNICAL COMPUTATIONAL SKILLS (recommended)	5 cr.

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: 103-107

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/808A/Gedt.html

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 entry level skills for set-up 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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate compliance of all machine shop safety regulations.
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Interpret blueprints and perform inspection of machined parts.

Machining Technologies (AAS)

General Education Requirements

Communication Skills (6 credits required)

PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING (recommended)	5 cr.

Health & Physical Education (3 credits required)

Computational Skills (3 credits required)

PTCS 110	PROFESSIONAL TECHNICAL COMPUTATIONAL SKILLS (recommended)	5 cr.

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: 118-122

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. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Demonstrate compliance of all machine shop safety regulations.
- Interpret blueprints and perform inspection of machined parts.
- Perform entry level skills for set-up 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.

Machining Technologies (AAT)

General Education Requirements

Communication Skills (5 credits required)

PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING (recommended)	5 cr.

Computational Skills (5 credits required)

PTCS 110	PROFESSIONAL TECHNICAL COMPUTATIONAL SKILLS (recommended)	5 cr.

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.

Total Required Credits: 109

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:

- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate compliance of all machine shop safety regulations.
- Interpret blueprints and perform inspection of machined parts.
- Perform entry level skills for set-up 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.
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)

Marketing

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.

Marketing (CP)

The Marketing certificate provides students with a clear and well-rounded picture of how basic business functions impact marketing in the United States, as well as global, economic systems. Students learn about the conceptual and applied use of marketing, which includes marketing research tactics, the marketing mix concept, customer behavior, and the external environments considered in marketing decisions. Technology, ethics and social responsibility, competition, economics, and government and legal considerations complete the key components of this certificate.

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.

General Education Requirements

Communication Skills (3 credits required)

BTEC 106	APPLIED OFFICE ENGLISH	3 cr.
or		
ENGL&101	ENGLISH COMPOSITION I	5 cr.

Computational Skills (3 credits required)

BUS 102	BUSINESS MATH APPLICATIONS	5 cr.

Human Relations (3 credits required)

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 117	ADVERTISING	3 cr.
BUS 199	COOPERATIVE WORK EXPERIENCE **	1-5 cr.
BUS 251	PROFESSIONAL SELLING	3 cr.
BUS 260	PRINCIPLES OF MARKETING	5 cr.
CMST&230	SMALL GROUP COMMUNICATION	5 cr.

Total Required Credits: 54-56

***Minimum of 5 credits must be earned in Cooperative Work Experience*

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/252B/Gedt.html

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 advertisement to meet the needs of specific target market(s).
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate interpersonal/human relations skills. (GE)

Marketing (AAS)

The Marketing Associate of Applied Science degree provides a pervasive and critical link between the producers of products and the consumers of those products. Marketing professionals research, design, price, promote, and place goods and services that meet the needs of target customer groups. With the foundation in basic business skills that this program provides, the student is prepared for an entry-level career in varied and interesting manufacturing, distribution, advertising, public relations, selling, and retail fields.

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.

Completion of Certificate of Proficiency in Marketing, Small Business Management, Accounting Clerk or Supervisory Management accounts for 56-60 of necessary credits.

General Education Requirements

Communication Skills (3 credits required)

CMST&220	PUBLIC SPEAKING	5 cr.
or		
CMST&230	SMALL GROUP COMMUNICATION	5 cr.

Health and Physical Education	**3 cr.**
Humanities	**3 cr.**
Natural Sciences	**3 cr.**
Computational Skills- satisfied in the CPs.	
Human Relations - satisfied in the CPs.	
Social Sciences - satisfied in the CPs.	

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: 90-93

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 an effective business advertisement to meet the needs of specific target market(s).
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Analyze a target market and develop product, pricing, promotion, and distribution strategies to meet customers' needs at a profit.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Establish market strategies on the international level.
- Use micro- and macroeconomic concepts to analyze domestic and global business situations.
- Accurately maintain payroll register as required under federal and state laws.

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:

- 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 for more specific information.

Generic DTA Requirements

A. Basic Requirements

1. Communication Skills	10 cr.
2. Quantitative/Symbolic Reasoning Requirements	5 cr.
Intermediate algebra proficiency is required.	

B. Distribution Requirements

1. Humanities	15 cr.
2. Social Sciences	15 cr.
3. Natural Sciences	3 cr.

C. Major Requirements

1. Math courses

2. Education courses

3. Elective Courses

MRP Requirements

A. Basic Requirements

1. English Composition	10 cr.
2. First Term Calculus	5 cr.
Intermediate algebra proficiency is required.	

B. Distribution Requirements

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.

2. Social Sciences 15 cr.

Intro to Psychology (5 cr.)

Other social sciences (10 cr.)

3. Natural Sciences 15 cr.

Second ferm calculus

10 credits physical, biological, and/or earth science, including at least one lab course

C. Major Requirements

1. Math courses

third and fourth term 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

Intermediate algebra proficiency is required.

MATH&151	CALCULUS I	5 cr.

B. Distribution Requirements

1. Humanities

CMST&220	PUBLIC SPEAKING Fulfills oral communication requirement	5 cr.

2. Social Sciences

PSYC&100	GENERAL PSYCHOLOGY	5 cr.

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:

- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Obtain, evaluate, and ethically use information. (GE)
- Analyze patterns of power, privilege, and inequity in the United States. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Evaluate claims about the natural world using scientific methodology. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Analyze and interpret quantitative information presented verbally, graphically, numerically, and/or symbolically. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Apply communication theory to demonstrate effective oral communication skills. (GE)

Mathematics

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

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&151	CALCULUS I	5 cr.

Health & Physical Education (3 credits required)

HPE 258	FITNESS-WELLNESS	3 cr.
or HPE 266	MIND BODY HEALTH	3 cr.

Oral Communications (5 credits required)

CMST&220	PUBLIC SPEAKING	5 cr.

Social Sciences (15 credits required)

ECON&201	MICRO ECONOMICS	5 cr.
or ECON&202	MACRO ECONOMICS	5 cr.

Additional Requirements

COLL 101	COLLEGE ESSENTIALS: INTRODUCTION TO CLARK	2 cr.

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:

- Obtain, evaluate, and ethically use information. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)

- Analyze and interpret quantitative information presented verbally, graphically, numerically, and/or symbolically. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Analyze patterns of power, privilege, and inequity in the United States. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Apply communication theory to demonstrate effective oral communication skills. (GE)

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.

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.

General Requirements

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.

A. Basic Requirements

1. Communication Skills

Clark Equivalents:

ENGL&101	ENGLISH COMPOSITION I	5 cr.

2. Mathematics 10 cr.

Two courses at or above introductory calculus level. Third term calculus or approved statistics course: 5 term 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.

Clark Equivalents:

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.

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

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

Clark Equivalents:

PHYS&241	ENGINEERING PHYSICS I (concurrent enrollment in PHYS094 required)	4 cr.
and PHYS&231	ENGINEERING PHYSICS LAB I	1 cr.
PHYS&242	ENGINEERING PHYSICS II (concurrent enrollment in PHYS095 required)	4 cr.
and PHYS&232	ENGINEERING PHYSICS LAB II	1 cr.
PHYS&243	ENGINEERING PHYSICS III (concurrent enrollment in PHYS096 required)	4 cr.
and PHYS&233	ENGINEERING PHYSICS LAB III	1 cr.

4. Chemistry with Laboratory

Clark Equivalents:

CHEM&141	GENERAL CHEMISTRY I	4 cr.
and CHEM&151	GENERAL CHEMISTRY LABORATORY I	1 cr.
CHEM&142	GENERAL CHEMISTRY II	4 cr.
and CHEM&152	GENERAL CHEMISTRY LABORATORY II	1 cr.

5.Required Major Courses

ENGR&214	STATICS	5 cr.
ENGR&215	DYNAMICS	5 cr.
ENGR&225	MECHANICS OF MATERIALS	5 cr.

B. Distribution Requirements

1. Humanities/Fine Arts/English & Social Sciences

A course in Economics is recommended (ECON&201 or 202).

PHIL&120 is strongly recommended as the Humanities course.

C. Electives

1. Elective Courses

The remaining term 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.

Required at Clark:

MATH&254	CALCULUS IV	5 cr.

Other electives as advised dependent on transfer institution.

DiRequirements **5.** Required Major Courses

B. Distribution Requirements

1. Humanities/Fine Arts/English & Social Sciences 15 cr.

C. Electives

1. Elective Courses

The remaining term 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 1, 2 + labs - 5 credits

5. Required Major Courses

- Statics - 5 credits
- Mechanics of Materials - 5 credits
- Dynamics - 5 credits

B. Distribution Requirements

1. Humanities/Fine Arts/English & Social Sciences 15 cr.

Minimum 15 term 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/Engr Electives 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.

- 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

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 an instantaneous rate of change and the definite integral as a limit of a sum.
- 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.
- Demonstrate progress toward healthier behaviors. (GE)
- Obtain, evaluate, and ethically use information. (GE)
- 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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Analyze patterns of power, privilege, and inequity in the United States. (GE)
- Analyze and interpret quantitative information presented verbally, graphically, numerically, and/or symbolically. (GE)
- Apply communication theory to demonstrate effective oral communication skills.(GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)

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 too 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.

Mechatronics Fundamentals (CC)

Major Area Requirements

MTX 100	INDUSTRIAL SAFETY	1 cr.
MTX 101	DC FUNDAMENTALS	3 cr.
MTX 102	AC FUNDAMENTALS	4 cr.
MTX 103	BASIC MEASUREMENT TOOLS	2 cr.
MTX 105	BASIC HYDRAULICS	3 cr.
MTX 107	BASIC PNEUMATICS	2 cr.
MTX 110	ELECTRIC MOTOR CONTROL 1	4 cr.

Total Required Credits: 19

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 DC and AC circuits for malfunctions.
- Design fluid power systems and identify common components.
- Correctly connect, operate and troubleshoot an AC motor control circuit.
- Demonstrate proper tool identification and usage techniques.

Instrumentation/Control Automation (CA)

Major Area Requirements

MTX 100	INDUSTRIAL SAFETY	1 cr.
MTX 101	DC FUNDAMENTALS	3 cr.
MTX 102	AC FUNDAMENTALS	4 cr.
MTX 103	BASIC MEASUREMENT TOOLS	2 cr.
MTX 105	BASIC HYDRAULICS	3 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: 40

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/633F/Gedt.html

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.

Mechanical Automation (CA)

Major Area Requirements

MTX 100	INDUSTRIAL SAFETY	1 cr.
MTX 101	DC FUNDAMENTALS	3 cr.
MTX 102	AC FUNDAMENTALS	4 cr.
MTX 103	BASIC MEASUREMENT TOOLS	2 cr.
MTX 105	BASIC HYDRAULICS	3 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 123	PICK AND PLACE ROBOT	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: 44

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/633E/Gedt.html

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.

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	4 cr.
MTX 103	BASIC MEASUREMENT TOOLS	2 cr.
MTX 105	BASIC HYDRAULICS	3 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: 90

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/633B/Gedt.html

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 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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Assimilate and interpret technical and nontechnical descriptions to form a solution.
- Design, operate, and troubleshoot automation processes and systems.

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	4 cr.
MTX 103	BASIC MEASUREMENT TOOLS	2 cr.
MTX 105	BASIC HYDRAULICS	3 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 123	PICK AND PLACE ROBOT	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 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 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: 84

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/633A/Gedt.html

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 and interpret technical and nontechnical descriptions to form a solution.
- Design, operate, and troubleshoot automation processes and 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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)

Instrumentation/Control Automation (AAT)

General Education Requirements

Communication Skills

PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING (recommended)	5 cr.

Computational Skills

PTCS 110	PROFESSIONAL TECHNICAL COMPUTATIONAL SKILLS	5 cr.

Human Relations

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	4 cr.
MTX 103	BASIC MEASUREMENT TOOLS	2 cr.
MTX 105	BASIC HYDRAULICS	3 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: 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:

- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- 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.

Mechanical 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)

PTCS 110	PROFESSIONAL TECHNICAL COMPUTATIONAL SKILLS	5 cr.

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	4 cr.
MTX 103	BASIC MEASUREMENT TOOLS	2 cr.
MTX 105	BASIC HYDRAULICS	3 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 123	PICK AND PLACE ROBOT	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 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 227	MECHANICAL DRIVES 3	4 cr.
MTX 230	LASER ALIGNMENT	2 cr.
MTX 250	ADVANCED PROGRAMMABLE LOGIC CONTROLLERS	4 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: 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:

- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Design, operate, and troubleshoot automation processes and 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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Assimilate/interpret technical and nontechnical descriptions to form a solution.

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
25400 US Highway N
Suite 158
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-ntl.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 term 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).

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.
or		
ENGL&101	ENGLISH COMPOSITION I	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 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 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 148	BUSINESS PROFESSIONAL SELF DEVELOPMENT	3 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.

HLTH 124	HEALTHCARE PROVIDER CPR AND FIRST AID	1 cr.

Total Required Credits: 80

** 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 http://www.clark.edu/academics/catalog/gainful-employment 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:

- 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)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate the ability to work as a team member to accomplish a task. (affective)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- 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)

Medical Assisting (AAT)

General Education Requirements

Communication Skills (5 credits required)

BTEC 107	BUSINESS ENGLISH	5 cr.
or PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING	5 cr.
or		
ENGL&101	ENGLISH COMPOSITION I	5 cr.

Computational Skills (5 credits required)

BMED 103	MATH FOR HEALTH CARE PROFESSIONALS	3 cr.
BMED 105	STATISTICS FOR HEALTH CARE PROFESSIONALS	2 cr.

Human Relations (5 credits required)

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 148	BUSINESS PROFESSIONAL SELF DEVELOPMENT	3 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.
HLTH 124	HEALTHCARE PROVIDER CPR AND FIRST AID	1 cr.

Total Required Credits: 93

** 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)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate interpersonal/human relations skills. (GE)

Music

The Music program at Clark offers students an abundance of experiences in music theory, instrumental and vocal performance training, music appreciation and music history. Courses are designed to prepare the music major for advanced studies for transfer to a four-year bachelor's music degree while also providing an enriching experience to the non-music major with the skills and background to fully enjoy music as a cultural pursuit.

Associate in Music DTA/MRP (AA)

General Education Requirements

Communication Skills (10 credits required)		**10 cr.**
Quantitative Skills (5 credits required)		
MATH&107	MATH IN SOCIETY	5 cr.
Humanities (15 credits required)		**15 cr.**
MUSC&141	MUSIC THEORY I	5 cr.
MUSC&142	MUSIC THEORY II	5 cr.
5 credits other discipline		5 cr.
Social Sciences (15 credits required)		**15 cr.**
Selected from at least two disciplines. No more than 10 credits allowed from any one discipline.		
Natural Sciences (15 credits required)		
Selected from at least two disciplines. No more than 10 credits allowed from any one discipline. At least 10 credits in Physical, Biological and/or Earth Sciences. Shall include at least one laboratory course.		

Major Area Requirements

MUSC&121	EAR TRAINING 1	1 cr.
MUSC&122	EAR TRAINING 2	1 cr.
MUSC&123	EAR TRAINING 3	1 cr.
MUSC&221	EAR TRAINING 4	1 cr.
MUSC&222	EAR TRAINING 5	1 cr.
MUSC&223	EAR TRAINING 6	1 cr.
MUSC&143	MUSIC THEORY III	5 cr.
MUSC&231	MUSIC THEORY IV	3 cr.
MUSC&232	MUSIC THEORY V	3 cr.
MUSC&233	MUSIC THEORY VI	3 cr.
In-house diagnostic testing and/or auditions might affect the credits accepted in theory and ear training. Students are advised to check with the receiving institution.		
MUSC 101	BEGINNING PIANO CLASS	2 cr.
MUSC 201	INTERMEDIATE PIANO CLASS	2 cr.
Applied Instrument, Piano, or Voice		**6 cr.**
All MUSCA Courses (MUSCA 101-286)		
Applied Voice: MUSC 170, 171, 172,270, 271, 272		
Applied Piano: 173, 174, 175, 273, 274, 275		
In-house auditions might affect the credits accepted in this area. Students are advised to check with the receiving institution.		
Major Performing Ensemble Any of the following:		**12 cr.**
Orchestra: MUSC 151, 152, 153, 251, 252, 253		
Concert Band: MUSC 180, 181, 182, 280, 281, 282		
Concert Choir: MUSC 183, 184, 185, 283, 284, 285		

Total Required Credits: 108

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:

- Meet audition standards for any necessary proficiency exams in music theory for transfer to a four-year school of music.
- Perform a standard body of literature at a proficiency level relevant to pursuit of a BA or BM degree in music.
- Demonstrate musicality through participation in recorded performances.
- Apply communication theory to demonstrate effective oral communication skills.(GE)
- 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)
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Obtain, evaluate, and ethically use information. (GE)

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

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	3 cr.
NTEC 220	DEPLOYING LINUX SERVER SERVICES	6 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 http://www.clark.edu/academics/catalog/gainful-employment 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)

COLL 101	COLLEGE ESSENTIALS: INTRODUCTION TO CLARK	2 cr.

Major Area Requirements

NTEC 103	IP SUBNETTING	3 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 151	LINUX ESSENTIALS	6 cr.
NTEC 220	DEPLOYING LINUX SERVER SERVICES	6 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 242	DATACENTER VIRTUALIZATION TECHNOLOGY	6 cr.
NTEC 252	LINUX ADMINISTRATION 1	6 cr.
NTEC 253	LINUX ADMINISTRATION 2	6 cr.
NTEC 299	CAPSTONE EXPERIENCE: CISCO TECHNOLOGIES	3 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:

- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- 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.
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)

Network 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	3 cr.
NTEC 132	WINDOWS MTA SERVER ADMINISTRATION FUNDAMENTALS	3 cr.
NTEC 220	DEPLOYING LINUX SERVER SERVICES	6 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 297	CAPSTONE EXPERIENCE: NETWORK TECHNOLOGIES	3 cr.

Program Area Requirements

Students must complete a minimum of 37 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 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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)

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 Arts Nursing DTA/MRP degree, and are qualified to take the National Council Examination for licensure as a Registered Nurse.

Clark College's Associate Degree in 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
www.acenursing.org

About the Program

For Financial Aid purposes, the Associate Degree in Nursing DTA/MRP is open enrollment which enables all students who wish to pursue this degree to complete the "Nursing Degree Requirements" (courses in the areas of English, Biological Sciences, Psychology, etc.). The "Nursing Degree Requirements" provide the foundation for the subsequent "Nursing Core" classes (classes with "NURS" prefix). Due to clinical space limitations, although the program of study for the nursing transfer degree is open enrollment, there is a competitive application process for students to be able to begin the "Nursing Core" classes. The instructions in the Nursing Program Guide explain the nursing transfer degree requirements and the competitive application process to be able to begin the Nursing Core classes.

The Nursing Program Guide is posted on the Nursing website at www.clark.edu/clarknursing.

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. 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.

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:

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

Generic DTA Requirements

A. Basic Requirements

1. Communication Skills	10 cr.
2. Quantitative/Symbolic Reasoning Requirements	5 cr.
Intermediate algebra proficiency is required.	

B. Distribution Requirements

1. Humanities	15 cr.
2. Social Sciences	15 cr.
3.Natural Sciences	15 cr.

C. Electives **27 cr.**

Elective Courses

MRP Requirements

A. Basic Requirements

1. English Composition	10 cr.
2. Quantitative/Symbolic Reasoning Requirement	5 cr.
5 term credits Statistics (a course that includes descriptive and inferential statistics)	
Intermediate algebra proficiency is required.	

B. Distribution Requirements

1. Humanities 15 cr.

5 term credits of Public Speaking

10 term 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 term credits, Introduction to Psychology
- 5 term 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 term credits General Biology, the course prerequisite to Anatomy/Physiology
- 10 term credits Anatomy and Physiology with lab
- 5 term credits Inorganic Chemistry with lab
- 5 term credits Organic/Biochemistry with lab (when Organic + Biochemistry are separate courses, both are required)
- 5 term credits Microbiology with lab
- 5 term credits Human Nutrition

C. Electives **10 cr.**

Up to 10 additional term 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

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	INFERENTIAL STATISTICS	3 cr.

B. Distribution Requirements

1. Humanities

CMST&220	PUBLIC SPEAKING Fulfills oral communication requirement	5 cr.

10 term 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.

C. Electives

1. Elective Courses

Up to 10 additional term 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

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.

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.

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.

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.

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.

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:

- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Analyze patterns of power, privilege, and inequity in the United States. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)

- Obtain, evaluate, and ethically use information. (GE)
- Evaluate claims about the natural world using scientific methodology. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Analyze and interpret quantitative information presented verbally, graphically, numerically, and/or symbolically. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Apply communication theory to demonstrate effective oral communication skills. (GE)

Nursing (AA)

Nursing Degree Requirements

Communication Skills		**10 cr.**
ENGL&101	ENGLISH COMPOSITION I	5 cr.
Quantitative Skills		
MATH&146	INTRODUCTION TO STATISTICS	5 cr.
Humanities		**10 cr.**
Social Science		
PSYC&100	GENERAL PSYCHOLOGY	5 cr.
PSYC&200	LIFESPAN PSYCHOLOGY	5 cr.
Natural Science		
CHEM&121	INTRO TO CHEMISTRY: PRE-HEALTH (or Higher Level Chemistry Course)	5 cr.
BIOL&160	GENERAL BIOLOGY W/LAB	5 cr.
BIOL&260	MICROBIOLOGY	5 cr.
BIOL&241	HUMAN ANATOMY AND PHYSIOLOGY I	5 cr.
BIOL&242	HUMAN ANATOMY AND PHYSIOLOGY II	5 cr.
NUTR&101	NUTRITION	3 cr.

Nursing Core Requirements

First Term		
NURS 110	FOUNDATIONS OF NURSING CONCEPTS	2 cr.
ENGL 112	ETHICS AND POLICY IN HEALTHCARE I	2 cr.
NURS 113	LIFESPAN ASSESSMENT CONCEPTS	2 cr.
NURS 114	NURSING SKILLS APPLICATION I	1 cr.
NURS 115	NURSING SKILLS LAB I	2 cr.
Second Term		
NURS 122	FAMILY-CENTERED NURSING	2 cr.
PSYC 122	PSYCHOSOCIAL ISSUES IN HEALTH CARE I	1 cr.
NURS 123	FAMILY-CENTERED CLINICAL NURSING	4 cr.
PSYC 124	PSYCHOSOCIAL ISSUES IN HEALTH CARE II	2 cr.
NURS 127	NURSING SKILLS APPLICATION II	1 cr.
NURS 128	NURSING SKILLS LAB II	2 cr.
Third Term		
NURS 135	MEDICAL SURGICAL NURSING CONCEPTS 1	3 cr.
NURS 136	MEDICAL-SURGICAL CLINICAL NURSING I	5 cr.

NURS 137	NURSING SKILLS APPLICATION III	1 cr.
NURS 138	NURSING SKILLS LAB III	2 cr.
NUTR 139	NUTRITION IN HEALTHCARE II	1 cr.

Fourth Term

NURS 241	MEDICAL-SURGICAL NURSING CONCEPTS II	3 cr.
NURS 242	MEDICAL/SURGICAL CLINICAL NURSING II	8 cr.
NUTR 240	NUTRITION IN HEALTHCARE III	1 cr.

Five Term

NURS 251	MEDICAL-SURGICAL NURSING CONCEPTS III	2 cr.
NURS 252	ADVANCED HOLISTIC CLINICAL NURSING	8 cr.
PSYC 253	PSYCHOSOCIAL ISSUES IN HEALTH CARE III	2 cr.

Sixth Term

NURS 261	PROFESSIONAL LEADERSHIP TRANSITION TO PRACTICE	1 cr.
ENGL 273	ETHICS AND POLICY IN HEALTHCARE II	3 cr.
NURS 262	PROFESSIONAL LEADERSHIP SENIOR PRACTICUM	6 cr.
NURS 263	PROFESSIONAL ROLE IN COMMUNITY SERVICE	1 cr.
NURS 264	CAPSTONE NCLEX PREPARATION	1 cr.

Total Required Credits: 135

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:

- Teamwork and Interprofessional Collaboration: Model open communication, mutual respect and shared decision making.
- 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.
- 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.
- Apply communication theory to demonstrate effective oral communication skills.(GE)
- 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)
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Obtain, evaluate, and ethically use information. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate progress toward healthier behaviors. (GE)

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.

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

About the Program

For Financial Aid purposes, the Certificate of Proficiency in Pharmacy Technician is open enrollment which enables all students who wish to pursue this program to complete the "Pharmacy Technician Program Requirements" (courses in the areas of English, Sciences, Medical Terminology, etc.). The "Pharmacy Technician Program Requirements" provide the foundation for the subsequent "Pharmacy Technician Core" classes (classes with "PHAR" prefix). Due to clinical space limitations, although the program of study for the pharmacy technician is open enrollment, there is an application process for students to be able to begin the "Pharmacy Technician Core" classes. The instructions in the Pharmacy Technician Program Guide explain the Pharmacy Technician requirements and the application process to be able to begin the Pharmacy Technician Core classes.

The Pharmacy Technician Program Guide is posted on the Pharmacy Technician website at: www.clark.edu/pharmacytech

Program Pathway

Clark College also offers an expanded Pharmacy Technician curriculum leading to an Associate in Applied Technology (AAT) degree in Pharmacy Technician Leadership. This degree program is intended for those students who would like to continue their education beyond the Pharmacy Technician Certificate of Proficiency. Courses offered for the AAT in Pharmacy Technician focus on developing skill sets in leadership, business relations, and professional development.

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. 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.

Pharmacy Technician (CP)

Preliminary Requirements

Completion of ENGL 098 or equivalent with a grade of "C" or better (2.0) or placement into ENGL& 101

Completion of MATH 030 or equivalent with a grade of "C" or better (2.0) or placement into MATH 089/090

(Must be 7 years current upon program entry).

BMED 110	MEDICAL TERMINOLOGY I *	3 cr.
BTEC 149	COMPUTER APPLICATIONS ESSENTIALS	3 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.
HLTH 124	HEALTHCARE PROVIDER CPR AND FIRST AID	1 cr.

General Education Requirements

Communication Skills (3 credits required) **3 cr.**

Computational Skills (3 credits required)

PHAR 110	PHARMACY CALCULATIONS	3 cr.

Human Relations (3 credits required)

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.
PHAR 129	PHARMACY EXTERNSHIP SEMINAR II	2 cr.

Total Required Credits: 67-68

** Must be seven years current upon program entry and must be completed by the end of the first term*

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

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:

- 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 work place while complying with laws, regulations, and ethical standards of practice.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Successfully complete all criteria necessary for registration as a pharmacy tech in any state.

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

Completion of ENGL 098 or equivalent with a grade of "C" or better (2.0) or placement into ENGL& 101

Completion of MATH 030 or equivalent with a grade of "C" or better (2.0) or placement into MATH 089/090 (Must be 7 years current upon program entry).

BMED 110	MEDICAL TERMINOLOGY I *	3 cr.
BMED 138	LEGAL ASPECTS OF THE MEDICAL OFFICE	2 cr.
BTEC 149	COMPUTER APPLICATIONS ESSENTIALS	3 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.
HLTH 124	HEALTHCARE PROVIDER CPR AND FIRST AID	1 cr.

General Education Requirements

Communications (5 credits required) **5 cr.**

Computational Skills (5 credits required) **5 cr.**

Human Relations (5 credits required)

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.
ElectivesSelect 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.
MGMT 106	MOTIVATION AND PERFORMANCE	3 cr.
BIOL 180	BIOETHICS	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:

- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- 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 work place 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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)

Phlebotomy

Phlebotomy is the practice of drawing blood for analysis, donation or medical testing. A career as a Phlebotomy technician is a rewarding path for someone who desires to work directly with patients. Students in Clark's Phlebotomy program are trained to perform a variety of blood collection methods. With hands-on training from experienced faculty, you will learn the essentials of drawing blood, including the monitoring and handling of blood collection equipment, safety and infection control and specimen processing.

Clark's phlebotomy coursework includes theories and principles related to obtaining blood specimens from many different kinds of patients, including adults, children and infants. The Phlebotomy curriculum prepares students to perform skin and venipuncture as well as to function as a member of a medical laboratory team. Emphasis is placed on safety, patient identification, quality assurance and specimen handling. The program curriculum includes a one-quarter lab practicum, providing students with 'real world' training practice in a health care facility.

Graduates of the Clark College Phlebotomy program will be eligible for:

- Clark College Certificate of Achievement
- Washington State Phlebotomy Licensure
- National Phlebotomy Certification Exam

About the Program

The Certificate of Achievement in Phlebotomy is open enrollment which enables all students who wish to pursue this program to complete the "Phlebotomy Program Requirements" (courses in the areas of English, Sciences, Medical Terminology, etc.). The "Phlebotomy Program Requirements" provide the foundation for the subsequent "Phlebotomy Core" classes (classes with "PHLE" prefix). Due to clinical space limitations, although the program of study for the Phlebotomy is open enrollment, there is an application process for students to be able to begin the "Phlebotomy Core" classes. The instructions in the Phlebotomy Program Guide explain the Phlebotomy requirements and the application process to be able to begin the Phlebotomy Core classes.

The Phlebotomy Program Guide is posted on the Phlebotomy website at: www.clark.edu/phlebotomy

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. 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)

Preliminary Requirements

BMED 110	MEDICAL TERMINOLOGY I *	3 cr.
ENGL 098	WRITING FUNDAMENTALS	5 cr.
or equivalent with a grade of "C" or better (2.0) or placement into ENGL& 101		
HEOC 104	HEALTH CARE DELIVERY & CAREER EXPLORATION	3 cr.
HLTH 124	HEALTHCARE PROVIDER CPR AND FIRST AID	1 cr.

HEOC 120	AIDS EDUCATION	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.

Program Requirements

BMED 111	MEDICAL TERMINOLOGY II *	3 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.

Total Required Credits: 32-38

** 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:

- Accurately perform phlebotomy procedures in variable clinical environments.
- Identify the varying clinical conditions that require a different methodology of sample collection.
- Communicate effectively, accurately, and professionally, using verbal, non-verbal, and written language with diverse populations of patients and other healthcare providers.
- Conduct self in an ethical and professional manner to provide quality patient care.
- Apply safety and infection control standards in the health care environment.

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

Communication Skills (5 credits required)

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)

Health Requirement		2 cr.
Physical Education Activity		1 cr.

Humanities & Social Sciences (15 credits required)

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

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.

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:

- Apply scientific methodologies to develop and answer questions about the natural world.
- Demonstrate understanding of the derivative as an instantaneous rate of change and the definite integral as a limit of a sum.
- Analyze and solve multi-step problems using techniques through single-variable calculus.
- Acquire scientific information from appropriate sources to analyze issues, claims or situations.
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Obtain, evaluate, and ethically use information. (GE)
- Analyze patterns of power, privilege, and inequity in the United States. (GE)
- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- Apply communication theory to demonstrate effective oral communication skills.(GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)

Power, Privilege, and Inequity

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 Academic Concentration prepares students to identify power, privilege, and inequity as central organizing principles of human experience within the United States. Students who complete this Academic Concentration 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 Academic Concentration 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.
ENGL 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 176	NATURE AND THE HUMANITIES	4 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.
SOC 230	DOMESTIC VIOLENCE	5 cr.

Total Required Credits: 27-29

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:

- 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.

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.

Small Business Management (CP)

This program focuses on the theories used to manage and lead a small business. Whether an entrepreneur, small business owner, or franchiser/franchisee, the odds of being a success greatly improve through real-world practices that are taught in this program. The foundation of knowledge gleaned from the study of small business management emphasizes the many stakeholders that are necessary for success. The impact that small business has on one's life and the lives of others is revealed, along with the contributions from small business to the economy and society. Many of today's career opportunities have been in the small business sector, and forecasts suggest that this trend will continue. The Small Business Management certificate provides a solid foundation to operate and maintain a successful small business.

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.

General Education Requirements

Communication Skills (3 credits required)

BTEC 106	APPLIED OFFICE ENGLISH	3 cr.
or		
ENGL&101	ENGLISH COMPOSITION I	5 cr.

Computational Skills (3 credits required)

BUS 102	BUSINESS MATH APPLICATIONS	5 cr.

Human Relations (3 credits required)

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: 58-60

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/257A/Gedt.html

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:

- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Prepare a business plan.
- Demonstrate interpersonal/human relations skills. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Analyze a target market and develop product, pricing, promotion, and distribution strategies to meet customers' needs at a profit.
- Describe the U.S. legal system and the legal environment of business by outlining the basic principles of law that apply to business transactions.

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.

Survey & Geomatics Technician - GIS (CP)

General Education Requirements

Communication Skills		**3 cr.**
PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING (recommended)	5 cr.
Computational Skills		
MATH 103	COLLEGE TRIGONOMETRY	5 cr.
Human Relations		**3 cr.**
CMST&210	INTERPERSONAL COMMUNICATION (recommended)	5 cr.

Major Area Requirements

CADD 140	BASIC AUTOCAD	4 cr.
or		
ENGR 140	BASIC AUTOCAD	4 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 250	ARC GIS I	3 cr.
SURV 252	MAP PROJECTIONS	2 cr.
SURV 253	INTRODUCTION TO GPS	2 cr.

Total Required Credits: 50

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 in written form, verbally, and graphically with surveyors and engineers.
- Demonstrate use of modern technology, industry standard software, and tools to collect, analyze and interpret data for surveying solutions.
- Practice a code of ethics prescribed by the professional organizations and state codes.

Survey & Geomatics Technician - Boundary (CP)

General Education Requirements

Communication Skills		**3 cr.**
PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING (recommended)	5 cr.
Computational Skills		
MATH 103	COLLEGE TRIGONOMETRY	5 cr.
Human Relations		**3 cr.**
CMST&210	INTERPERSONAL COMMUNICATION (recommended)	5 cr.

Major Area Requirements

CADD 140	BASIC AUTOCAD	4 cr.
or		
ENGR 140	BASIC AUTOCAD	4 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 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 264	SURVEY SOFTWARE APPLICATIONS	4 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:

- 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.
- Demonstrate use of modern technology, industry standard software, and tools to collect, analyze and interpret data for surveying solutions.
- Practice a code of ethics prescribed by the professional organizations and state codes.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate interpersonal/human relations skills. (GE)

Surveying/Geomatics (AAS)

General Education Requirements

Communication Skills (6 credits required)

CMST&210	INTERPERSONAL COMMUNICATION (recommended)	5 cr.
PTWR 135	INTRODUCTION TO APPLIED TECHNICAL WRITING (recommended)	5 cr.

Health & Physical Education (3 credits required)

HPE 220	INDUSTRIAL HEALTH AND FITNESS (recommended)	3 cr.

Computational Skills (3 credits required)

MATH 103	COLLEGE TRIGONOMETRY	5 cr.

Human Relations (3 credits required)

CMST&210	INTERPERSONAL COMMUNICATION (recommended)	5 cr.

Humanities (3 credits required)

Social Sciences (3 credits required)

Natural Sciences (3 credits required)

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.
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 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 253	INTRODUCTION TO GPS	2 cr.
SURV 252	MAP PROJECTIONS	2 cr.
SURV 264	SURVEY SOFTWARE APPLICATIONS	4 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:

- Evaluate, analyze, and explain events, behaviors, and institutions using perspectives and methods in the Social Sciences. (GE)
- 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.
- Apply a method of scientific inquiry, valid to the natural sciences, to evaluate claims about the natural world. (GE)
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate progress toward healthier behaviors. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate interpersonal/human relations skills. (GE)
- Interpret the human experience, within appropriate global and historical contexts, through evaluation, analysis, creation, or performance. (GE)
- Practice a code of ethics prescribed by the professional organizations and state codes.

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.
WELD 143	FLUX CORE ARC FABRICATION	6 cr.

Total Required Credits: 24

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/814G/Gedt.html

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.
- Interpret blueprints and specifications.

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 ARC FABRICATION	6 cr.

Total Required Credits: 24

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/814H/Gedt.html

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.
- Interpret blueprints and specifications.

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 METAL ARC FABRICATION	6 cr.

Total Required Credits: 24

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/814C/Gedt.html

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.
- Interpret blueprints and specifications.

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.

Total Required Credits: 24

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/814D/Gedt.html

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.
- Interpret blueprints and specifications.

Welding Technician (CP)

General Education Requirements

Communication Skills (3 credits required)	3 cr.
Computational Skills (3 credits required)	3 cr.
Human Relations (3 credits required)	3 cr.

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.
and		
WELD 141	GAS METAL ARC FABRICATION	6 cr.
or		
ART 295	WELDED SCULPTURE THEORY I	1 cr.
and		
ART 296	WELDED SCULPTURE THEORY II	1 cr.
and		
ART 297	WELDED SCULPTURE THEORY III	1 cr.
and		

WELD 120	WELDED SCULPTURE LAB I	3 cr.
and		
WELD 121	WELDING SCULPTURE LAB II	3 cr.
and		
WELD 122	WELDED SCULPTURE LAB III	3 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 METAL ARC FABRICATION	6 cr.

Total Required Credits: 71

To learn more about this program's employment outlook, approximate cost and potential careers, please visit the http://www.clark.edu/academics/catalog/gainful-employment/814B/Gedt.html

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 proficiency in gas metal arc welding.
- Demonstrate proficiency in flux core arc welding.
- Demonstrate proficiency in gas tungsten arc welding.
- Demonstrate proficiency in shielded metal arc welding.
- Demonstrate proficiency in oxy/fuel cutting, plasma arc cutting and carbon-arc cutting processes.
- Demonstrate correct operation of metal working equipment.
- Interpret blueprints and specifications.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate interpersonal/human relations skills. (GE)

Welding Technologies (AAT)

General Education Requirements

Communication Skills	**5 cr.**
Computational Skills	**5 cr.**
Human Relations (5 credits required)	**5 cr.**

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.
and		
WELD 141	GAS METAL ARC FABRICATION	6 cr.

or		
ART 295	WELDED SCULPTURE THEORY I	1 cr.
and		
ART 296	WELDED SCULPTURE THEORY II	1 cr.
and		
ART 297	WELDED SCULPTURE THEORY III	1 cr.
and		
WELD 120	WELDED SCULPTURE LAB I	3 cr.
and		
WELD 121	WELDING SCULPTURE LAB II	3 cr.
and		
WELD 122	WELDED SCULPTURE LAB III	3 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 METAL 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.
MACH 235	ELEMENTARY METALLURGY	2 cr.
MACH 236	ELEMENTARY METALLURGY LAB	2 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:

- 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 preform appropriate first aid. Determine the appropriate and proper response to situational questions and select the best answer.
- Demonstrate the ability to safely use all metal working shop equipment and perform safety inspections of said equipment.
- Demonstrate the ability to successfully weld and understand the processes and equipment used in manual and semi-automatic welding.
- Demonstrate basic shop drawing and sketching. Explain multi-view drawings. Interpret the title block components. Interpret local and general drawing notes. Explain various drawing change systems. Decipher drawing parts lists and bill of materials. Explain dimensioning and tolerance system. Demonstrate drawing element interpretation. Define drawing terms and definitions. Demonstrate the use and interpretation of welding symbols. Explain welded joint geometry. Identify and describe drawing line conventions. As defined by the American Welding Society, as well as adhering to ANSI Y14.1-1996, ANSI/AWS A2.4, and various industry practices.
- 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.

- 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.
- 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, PAC and CAG-A principles of operation.
- 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.
- Obtain or work towards AWS certifications in multiple process. Enhance skills in FCAW, SMAW, GTAW, GMAW, SAW, PAC and Oxy/fuel cutting processes.
- 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.
- 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.
- 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.
- 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.
- 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 close relationship 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.
- Articulate well-considered ideas and written claims to an academic audience, using effective rhetorical techniques, properly credited evidence, and a command of Standard English. (GE)
- Demonstrate and clearly explain an effective strategy to solve a quantitative problem. (GE)
- Demonstrate interpersonal/human relations skills. (GE)

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...

Women's Studies (AC)

For students who want expertise in women's issues, this Academic Concentration 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 175	INTRODUCTION TO LGBTQ STUDIES	5 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.
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

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:

- Describe foundational concepts in Women's Studies such as: the personal is political; the waves of feminism; the diversity of women's experiences; the difference between sex and gender; the history of feminist activism for social justice; and, women's contributions to culture, politics, history, etc.
- Explain the social construction of identity and difference, analyzing power, privilege and inequality from feminist theoretical perspectives, distinguishing the intersections between gender and other social and cultural identities, such as race, sex, class, ethnicity, national origin, religion, class, ability and sexuality, and locating oneself within the hierarchy of identities.
- Analyze institutional, ideological, and individual components that maintain or challenge systems of oppression in contemporary U.S. society and throughout the world.

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:

- Spanish
- Japanese
- American Sign Language
- 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 Joyo
- Other Study Abroad

Clark College is a member of the Washington Community College Consortium for Study Abroad (WCCCSA), which offers term-long programs in London, England; Paris, France; Florence, Italy; and Alajuela, Costa Rica. Contact an advisor in the International Center for more information.

American Sign Language (AC)

For students who want expertise in American Sign Language, this Academic Concentration may be earned along with a regular AA 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

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:

- Participate in most formal and informal conversations on general topics in ASL.
- Analyze 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 using ASL.
- Identify the rules of behavior, values, beliefs and etiquette of Deaf culture.

Section D:
Course Descriptions

SECTION D: Course Descriptions

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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, HR, 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 outcomes; and determining criteria and methods for termination or graduation from group.
- 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 cat.
- 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 historic substance use; health, mental health, and substance related history; mental status and current social, environmental, and/or socioeconomic constraints.

- Screen for psychoactive substance toxicity, intoxication, and withdrawal symptoms, aggression or danger to other, 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 pharmocological 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, health, mental health and substance related treatment history, mental status and current social, environmental and/or economic constraints.
- 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

3 Credits 33 hours of lecture

Skills to reduce impact of air- and blood-borne pathogens on addition clients. HIV/AIDS, pathogen, and suicidality 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 infectious diseases

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, HR]

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 confidentially 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 infectious diseases.
- 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 term 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 socio-ecological 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 term 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.
- Display skill in rendering and sensitivity in mark making to create the illusion of depth, texture, movement, and space.
- Critique works in terms of technique, design, composition, and content using discipline appropriate vocabulary.

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 design.
- Critique works in terms of technique, design, composition, and content using discipline appropriate vocabulary.
- 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 design.
- Demonstrate technical skill, care in handling materials and purposeful execution.
- 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.
- Demonstrate proficiency in color perception, mixing, and application.

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.

DARKROOM PHOTOGRAPHY

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 tolls, 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. Concurrent enrollment in ART 273 is encouraged for Graphic Design AFA and CP students. Prerequisite: CGT 102 and Consent of Graphic Design Program. [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.
- Analyze patterns of power, privilege and inequity

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.
- Analyze patterns of power, privilege and inequity

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.
- Analyze patterns of power, privilege and inequity

ART IN THE TWENTIETH CENTURY

ART 223
5 Credits 55 hours of lecture

Survey of visual arts and architecture of the Modern and Postmodern periods and beyond. Topics include how art and architecture were influenced by rapidly changing technologies in Europe and the Americas: how artists use iconography, composition, materials, technique and style to achieve their effects; the impact of art criticism; and artists' reflections on contemporary events and ideologies. We also explore the role of race and gender in the business of art. [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.
- Analyze patterns of power, privilege and inequity

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 inequity.
- 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 mixing color, handling paint, rendering proportion, and crafting the illusion of depth.
- 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

color, handling paint, rendering proportion, and crafting the illusion of depth.
- Display design skills in the compositional arrangement of shape, line, color, value, etc. within a painting.
- Critique works in terms of technique, design, composition, content, and historical context 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 color, handling paint, rendering proportion, and crafting the illusion of depth.
- Display design skills in the compositional arrangement of shape, line, color, value, etc. within a painting.
- Critique works in terms of technique, design, composition, content, and historical context 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. Concurrent enrollment in ART 270 is encouraged. Prerequisite: ART 174, CGT 103 and Consent of Graphic Design Program. [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 HISTORY

ART 272
5 Credits 55 hours of lecture

A survey of influential individuals, artifacts, technologies and intellectual thought in graphic design from its origins to contemporary practice. Emphasis on the development of a visual vocabulary and providing historical and cultural context for design practice. [HA, SE] [PNP]

Course Outcomes:

- Evaluate the role and influence graphic design has in a consumer society.
- Write, debate and speak intelligently about art, design and technology.
- Recognize and describe how art history, design history, contemporary trends and pop culture provide context for graphic design.
- Discuss how cultural context, social human factors, and the global environment inform and shape design decisions.

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. Concurrent enrollment in ART 208 is encouraged for Graphic Design AFA and CP students. Prerequisite: ART 173, CGT 102 and Consent of Graphic Design Program. [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.

GRAPHIC DESIGN STUDIO III

ART 274
4 Credits 22 hours of lecture
44 hours of lab

Third of three applied-design studio courses, with focus on longer-term projects based on real-world communication design problems with the goal of preparing the student for professional practice. Goal includes portfolio-quality graphic design work such as a personal identity and self-promotional package. Recommended concurrent

enrollment with ART 215 - Portfolio Development. Prerequisite: A grade of "C" or better in ART 273. [HB, SE]
Course Outcomes:

- Analyze target audience and needs to develop effective graphic design solutions.
- 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.
- 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.
- Work with printers, programmers and other third parties to determine pricing estimates and production workflow.
- Prepare a client brief or proposal, including business, marketing, timeline and technical requirements.
- 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.
- Communicate and clarify ideas through well-written business correspondence, proposals, instructions, design summaries and client briefs.
- Write, debate and speak intelligently about art, design and technology.
- Assemble, design, discuss and present a graphic design portfolio.
- Identify professional organizations, industry resources and networking opportunities in the graphic design community.
- Familiarize yourself with the pros and cons of business practices and managing client expectations.

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 Credit 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 Credit 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 Credit 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 language.

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

INTRODUCTION TO TOYOTA

AUTO 150
5 Credits 22 hours of lecture
66 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 33 hours of lecture
110 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 33 hours of lecture
110 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
8 Credits 33 hours of lecture
110 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 and 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
8 Credits 44 hours of lecture
88 hours of lab

First managed internship experience in a Toyota/ Lexus dealership, with focus on practicing skills learned throughout the first term 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
8 Credits 33 hours of lecture
110 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 33 hours of lecture
110 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 33 hours of lecture
110 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" driveability fault; document diagnostic strategy and determine needed repair.
- Diagnose and repair an EVAP system Leak and / or Failure.

INTRODUCTION TO DEALERSHIP OPERATIONS

AUTO 160
5 Credits 22 hours of lecture
66 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 33 hours of lecture
110 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 33 hours of lecture

110 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 maintantence service procedures.

BRAKES

AUTO 163

8 Credits 33 hours of lecture

110 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

8 Credits 44 hours of lecture

88 hours of lab

Provides students with a managed internship experience in an automotive dealership. Students will focus on practicing skills learned throughout their first term 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

8 Credits 33 hours of lecture

110 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 measurment and adjustment.
- Demonstrate proficiency in diagnosing tire wear and handling concerns.

ENGINE PERFORMANCE I

AUTO 166
8 Credits 33 hours of lecture
110 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 driveability concerns based on engine mechanical failures.
- Diagnose driveability concerns based on ignition failures.
- Diagnose driveability 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 33 hours of lecture
110 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

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.

TOYOTA CLIMATE CONTROL

AUTO 250
8 Credits 33 hours of lecture
110 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
8 Credits 44 hours of lecture
88 hours of lab

Second managed internship experience in a Toyota/Lexus dealership, with focus on practicing skills learned throughout the second term 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 33 hours of lecture
110 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
8 Credits 33 hours of lecture
110 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
8 Credits 33 hours of lecture
110 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
8 Credits 44 hours of lecture
88 hours of lab

Third managed internship experience in a Toyota/Lexus dealership, with focus on practicing skills learned throughout the third term 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
8 Credits 33 hours of lecture
110 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
8 Credits 44 hours of lecture
88 hours of lab

Provides students with a managed internship experience in a dealership. Students will focus on practicing skills learned throughout their term 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 33 hours of lecture
110 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
8 Credits 33 hours of lecture
110 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
8 Credits 33 hours of lecture
110 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
8 Credits 44 hours of lecture
88 hours of lab

Provides students with a managed internship experience in a dealership. Students will focus on practicing skills learned throughout their term 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.

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 term 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.

BAS Applied Management

FOUNDATIONS OF MANAGEMENT
BASAM301
5 Credits 55 hours of lecture

Serves as the core and foundation for the Bachelor of Applied Science in Applied Management Program. It merges both theories and management practices to serve as a practical tool for managers. Stresses good management practices and higher-level decision making by ensuring that current changes in industry and technology are applied to problem-solving and innovative sources for the growth and survival of an organization. [GE]

Course Outcomes:
- Apply the four management functions specific to organizational needs.
- Assess organizational structures and design to ensure appropriateness to present realities and needs.
- Prepare a control system for specific management tasks.
- Analyze work and task design to ensure for efficiencies and up-to-date design and best uses of technologies.
- Design innovative strategies for organizational change.
- Demonstrate effective motivational techniques for productive work processes.

SOCIAL MEDIA IN BUSINESS
BASAM305
5 Credits 55 hours of lecture

With the growth of Internet and the popularity of social media among consumers, companies now communicate with consumers in what is becoming the new wave. Covers the knowledge and theories of these growing areas by illustrating topics such as E-commerce, E-marketing strategy, social media marketing strategy, social consumers in digital communities, and measuring the impact of social media marketing. Primary focus is to understand how marketing activities can be implemented, via Internet and social media, to reach target customers and strategic objectives. [GE]

Course Outcomes:
- Comprehend the marketing strategy applications enabled by the Internet technology.

- Assess the influence of new media and social networks on consumer behavior and marketing responses and analyzing the functions of each.
- Examine the effectiveness of e-commerce and social network platforms for marketing and customer communications and devise marketing and news media planning for e-commerce.
- Apply terminology related to the use of social media in a marketing context.
- Develop both proactive and reactive strategies to manage corporate messaging in a social media environment.
- Identify and respond to significant legal and ethical issues related to social media, including laws and voluntary agreements covering protection of individual and institutional information and data.

BUSINESS RESEARCH APPLICATIONS

BASAM320

5 Credits 55 hours of lecture

Introduces students to quantitative and qualitative research methods. Topics include customized research methodology to fit specific types and sizes of businesses and organizations, application of the research results for informed and relevant management decisions, and an examination of ethical research standards. Case methods will be applied to practical situations. Prerequisite: A grade of "C" or better in MATH& 146, or MATH 203 and MATH 204, or an equivalent math course. [CP]

Course Outcomes:

- Clarify the research question through secondary data and exploration.
- Design business research methodology to include qualitative research, observation studies, experiments, and surveys that best serves the purpose of the research.
- Collect the data and interpret the results.
- Develop a model of implementation.
- Evaluate the applications for ongoing quality and productive oversight.

BUSINESS PRINCIPLES

BASAM325

5 Credits 55 hours of lecture

Provides a study of various facets of business, from economic systems to forms of business and from ownership to considerations for running a business. Students will learn various aspects of business, management, and leadership functions; organizational considerations; and decision-making processes. Financial topics are introduced including accounting, money and banking, and securities markets. Also included are discussions of business challenges in the legal and regulatory environment, business ethics, social responsibility, and international business. [GE]

Course Outcomes:

- Analyze internal and external factors which make up a dynamic business environment.
- Evaluate stakeholders and the impact on an organization.
- Explain the impact globalization has on business.
- Demonstrate the ability to assess business cycles.
- Evaluate the best legal forms for a business.
- Create a reflective component on the necessity to understand business models and practices.
- Assess the environment of an organization including political, economic, and social factors.

ACCOUNTING PRINCIPLES FOR MANAGERS

BASAM330

5 Credits 55 hours of lecture

This is a BASAM foundation course in accounting theory and principles, applications, and language, with emphasis from a manager's perspective for the requirement to measure and control. Students will analyze balance sheets, income statements, cash flow statements, cost behavior, financial statement interrelationships, financial analysis, product costing, and budgetary control systems. Topics include information reporting for planning, coordinating, and monitoring the performance of an organization. [GE]

Course Outcomes:

- Explain the primary relationship between the balance sheet, income statement, and statement of cash flows.
- Evaluate the statement of cash flows and internal information reporting for financing demands and decisions.
- Apply accounting and financial factors to budgeting, product costing, and planning decisions.
- Evaluate organizational performance based on accounting and financial results.
- Develop pro-forma or projected accounting scenarios for differing situations or environments.
- Create the financial section of a business plan for a hypothetical organization.

LEGAL ISSUES IN MANAGEMENT

BASAM335

5 Credits 55 hours of lecture

Explores the state and federal laws that affect management behavior and organizational practices, including contracts, business organizations, employment law, product liability, safety issues, and environmental regulations.

Special attention is given to issues surrounding business start-up and intellectual property. Each student will develop a portfolio/notebook of topics related to his/her career choice. [GE]

Course Outcomes:

- Comprehend the state and federal laws that affect management behavior and organizational practices.
- Understand the legal issues concerning contracts, business organizations, employment law, products liability, safety and environmental regulations.
- Assess the issues surrounding business start-up and intellectual property.
- Create an electronic portfolio component to demonstrate your understanding and competency in legal issues in management.

MARKETING FOR MANAGERS

BASAM340

5 Credits 55 hours of lecture

Develops the marketing knowledge and skills necessary for a successful manager of a profit business firm or a non-profit organization. Helps students identify and satisfy customers' needs and wants. Focuses on key aspects of marketing for firms both large and small, such as marketing research; target market planning and segmentation; product planning, pricing, promoting, and placement (general distribution); international marketing; and the development of general marketing goals, strategies, and their implementation, with a view toward quality societal standards. Students will develop a comprehensive marketing plan. [GE]

Course Outcomes:

- Implement the fundamental marketing functions in organizations and global business environment.
- Evaluate the social, legal, political, and ethical concerns in marketing.
- Develop effective strategic and analytic marketing skills.
- Demonstrate an individual capability for meeting professional standards of conduct, quality and skill.
- Determine customer need in order to develop solutions that build value, satisfaction, and loyalty.
- Compare consumer markets and the influence on their behavior and buying decisions, including business- to- business and business- to- government models.
- Create effective comprehensive marketing plan.

HUMAN RESOURCE MANAGEMENT

BASAM400

5 Credits 55 hours of lecture

Studies the fundamental principles and techniques of personnel management and examines the management of human resources from the point of view of the personnel officer, the operational manager, and the employee. Examines the responsibilities of organizational leadership for incorporating human resource issues in strategic planning and initiatives. Emphasis is placed on current legal considerations, issues, and research. [GE]

Course Outcomes:

- Introduce the role of Human Resource Management (HRM) in the attainment of foundational skills, performance, and compliance.
- Identify effective versus ineffective HRM practices to include hiring, promoting, working with diverse population, safety practices, and motivating employees.
- Synthesize information regarding the effectiveness of recruiting methods and the validity of selection procedures to make appropriate staffing decisions.
- Design a training program using a useful framework for evaluating training needs, designing a training program, and evaluating training results.
- Demonstrate knowledge of employee benefit concepts, plan design, administrative considerations and regulations governing employee benefit practices.
- Properly interpret salary survey data and design a pay structure with appropriate pay grades and pay ranges for a performance-based pay system.
- Create an electronic portfolio component to demonstrate your understanding and competency in human resources management.

PROJECT MANAGEMENT

BASAM410

5 Credits 55 hours of lecture

Studies the concepts, issues, and approaches important in effectively managing projects. Topics include project selection, project planning, negotiation, budgeting, scheduling, resource allocation, project control, project auditing, and project termination. Topics are viewed from a managerial perspective. [GE]

Course Outcomes:

- Comprehend and analyze the variety of concepts and issues involved in project management.
- Understand the types of decisions a project manager must make to effectively complete a project on time and on budget. Understand the conflicting demands from different parties on the manager.
- Use project management software such as Microsoft Project.
- Evaluate and select the most desirable projects. Identify the key risks and appropriate approaches.

- Identify desirable characteristics of effective project managers.
- Apply appropriate techniques to assess ongoing project performance.
- Apply concepts from this course to a real project management environment, with a project schedule, budget, and a financial plan.

FINANCIAL MANAGEMENT

BASAM415

5 Credits 55 hours of lecture

Shows managers how to interface with accounting and finance departments, facilitating their understanding of how firms meet their financial objectives, utilizing financial decision making. Describes financial tools and techniques which can be used to help firms maximize value by improving decisions relating to capital budgeting, capital structure, and working capital management. Topics also include multinational financial management, risk management, mergers, and acquisitions. [GE]

Course Outcomes:

- Explain the characteristics of different financial assets such as money market instruments, bonds, and stocks, and how to buy and sell these assets in financial markets.
- Summarize the benefit of diversification of holding a portfolio of assets and the importance played by the market portfolio.
- Apply different valuation models to evaluate fixed income securities, stocks, and how to use different derivative securities to manage their investment risks.
- Explain how financial markets are globally integrated, discussing relevant cases and examples involving international companies.
- Organize financial transactions effectively and with integrity.

OPERATIONS AND LOGISTICS

BASAM425

5 Credits 55 hours of lecture

Studies the physical movement and storage of goods, such as raw materials, semi-finished and finished goods, and all the associated managerial activities that are important for effective control. Close attention is paid to managerial concepts and responsibilities such as transportation, inventory, warehousing, packaging, materials handling, network design, and customer service. Covers the importance of interrelationships between logistics and production, marketing, financial management, and quality control. [GE]

Course Outcomes:

- Specify the role and goal of the Logistics function within a company.
- Use the basic tools and techniques to plan and improve all aspects of the supply chain.
- Describe the control systems that can be used for operations management in a wide variety of environments.
- Acquire knowledge of up-to-date systems and approaches of managing operations in service organizations.
- Understand how to build an efficient and effective service organization.
- Understand modern concepts and applications of logistics management in supply chain and global business environments.

CAPSTONE: STRATEGIC MANAGEMENT & POLICY

BASAM440

5 Credits 55 hours of lecture

Focuses on the key aspects that must be addressed for sustained organizational success, effective problem solving, and the capture of opportunities from the perspective of the general manager or the entrepreneur. Topics include strategic issues facing organizations such as the global economy, regulatory changes, competitive pressures, challenges from non-traditional competitors, and the identification and realization of new products; financial analysis, decision-making, communications, and the leadership required to affect and sustain positive organizational change. Complex case studies of both commercial and non-profit entities will be used to immerse the students in the integrated complexities that general managers face. [GE]

Course Outcomes:

- Apply real-world solutions for serious challenges to organizations, recommending innovation, differentiation, and motivational strategies.
- Devise a competitive advantage proposal for domestic and/or global markets.
- Synthesize the BASAM program outcomes with technical skills for a value-added learning experience.
- Choose the appropriate analytical tools to determine the facts and trends relevant to an issue, an opportunity, and internal capabilities of an industry structure.
- Recognize and incorporate the ethical regulatory requirements and customer/client expectations in order to develop feasible solutions.
- Establish goals, strategic objectives and specific financial measures, directly related to the effective management of challenges.

APPLIED MANAGEMENT INTERNSHIP

BASAM450

5 Credits 11 hours of lecture
132 hours of clinical

Designed to provide students with major-related, supervised, and evaluated practical training work experiences which may be paid or voluntary. Students will be graded on the basis of the quality of documented learning acquired through hands-on, new experiences in an actual work setting. The course-related outcomes will be designed and agreed to by the student, the organization providing the internship, the faculty member teaching this course, and the BASAM program lead- faculty member. (Four credits application/one credit seminar). [GE]

Course Outcomes:

- Analyze industry categories for personal and professional goals that fit with interests and abilities.
- Directly apply the learning achieved from the BASAM course work to specific opportunities that exist in an organization.
- Engage in an on-site work experience, supporting the value and mission of a chosen organization, applying competencies learned and seeking new learning opportunities.
- Articulate the key challenges and opportunities that the organization encounters.
- Develop an action plan for a defined organizational issue/problem or situation, utilizing the student's acquired skills to provide meaningful and practical input to the organization.
- Establish collaborative and sustainable relationships at a chosen organization.

Biology

SURVEY OF BIOLOGY

BIOL&100

5 Credits 33 hours of lecture
44 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, 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 ANTIBIOTICS RESEARCH 1

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] [PNP]

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.

SMALL WORLD ANTIBIOTICS RESEARCH 2B

BIOL 106

5 Credits 33 hours of lecture

44 hours of lab

Focuses on research to discover new antibiotics to help alleviate the current worldwide crisis of antibiotic-resistant bacteria including microbial cell structure, growth, genetics and antibiotic production, DNA sequencing, PCR, nanopore-based genome sequencing, and bioinformatic analysis. Lab work will focus on determining, analyzing and "mining" the genome sequence of antibiotic-producing bacteria isolated in BIOL 105, with the aim of discovering novel antibiotics. Strong emphasis on scientific inquiry including critical thinking, laboratory research methodology, and communication abilities. Prerequisite: A grade of "C" or better in BIOL 105 or consent of Instructional Unit. [NS, GE, SE] [PNP]

Course Outcomes:

- Demonstrate an understanding of the principles of microbial genetics, DNA sequencing, genomics, bioinformatics analysis, and molecular biological lab techniques, especially as they relate to antibiotics.
- Demonstrate an ability to apply the process of science as it relates to the design, implementation and evaluation of results of experimentation using standard scientific methodologies such as hypothesis formulation and testing.
- Clearly communicate research results and complex scientific information (via oral, written and visual formats) both within a discipline, and to other disciplines.
- Demonstrate an ability to analyze, interpret and critically evaluate information presented in the scientific literature and other media.
- Demonstrate an appreciation of research science and its relevance to solving a human societal issueóthe antibiotic crisis.
- Demonstrate an ability to interpret biological phenomena using information from multiple scientific disciplines.

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 Credit33 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.

BIOETHICS

BIOL 180
3 Credits 33 hours of lecture

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. [GE, NS, SE]

Course Outcomes:

- Define bioethics and explain the fundamentals of the ethical theories and principles that apply to bioethical dilemmas.
- Evaluate multiple perspectives concerning bioethical issues and recognize that different value systems may lead to different ethical decisions.
- Understand the development of the process of moral development of humans and how society and its laws affect this development.
- Demonstrate an understanding of the complexity of bioethical issues and the processes used to build resolution.
- 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.

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

The first in a two-term 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

The second in a two-term 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

The first in a three-term 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, muscel 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 skeletal system, muscle tissue and the muscular system, and neuronal membranes.
- Explain biological concepts (above) using effective written communication skills.

HUMAN A & P II

BIOL&252

5 Credits 33 hours of lecture

The second in a three-term 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 systems, development and inheritance.
- Explain biological concepts (above) using effective written communication skills.

HUMAN A & P III

BIOL&253

5 Credits 33 hours of lecture

The third in a three-term 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 systems, development and inheritance.
- Explain biological concepts (above) using effective written communication skills.

MICROBIOLOGY

BIOL&260

5 Credits 33 hours of lecture

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 66 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. .
- Distguish 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 proportion.

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 tex,t 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 nonverbal 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 health care provider and patient, patient paperwork and payments, review of HIPAA compliance, various aspects of office management and skills therein (to include office accounting) and prioritization of duties in a medical office.

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. Implica-

tions 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. Tecognize 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 Credit 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 (HIPPA) 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 HLTH 124 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 complay 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:

- Student hand book with tracking of all course outcomes. Need to be completed, signed and returned after 200 hours are completed.
- Preceptor hand book with tracking of all course outcomes. Need to be completed, signed and returned after 200 hours are completed.
- Sit and pass the CMA (AAMA) exam, as well as Washington State National (NCCT) exam.
- Become employed as a medical assistant.

HEALTH INFORMATION PROCEDURES

BMED 222
5 Credits 44 hours of lecture
22 hours of lab

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. Perform as an exemplary employee.
- 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 Credit 33 hours of clinical

Supervised learning in a clinic, medical center, campus, or other health care facility to practice medical office administrative and HIIM responsibilities. Topics include 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. 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 technician. 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.

INTRODUCTION TO PATIENT NAVIGATION & ADVOCAC

BMED 233
5 Credits 55 hours of lecture

Introduction to the knowledge, skills, and attitudes necessary to apply care navigation for the benefit of the client. The content focuses on the healthcare systems, client profiles and needs, communication basics, an introduction to chronic illness, and health coaching.

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.

INTERMEDIATE PATIENT NAVIGATION & ADVOCACY

BMED 234
5 Credits 55 hours of lecture

Builds on the foundations developed in Introduction of Patient Navigation & Advocacy. Additional topics covered are care coordination and navigation, client characteristics, an overview of behavioral health, strategies to influence outcomes, and advanced communications. Prerequisite: Successful completion with a "C" or better in BMED 233 or consent of the Instructional Unit.

Course Outcomes:

- Define care coordination, plan of care (POC) care transitions, continum 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.

ADVANCED PATIENT NAVIGATION & ADVOCACY

BMED 235
5 Credits 55 hours of lecture

Builds on the concepts covered in Intermediate Patient Navigation & Advocacy. Additional topics covered are care transitions, preventive healthcare, continued discussion of chronic illness, end of life care, and challenges particular to care navigation. Prerequisite: Successful completion with a "C" or better in 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.

AGING AND THE AGING POPULATION

BMED 237

2 Credits 22 hours of lecture

Covers topics surrounding the specific needs, conditions and support for the aging population to include strategies leading toward positive patient experience and outcomes. This coursework is highly recommended for all students who might work with or care for an elderly person. [GE]

Course Outcomes:

- Describe the psychosocial and biolgical theories of aging.
- Identify unique characteristics of coordination and navigation with older adults and their families.
- Examine chronic diseaese common to oker adults.
- Examine wellness and prevention strategies for older adults.
- Develop culturally appropriate health literacy and communication skills in working with older adults.
- Plan successful transistion for patients/clients throughout the continuum of care.

BEHAVIORAL HEALTH AND CARE COORDINATION

BMED 238

2 Credits 22 hours of lecture

Topics covered in this course address the specific needs, conditions and support for patients with mental or behavioral health issues. In addition to an overview of mental/behavioral health this course will deal specifically with Mental Health First Aid, how to deal with anxiety, depression, suicide and other common mental/behavioral health issues including strategies leading toward positive patient experience and outcomes. [GE]

Course Outcomes:

- Define behavioral health navigation for working with individuals and families.
- Describle current system and referral processes of behavioral health services.
- Identify needs of specific behavioral health populations such as, children, older adults and culturally specific communities.
- Increase behavioral health literacy for the individuals and communities of need.
- Describe ways to engage interdisciplinary primary care and behavioral health team members in the coordination of intervention and care.
- Demonstrate the skills necessary to identify the risk factors and signs of addiction and/or mental illness, in order to facilitate early detection, intervention and referral.

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 term 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.

CAPSTONE

BMED 299

2 Credits 11 hours of lecture

22 hours of lab

Capstone project to expand knowledge by studying selected BMED topics. Normally taken during the final term of the program. Application of many topics covered in the other program courses in a simulated employee team or small group setting. Projects must be pre-approved by the instructor.

Course Outcomes:

- This course has been officially deleted.

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, 102, and 190) are taught as individualized instruction through self-paced study. Students register for BTEC 100. At the end of the term, registration will automically 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 term, 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. Students must be able to type at least 30 words per minute by touch to register for this course. Business Technology majors who type at least 30 words per minute by touch must enroll in this course. Continuous enrollment, flexible time, individualized program. Satisfactory completion meets prerequisite for BTEC 120, Document Formatting. [GE]

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. [CA,GE]

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, etcÖ).
- 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. [CA,CT,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 Credit 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] [PNP]

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 Credit 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 Credit 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 experi-

ence 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 Credit 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]

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 Credit 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] [PNP]

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 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 enroll-

ment 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 120 (or 122). [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]

Course Outcomes:

- Key straight copy for five minutes 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] [PNP]

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 term 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. Prerequi-

site: 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 wreconcile 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, HR] [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: Eligibility for MATH 089 or higher or a grade of "C" or better in CAP 042 or consent of Instructional Unit. [CP]

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 dramatic internationalization of markets. Also, recognize the key arguments for and against the globalization of business, and the reasons for entering foreign markets.
- 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 the size, growth, and direction of foreign direct investment.
- 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 institutions, the IMF and the World Bank.
- 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 sources and their broad business implications. Explain the major characteristics of sustainable business, and the concept of environmental sustainability and its potential influence on business.

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 telephone communications; projecting a professional image; demonstrating the knowledge, attitudes, and skills necessary for a successful job performance.
- 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 distribution whether it is uniform or normal distributions.
- 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.

INFERENTIAL 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 with z-score and t-test tables and calculations.
- 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.

INTRODUCTION TO E-BUSINESS

BUS 210

5 Credits 55 hours of lecture

Introduction to e-Business includes topics such as email, EFT (electronic fund transfers), barcoding, etc.. This will be a 5 credit course that deals with the fundamentals of conducting business online. This course will help assist students better understand the strategies on conducting business online. Other issues include, international standards, ethics, business strategy, electronic marketing. Examination of e-Business in altering the structure of entire industries, and how it affects business processes including electronic transactions, supply chains, decision making and organizational performance. The exponential growth in the last few years of the Internet and its related technologies has created new ways of communication and trading. [PNP]

Course Outcomes:

- Students will be familiar with nuances of conducting business online.
- Students will be presenting an e-business plan at the end of the term.
- Students will compare the electronic VS mobile commerce.

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. [CA,CT,WC,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 attention, using direct/indirect approach, using passive/active voice, buffering, reducing resistance.).

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/service, and pricing strategy.
- 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 strategy, and pricing strategy.
- 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 term 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 Credit 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 Credit 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 contraints and relations in moderately complex sketchs.
- 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.

SOLIDWORKS FOR THE TRADES

CADD 161
3 Credits 11 hours of lecture
44 hours of lab

Intended for machinists, welders, and others involved directly in manufacturing. Provides a core foundation of the use of the SolidWorks CADD application. Focuses on part modeling with an emphasis on evaluation of part models for geometric and other properties. Also includes sheet metal part modeling and file export for subsequent CNC manufacturing. Prerequisite: Completion of with a grade of "C" or concurrent enrollment in WELD 110 or MACH 241.

Course Outcomes:

- Identify features and their function on the SolidWorks interface.
- Create, open, and save part, drawing, assembly, and

template documents, and export to other file types for subsequent manufacture.
- Create and modify moderately complex parametric 2D sketches.
- Create and modify moderately complex parametric part features.
- Use evaluation tools to inspect part geometries and properties.
- Create and flatten sheet metal part models.

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.

ADVANCED REVIT

CADD 172
4 Credits 16 hours of lecture
55 hours of lab

Continuation of Revit training beyond CADD 170 and CADD 171. Focuses on the following aspects of Revit: family creation, templates, advanced visibility, filters, schematics, and parameters and constraints. Prerequisite: A grade of "C" or better in CADD 171.

Course Outcomes:
- Create, modify, and use families within Revit.
- Create and use template files.
- Use advance visibility techniques.
- Use filters.
- Create, modify, and use schedules.
- Use parameters and constraints.

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 AutoLSIP 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).

TECHNICAL STATICS & STRENGTHS

CADD 215
3 Credits 22 hours of lecture
22 hours of lab

Introduction to technical statics and strength of materials. Topics introduced include 2D force and moment systems, static equilibrium, mechanical properties, stress and strain, beams and trusses, buckling, and moment of inertia. Concurrent enrollment in CADD 216. Prerequisite: A grade of "C" or better in MATH 103. [GE]

Course Outcomes:

- Discuss and apply static equilibrium in design problems.
- Discuss and apply mechanical properties of material in design problems.
- Discuss and apply mechanics of materials in solving design problems.

INTEGRATED COMPUTATIONAL DESIGN

CADD 216
3 Credits 11 hours of lecture
44 hours of lab

Use of computational SolidWorks Simulation CADD applications in the design and analysis of engineering problems. Also, use of integrated surface/solid modeling techniques, motion analysis, and use of CADD in documentation of designs and analyses. Concurrent enrollment in CADD 215 Prerequisite: A grade of "C" or better in ENGR 150 or CADD 150, and MATH 103. [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. 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. 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.

INTENSIVE 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 Intensive Fast Track 1, students will have gained the study skills as well as the academic skills to transition into Fast Track 2, Integrated English CAP coursework or I-BEST. HS21+ students will also receive Occupational Education credit toward their HS21+ diploma. Prerequisite: Current CASAS test scores in all skills. CASAS test score between 211 and 220 in reading. ESL students must score at least 211 in listening. Or successful completion of Intensive Explorations (ESL 045, ESL 057, ESL 049) or Explorations (ESL 046, ESL 048).

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.

INTENSIVE FAST TRACK 1: WRITTEN COMMUNICATION

CAP 012

6 Credits 66 hours of lecture

Improve the ability to read with understanding and convey your ideas in writing. Upon successful completion of Intensive Fast Track 1, students will have gained the study skills as well as the academic skills to transition into Fast Track 2, Integrated English CAP coursework or I-BEST. HS21+ students will also receive Occupational Education credit toward their HS21+ diploma. Prerequisite: Current CASAS test scores in all skills. CASAS test score between 211 and 220 in reading. ESL students must score at least 211 in listening. Or successful completion of Intensive Explorations (ESL 045, ESL 057, ESL 049) or Explorations (ESL 046, ESL 048).

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.

INTENSIVE FAST TRACK 1: ORAL COMMUNICATION

CAP 013

3 Credits 33 hours of lecture

Improve the ability to listen actively and speak so others

can understand. Upon successful completion of Intensive Fast Track 1, students will have gained the study skills as well as the academic skills to transition into Fast Track 2, Integrated English CAP coursework or I-BEST. HS21+ students will also receive Occupational Education credit toward their HS21+ diploma. Prerequisite: Current CASAS test scores in all skills. CASAS test score between 211 and 220 in reading. ESL students must score at least 211 in listening OR successful completion of Intensive Explorations (ESL 045, ESL 057, ESL 049) or Explorations (ESL 046, ESL 048).

Course Outcomes:

- Complete an informational interview.
- Give a professional presentation with group members.
- Give an individual presentation.

INTENSIVE FAST TRACK 1: TECHNOLOGY

CAP 014

3 Credits 33 hours of lecture

Improve the ability to use technology. Upon successful completion of Intensive Fast Track 1, students will have gained the study skills as well as the academic skills to transition into Fast Track 2, Integrated English CAP coursework or I-BEST. HS21+ students will also receive Occupational Education credit toward their HS21+ diploma. Prerequisite: Current CASAS test scores in all skills. CASAS test score between 211 and 220 in reading. ESL students must score at least 211 in listening OR successful completion of Intensive Explorations (ESL 045, ESL 047, ESL 049) or Explorations (ESL 046, ESL 048).

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.

INTENSIVE 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 Intensive Fast Track 1, students will have gained the study skills as well as the academic skills to transition into Fast Track 2, Integrated English CAP coursework or I-BEST. HS21+ students will also receive Occupational Education credit toward their HS21+ diploma. Prerequisite: Current CASAS test scores in all skills. CASAS test score between 211 and 220 in reading. ESL students must score at least 211 in listening OR successful completion of Intensive Explorations (ESL 045, ESL 047, ESL 049) or Explorations (ESL 046, ESL 048).

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.

FAST TRACK 1: ORAL COMMUNICATION/ TECHNOLOGY

CAP 016

6 Credits 66 hours of lecture

Development of computer skills to support your ability to listen actively and speak so others can understand in the context of college and work. Upon successful completion of Fast Track 1 (both CAP 016 and CAP 018), students will have gained the study skills as well as the academic skills to transition into Fast Track 2, Integrated English CAP coursework or I-BEST. HS21+ students will also receive Occupational Education credit toward their HS21+ diploma. Prerequisite: Current CASAS test scores in all skills. CASAS test score between 211 and 220 in reading. ESL students must score at least 211 in listening. OR successful completion of Intensive Explorations (ESL 045, ESL 047, ESL 049) or Explorations (ESL 046, ESL 048).

Course Outcomes:

- Give presentations using accurate conventions and format appropriate to the purpose and audience.
- Communicate with others one-one and in small groups in contexts necessary for college and workplace success.
- Use technology to enhance oral communication appropriate to the purpose and audience.

FAST TRACK 1: WRITTEN COMMUNICATION/ TECHNOLOGY

CAP 018

6 Credits 66 hours of lecture

Development of computer skills as you improve your ability to read with understanding and convey your ideas in writing. Upon successful completion Intensive Fast Track 1 (both CAP 016 and CAP 018), students will have gained the study skills as well as the academic skills to transition into Fast Track 2, Integrated English CAP coursework or I-BEST. HS21+ students will also receive Occupational Education credit toward their HS21+ diploma. Prerequisite: Current CASAS test scores in all

skills. CASAS test score between 211 and 220 in reading. ESL students must score at least 211 in listening. OR successful completion of Intensive Explorations (ESL 045, ESL 047, ESL 049) or Explorations (ESL 046, ESL 048).

Course Outcomes:

- Apply reading strategies to demonstrate understanding of a variety of texts.
- Create professional documents with accurate conventions and format appropriate to the purpose and audience.
- Use technology to enhance written communication appropriate to the purpose and audience.

FAST TRACK2: COMMUNICATION FOR COLLEGE TRANSITION

CAP 021

7 Credits 77 hours of lecture

Development of both oral and written communication skills both face-to-face and on-line, focusing on college readiness. Upon successful completion of Fast Track 2: Communication for College Transition, students will have gained the skills to transition into Integrated English CAP coursework or I-BEST. HS21+ students will also receive elective credit toward their HS21+ diploma. Prerequisite: Current CASAS test scores in all skills. CASAS test score 221 or higher in reading. OR successful completion of Intensive Fast Track 1 (CAP 011, CAP 012, CAP 013, CAP 014, CAP 015) or Fast Track 1 (CAP 016, CAP 018).

Course Outcomes:

- Demonstrate creative thinking related to problem and solution using appropriate vocabulary, grammar, and pronunciation to carry out the task.
- Demonstrate study skills, classroom and online behavior appropriate in a college setting, including working collaboratively.
- Communicate clearly utilizing communication strategies and content knowledge appropriate for intended audience and purpose.
- Use technology (Canvas, e-mail, Google Docs, etc.) appropriately for the intended purpose and audience.
- Support claims with evidence in writing using appropriate conventions for the task, purpose and audience.

WASHINGTON STATE HISTORY

CAP 031

3 Credits 33 hours of lecture

For students who want to prepare for the GED or the HS21+ diploma 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 award 1 credit for WA State History toward the HS21+ diploma. Prerequisite: CASAS scores of 221-255.

Course Outcomes:

- Identify and determine facts and key events in WA's timeline from birth of the state to present
- Observe, discuss, and write about WA's Native American Heritage
- 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
- Identify and demonstrate an understanding of the Washington State government structure, current leaders, government trends, and major political parties

WASHINGTON STATE HISTORY & FINE ARTS

CAP 032

7 Credits 77 hours of lecture

For students who want to earn credits toward their High School 21 diploma, prepare for the GED test or improve their skills to transition to college-level courses. Students will gain a deeper understanding of WA State History and how it relates to Fine Arts. Successful completion of the course will provide 1 credit for WA State History and 1 credit for Fine Arts toward the HS21+ diploma. Prerequisite: CASAS Reading score of 221 or above.

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 Hertitage using compare/contrast, reading for inferences
- Observe, discuss, and write about WA's Native American Heritage using compare/contrast, reading for inferences
- Identify the White Settlers movement through WA State and the impact on WA's Native American population using cause and effect
- Connect and respond to social and global issues in fine arts
- Demonstrate the ability to organize knowledge/ ideas for expression in the production of art in a variety of media
- Demonstrate the ability to organize knowledge/

ideas for expression in the production of art in a variety of media
- Demonstrate an understanding of Visual Arts as a basic history/human experience
- Create visual solutions to define a problem and reflect on possible solutions

US HISTORY & GOVERNMENT

CAP 033

7 Credits 77 hours of lecture

For students who want to earn credits toward their High School 21 diploma, prepare for the GED test or improve their skills to transition to college-level courses. Students will gain a deeper understanding of US history and government. Successful completion of the course will provide 1 credit for US History and Government toward the HS21+ diploma. Prerequisite: CASAS Reading score of 221 or above.

Course Outcomes:

- Understand key ideals and principles of the United States, including those in the Declaration of Independence, United States Constitution, and other fundamental documents
- Analyze and evaluate the ways in which the United States Constitution and other fundamental documents promote the key ideals and principles
- Evaluate the effectiveness of the systems of checks and balances during a particular presidential administration, Supreme Court, or congress
- Understand and analyze the casual factors that have shaped major events in history
- Analyze multiple causes of events in United States history, distinguishing between, proximate and long-term causal factor
- Understand how World War II and Cold War themes and developments define eras in history

SCIENCE & CONTEMPORARY WORLD PROBLEMS

CAP 034

7 Credits 77 hours of lecture

For students who want to earn credits toward their High School 21 diploma, prepare for the GED test or improve their skills to transition to college-level courses. 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 221 or above.

Course Outcomes:

- Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text relate to each other and the whole
- Identify, understand, and apply hypothesis
- Apply scientific processes and use sampling techniques to answer scientific questions
- Integrate text and visuals
- Research, evaluate, and support conclusions

INTEGRATED MATH AND OCCUPATIONS

CAP 040

8 Credits 88 hours of lecture

For students needing to learn or review math fundamentals. Students will apply their math skills (e.g. whole numbers, fractions, decimals, integers, percents, basic geometry, standard American measurement, basic tables/graphs) in various occupational contexts. Successful completion of the course will provide 1 credit for Math and 1 credit for Occupational Education toward the HS21+ diploma. Prerequisite: CASAS Math score up to 220.

Course Outcomes:

- Compare, order, round and estimate whole numbers, integers, fractions and decimals using multiple strategies and models.
- Perform operations on whole numbers, fractions and decimals including perfect squares and simple exponents in contextualized situations.
- Apply equality and the use of rates and ratios to contextualized occupational situations.
- Use a variety of models and applications of fraction when given contextualized occupational situations.
- Convert fluently between fractions, decimals and percents using multiple methods and apply to contextualized occupational situations.
- Read, interpret and create tables and graph as they apply to contextualized occupational situations.
- Apply and use Standard American measurement in contextualized occupational situations.
- Find area and perimeter of rectangles, triangles and circles in contextualized occupational situations.
- Find volume of rectangular solids in contextualized occupational situations.
- Introduction to appropriate use of basic four function calculator.

INTEGRATED MATH AND SCIENCE

CAP 042

7 Credits 77 hours of lecture

Students will apply their math skills (e.g. using integers, fractions, mixed numbers, order of operations, proportions, percents, algebraic expressions, multi-step equations, Metric system, standard and scientific notation, tables, graphs, diagrams) in the context of science. Successful completion of both CAP 042 and CAP 043 will

provide 1 credit for Math and 1 credit for Lab Science toward the HS21+ diploma. Prerequisite: CASAS Math score of 221-235 or successful completion of CAP 040. Concurrent enrollment in CAP 043: Math and Science Project.

Course Outcomes:

- Perform operations with integers, fractions and mixed numbers with unlike denominators.
- Perform and apply order of operations with fractions, decimals, integers, exponents and various grouping symbols in contextualized science situations.
- Solve and apply proportion and percent problems as they relate to contextualized science situations.
- Solve and simplify algebraic expressions and multistep equations involving whole numbers, fractions, decimals andintegers.
- Use knowledge of multiplying and dividing whole numbers and decimals by powers of ten to convert within the metric system.
- Convert between standard and scientific notation and perform operations in scientific notation.
- Apply various measures of central tendencies and interpret and create tables and graphs as they apply to
- contextualized science situations.
- Interpret, create and critique graphs and equations using slope-intercept form and apply to contextualized science situations.
- Create, identify and describe functions from tables, graphs and mapping diagrams.
- Appropriate use of TI-30xs calculator.

INTEGRATED MATH AND SCIENCE PROJECT

CAP 043

2 Credits 22 hours of lecture

This course will supplement the materials in CAP 042. This course focuses on exploring the scientific method through designing, implementing, and presenting a project using the scientific inquiry. Students will also identify and work on filling gaps of mathematical knowledge and engage in activities to support and extend content of CAP 042. Successful completion of both CAP 042 and CAP 043 will provide 1 credit for Math and 1 credit for Lab Science toward the HS21+ diploma. Concurrent enroll in CAP 042. Prerequisite: CASAS score of 221-235, successful completion of CAP 040 or permission of instructor.

Course Outcomes:

- Solve and apply proportion and percent problems as they relate to contextualized science situations
- Apply various measures of central tendencies and interpret and create tables and graphs as they apply to contextualized science situations
- Interpret, create and critique graphs and equations using slope-intercept form and apply to contextualized science situations
- Use the scientific process to explore a question and math to analyze the results

MATH APPLICATIONS

CAP 046

10 Credits 110 hours of lecture

For students preparing to transition to MATH& 107. Students will apply their math skills in appropriate contexts. Topics include complex expressions, equations, inequalities, compound inequalities, graphs and equations using point-slope and slope-intercept form, systems of equations using algebraic and graphing methods, exponential, radical and polynomial expressions and equations, quadratic, exponential and polynomial functions, quadratic equations, inverse and exponential functions, parabolic, exponential and logarithmic functions. Successful completion of the course will provide 1 credit for Math toward the HS21+ diploma. Prerequisite: CASAS Math score of 236 or higher or successful completion of CAP 042.

Course Outcomes:

- Simplify, critique and solve complex expressions, equations, inequalities and compound inequalities as they apply to contextualized situations.
- Interpret, create and critique graphs and equations using standard, point-slope and slope-intercept form and apply to contextualized situations.
- Interpret, create, solve and critique systems of equations using algebraic and graphing methods as they relate to contextualized situations.
- Simplify, solve, graph and evaluate exponential, radical and polynomial expressions and equations.
- Graph, identify, describe, critique and evaluate functions, including quadratic, exponential and polynomial as they relate to contextualized situations.
- Simplify exponential and radical expressions and convert between the various forms.
- Solve and describe quadratic equations in all forms, using all methods, as they relate to contextualized situations.
- Describe, graph and apply inverse and exponential functions to contextualized situations.
- Connect parabolic, exponential and logarithmic functions with elements of their graphs.
- Use technology to create and interpret graphs.

TRANSITIONAL STUDIES MATH SUPPORT

CAP 049

1 - 3 Credits 33 hours of lecture

Designed to provide additional instruction and support for student success in CAP Math classes. Reviews important concepts and skills introduced during CAP Math classes. Concurrent enrollment in CAP 040, CAP 042 or CAP 046. Prerequisite: Current CASAS Math score.

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 Transitional Studies math course.

INTEGRATED ENGLISH AND HEALTH

CAP 061

7 Credits 77 hours of lecture

For students who want to prepare for the GED or the HS21+ diploma. Integrates science, health and English writing skills to improve performance 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 & WA STATE HISTORY/FINE A

CAP 064

7 Credits 77 hours of lecture

For students who want to earn credits toward their High School 21 diploma, prepare for the GED test or improve their skills to transition to college-level courses. Integrates WA State history and Fine Arts with critical reading and writing skills. Successful completion of the course will provide 1-3 credits for English, 1 credit for WA State History and 1 credit for Fine Arts toward the HS21+ diploma. Prerequisite: CASAS Reading score of 221 or above or successful completion of CAP 061.

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 US HISTORY & GOVERNME

CAP 070

7 Credits 77 hours of lecture

For students who want to earn credits toward their High School 21 diploma, prepare for the GED test or improve their skills to transition to college-level courses. Integrates US history and government with critical reading and writing skills. Successful completion of the course will provide 1-3 credits for English and 1 credit for US History & Government toward the HS21+ diploma. Prerequisite: CASAS Reading score of 221 or above or successful completion of CAP 061.

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 & SCIENCE/CWP

CAP 074

7 Credits 77 hours of lecture

For students who want to earn credits toward their High School 21 diploma, prepare for the GED test or improve their skills to transition to college-level courses. Integrates Science and CWP with critical reading and writing skills. Successful completion of the course will provide 1-3 credits for English, 1 credit for Science and 1 credit for Contemporary World Problems toward the HS21+ diploma. Prerequisite: CASAS Reading score of 221 or above or successful completion of CAP 061.

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 ENGLISH/CWP (PP&I)

CAP 077

7 Credits 77 hours of lecture

For students who want to prepare for the GED, HS21+ diploma and/or college coursework. Students will gain a deeper understanding of the systems of power, privilege, and inequity and how they relate to current world problems. This is an advanced CAP writing course that will emphasize college-prep reading and writing skills. Successful completion of this course will provide 1 credit for Contemporary World Problems and 1 elective credit toward the HS21+ diploma. Prerequisite: Successful completion of CAP 064, 070, 074 or instructor recommendation.

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 term of a student's 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.

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 term 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.

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.

HEALTH

CAP 093

1 - 2 Credits 22 hours of lecture

For students who need to earn health credit for the HS21+ diploma. Students will gain a deeper understanding of a healthy lifestyle. Successful completion of the course will provide health credit toward the HS21+ diploma. Prerequisite: CASAS Reading score of 221 or above.

Course Outcomes:

- Evaluate current lifestyle and research ways to improve
- Identify Health Dangers
- Understand Disease Prevention
- Identify and explore Healthy Communication Styles
- Create a healthy meal plan

OCCUPATIONAL EDUCATION

CAP 094

1 - 2 Credits 22 hours of lecture

For students who need to earn occupational education credit for the HS21+ diploma. Students will gain a deeper understanding of preparing for a job and working successfully with co-workers. Successful completion of the course will provide occupational education credit toward the HS21+ diploma. Prerequisite: CASAS Reading score of 221 or above.

Course Outcomes:

- List work history and/or personal achievements
- Create a resume
- Understand different methods of dealing with difficult people in the work place
- Identify and access campus resources by attending workshops

PHYSICAL EDUCATION

CAP 095

1 - 2 Credits 22 hours of lecture

For students who need to earn physical education credit for the HS21+ diploma. Students will gain a deeper understanding of physical education by creating a personalized self-directed exercise plan. Successful completion of the course will provide physical education credit toward the HS21+ diploma. Prerequisite: CASAS Reading score of 221 or above.

Course Outcomes:

- Create a personalized self-directed exercise plan to complete 75 hours within the quarter
- Reflect on types/results of the personalized sefl-directed exercise plan and how they benefited from implementing the plan

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 term class schedules. Prerequisite: Consent of Instructional Unit. [GE]

Course Outcomes:

- Demonstrate an understanding of the core conceps 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.

SMALL WORLD ANTIBIOTICS RESEARCH 2A

CHEM 106
5 Credits 33 hours of lecture
44 hours of lab

Investigates authentic research to discover potentially new antibiotics. Overview of basic chemical concepts including a chemical history of antibiotics, their sources and discovery, and modes of action in bacteria. Strong emphasis on scientific inquiry including critical thinking, laboratory research methodology, and communication abilities. Prerequisite: A grade of "C" or better in BIOL 105 or consent of Instructional Unit.

Course Outcomes:

- Demonstrate an understanding of the chemical role antibiotics play in the biology of cells
- Demonstrate by example the fundamental rules behind atoms that leads to the formation of chemical bonds, organic functional groups, and water solubility of carbon based molecules
- 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
- Demonstrate an appreciation of research science and its role in solving a human health issue-the antibiotic crisis
- Clearly communicate research results via oral, written and visual formats

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:

- Report, evaluate and summarize experimental results.
- Demonstrate by example the fundamental rules behind atoms that leads to the formation of chemical bonds and their reactivity, including acidity, pH and osmosis.
- Apply the concepts of polarity and intermolecular forces (IMF) to molecules and ions to determine which are water (hydrophilic) or fat soluble (hydrophobic).
- Refine critical thinking and mathematical skill to solve contextual problems necessary in the treatment of patients as a Nursing or Dental Hygiene professional.

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 nutri-

tion. Prerequisite: Grade of "C" or better in CHEM& 121. Formerly CHEM 112. [NS,SE]

Course Outcomes:

- Report, evaluate and summarize experimental results.
- Demonstrate by example the fundamental rules behind functional group reactivity as it applies to metabolic processes, including acidity, isomerism and chirality.
- Apply the concepts of polarity and intermolecular forces (IMF) to molecules and ions and how they effect the shape and function of carbohydrates, lipids, proteins and nucleic acids.
- Further refine critical thinking and analytical skill to solve contextual problems necessary in the treatment of patients as a Nursing or Dental Hygiene professional.

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 (Celsius, Fahrenheit, Kelvin).
- 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-term 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-term 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-term 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 Credit33 hours of lab

First of a 3-term 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 Credit 33 hours of lab

Second of a 3-term lab sequence designed for science and engineering majors, to coincide with CHEM& 142 Gen-

eral 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-term 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-term 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 and CHEM& 153, 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-term 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 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, subtrate) 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, subtrate) 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 Huckel'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-term 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 mehind 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 Credit44 hours of lab

First of a 3-term 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& 153, 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 Credit44 hours of lab

Second of a 3-term 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-term 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.

Communication Studies

INTRO TO MASS MEDIA

CMST&102
5 Credits 55 hours of lecture

Survey of the various major communication media, their primary functions and social impact. Explores the ways in which various mass media impact us and how we impact the mass media. Focuses on critical analysis of issues regarding the mass media to help students develop their own personal and informed approach toward the dynamics of mass communication in society and increase their media literacy. [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. [HR,OC,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:

- Describe, explain, and discuss theories, principles, and concepts related to intercultural communication
- Apply intercultural communication theory to human interaction and reflect on the experience
- Examine barriers to intercultural communication and recommend strategies for improving intercultural communication competence
- Discuss and assess the impact of globalization on intercultural communication
- Identify and articulate the impact of power and privilege on communication and make recommendations for establishing equity in intercultural 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. [OC,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. [HR,OC,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 term 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.

ORGANIZATIONAL COMMUNICATION
CMST 310
5 Credits 55 hours of lecture

Introduction to the communication dynamics of an organization, including the major theories of organizational communication, identifying and defining primary concepts and applying them to discussions of real-world situations. Students will analyze relationships between structural variables in the organization and informal communication channels, organizational culture, and strategic communication. Topics include public and human relations, conflict resolution, motivation, coaching, leadership, informal communication networks, corporate culture, socialization, globalization, the role of technology, and external communication as they relate to organizations. The theory and research will be applicable to students through case studies of actual organizational problems/issues. Prerequisite: A grade of "C" or better in CMST& 210, CMST& 220, or CMST& 230. [C]

Course Outcomes:

- Work cooperatively with others in a variety of organizational communication contexts.
- Develop analytical skills that allow students to observe and gather data about organizational communication and develop presentation/writing skills to effectively communicate this knowledge.
- Create and deliver a variety of presentations (oral and visual) for specific clients and situations, analyzing each for audience, purpose, and context.
- Analyze interpersonal and organizational communication contexts and evaluate the success of the communication.
- Apply knowledge of verbal and nonverbal communication to common school and business contexts.

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 Clark College Libraries, 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.

Computer Science & Engineering

ENGINEERING AND COMPUTER SCIENCE ORIENTATION
CSE 101
1 Credit 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 fuundamental 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 logic and its limitations * Formal proof strategies: counterexample, contraposition, * Contradiction, mathematical induction * Recursive mathematical definitions * Computational Complexity * Trees, graphs and traversal strategies * Modeling Computation

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 PROGRAMMING

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

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 documents and be able to recognize common commands, keyboard symbols, and techniques that are universal across most computer operating systems.
- 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 todays' 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 sourced online.

INFORMATION TECHNOLOGY FUNDAMENTALS

CTEC 106

5 Credits 55 hours of lecture

Provides foundational skills utilized in information and computer technology and a functional understanding of information technology-related careers. Topics include hardware and software technologies, configuring and setting up workstations, network fundamentals and computer security. Course is based on CompTIA IT Fundamentals certification. [GE]

Course Outcomes:

- Identify and describe key features, functions and purposes of common operating systems and applications.
- Perform basic work station set up, operations, and support procedures.
- Identify and apply best common practices for physical and digital security.
- Set up and configure a basic small or home office router while demonstrating an understanding of different types of networked data connections as well as various methods of sharing resources and storage.

COMMAND LINE ESSENTIALS FOR WINDOWS AND UNIX

CTEC 110

3 Credits 33 hours of lecture

Provides skills and experience in command line environments such as DOS, Windows PowerShell and Linux/Unix shells needed for preparation towards careers in computer and information technology related fields. Topics include DOS, PowerShell and Unix file systems, Advanced File Processing and UNIX scripting. Instruction is provided in a lab environment using Windows OS and secure remote UNIX connections. 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.

POWERSHELL FUNDAMENTAS

CTEC 111

2 Credits 22 hours of lecture

Provides skills and experience in the Windows PowerShell command line environment for preparation towards careers in computer and information technology related fields. Topics include command line syntax, file system interactions and managing network systems in PowerShell, scripting, functions and using PowerShell with Active Directory. Prerequisite: Eligibility for ENGL 098.

Course Outcomes:

- Interact with the PowerShell console window and Integrated Scripting environment.
- Navigate and manipulate file systems.
- Demonstrate conceptual understanding of the command line environment.

PROGRAMMING ESSENTIALS

CTEC 112

5 Credits 55 hours of lecture

Course provides a participatory overview of essential foundational information technology and computer programming concepts. Topics include computing as a creative activity, abstraction, principles of computer operations, debugging, algorithmic thinking and problem solving, programming functions and operations, iteration principles, ethics in computing and the limitations of computing. Students will design and code simple programs. Prerequisite: A grade of "C" or better in MATH 030 or CAP 042 or consent of the Instructional Unit. [GE]

Course Outcomes:

- Demonstrate how computer operations and algorithmic thinking are applied to solve problems.
- Demonstrate a working knowledge of fundamental computer concepts and iteration principles.
- Identify and solve problems algorithmically and develop programs to address and solve the problems.
- Demonstrate an understanding of ethics in computing and the limitations to computing.

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 include: problem-solving techniques, program design, coding, de-bugging, testing and documentation. Students will use the Python programming language to write simple programs while being exposed to concepts common to all programming. The course serves as an available prerequisite pathway for further studies in 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 112, CTEC 121, or CSE 121 and a grade of "C" or better in 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 112, CTEC 121 or CSE 121 and a grade of "C" or better in 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/Transmis-

sion 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 administering 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.

MICROSOFT MTA SOFTWARE DEVELOPMENT WITH C#

CTEC 135

5 Credits 55 hours of lecture

Fundamental concepts related to developing desktop and web applications with the Microsoft C# programming language including the use of Microsoft SQL relational database management system. Topics covered include: program design, object-oriented and procedural coding, debugging, testing and documentation. Course is based on opportunity to earn as a component of the course curriculum. Prerequisite: A grade of "C" or better in CTEC 112, CTEC 121, or CSE 121 or connset of Instructional Unit. Completion of or concurrent enrollment in CTEC 134 is strongly recommended. [GE]

Course Outcomes:

- Code programs in C# that utilize repetition control structures, decision making, error handling and other programming core concepts.
- Develop C# programs for Microsoft Windows and the Web using Visual Studio.
- Develop C# programs utilizing object oriented programming techniques using C#.
- Describe the importance of the software development lifecycle.
- Interact with Microsoft SQL server relational database as a programming component with C#.

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: Eligibility for ENGL 098. [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 165 hours of clinical

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
132 hours of clinical

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: 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 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] [PNP]

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] [PNP]

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.

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.

APPLIED WEB DEVELOPMENT

CTEC 265

5 Credits 55 hours of lecture

The skills and knowledge to interact, use and create Application Programming Interfaces (APIs) and provide integration between programs and services on the web. Content management system programming skills and best practices will also be addressed. Prerequisite: A grade of "C" or better in CTEC 127 PHP with SQL II and CTEC 126 JavaScript or consent of the 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 themes and write a content management system plugin to add functionality to a site created in a content management system.

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.

WEB SKILLS PORTFOLIO

CTEC 293

3 Credits 99 hours of lab

Development of applied web programming skills and a coding portfolio website that will demonstrate a student's proficiency in various aspects of web development. Prerequisite: Completion of with a "C" or concurrent enrollment in CTEC 265. [GE]

Course Outcomes:

- Demonstrate professional coding standards that illustrate one's skill set in coding for the web.
- Design, prepare a manage a website that will be used by the student for marketing their skill set to the web community.
- Evaluate professional skills and weaknesses and create and implement a personal development plan for developing and strengthening one's programming skill set.

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.

Cuisine

CULINARY FUNDAMENTALS I

CUIS 110
5 Credits 22 hours of lecture
66 hours of lab

Introduction to fundamentals of cooking. Includes history of food service industry, professionalism in the workplace, kitchen safety and sanitation, nutrition, equipment, kitchen math, weights and measures, knife skills, aromatics and flavorings. Theory of cooking methods, stocks and sauces. Concurrent enrollment in CUIS 111. Prerequisites: Eligible for ENGL 098 and MATH 030. Valid Washington State food handlers card.

Course Outcomes:

- Demonstrate knowledge and applied skill relating to the step by step process for the primary cooking techniques.
- Describe and demonstrate proper step by step processes for preparing stocks and mother sauces with accuracy and adherence to the designated technique.
- Discuss, evaluate and present on selected flavor profiling, including elements of taste and flavor development as it relates with the cooking process.
- Demonstrate appropriate knowledge and applied practices for controlling food time/temperature abuse, proper food handling procedures and personal hygiene practices.
- Demonstrate safe knife sharpening and handling techniques and execute a variety of cuts including classical cuts with speed and accuracy.
- Identify and discuss proper use and safety of food service equipment..
- Describe the function of mise en place in a professional kitchen.
- Demonstrate the ability to successfully utilize the American standard system of measurement understanding the basic conversion of units of measure between volume, weight, and count and show competency in the ability to calculate yield percentages when provided with "as purchased" and "edible portion" of an assigned ingredient.

PROFESSIONAL COOKING I

CUIS 111
8 Credits 176 hours of lab

Hands-on preparation of product utilizing those skills introduced in culinary fundamentals I. Emphasizes kitchen safety, knife skills, basic cooking preparations, sanitation, stock preparation, basic meat/protein fabrication. Production for customer service and application of techniques through kitchen station rotation. Concurrent enrollment in CUIS 110. Prerequisites: Eligible for ENGL 098 and MATH 030. Valid Washington State food handlers card.

Course Outcomes:

- Understand the composition of animal muscle tissue of various meat, poultry and seafood products and apply appropriate fabrication skills that maximize yield and cooking techniques while evaluation of product for quality.
- Understand the composition of animal muscle tissue of various meat, poultry and seafood products and apply appropriate fabrication skills that maximize yield and cooking techniques while evaluation of product for quality.
- Ability to articulate the step-by-step process on the primary cooking techniques, showing competency on how flavor is developed within the cooking process.
- Identify, evaluate prepare and cook a variety of produce, grains and starches with accuracy and adherence to the designated technique.
- Demonstrate safe knife sharpening and handling techniques and execute a variety of cuts including classical cuts with speed and accuracy.
- Demonstrate food safety and sanitation skills.
- Ability to articulate work skill and attitude characteristics that are exemplified within the hospitality industry.
- Demonstrate professionalism standards relating to appearance, attendance and conduct.

CULINARY FUNDAMENTALS II

CUIS 120
5 Credits 22 hours of lecture
66 hours of lab

Continuation of Culinary Fundamentals I with greater emphasis on cooking techniques, specific food and flavoring identification, nutrition with healthy cooking techniques, breakfast cookery, salads, cold dressings and sauces. Introduction to regional and international fare. Concurrent enrollment in CUIS 121. Prerequisites: A grade of "C" or better in CUIS 110 and CUIS 111 or consent of Instructional Unit. Valid Washington State food handlers card.

Course Outcomes:

- Ability to demonstrate the step-by-step process in the primary cooking techniques and development of flavors in the process.
- Understand the composition of various proteins, fruits and vegetables and apply appropriate fabrication skills to ensure maximum yield.

- Display knowledge of basic human nutrition, healthy cooking techniques and selected cooking techniques and composition of meals for optimum flavor that meet national dietary guidelines.
- Prepare variety of classic, national and international salads, cold dressings and sauces.
- Prepare a variety of international dishes focusing on healthy cooking techniques.
- Identify and discuss proper use and safety of food service equipment.
- Demonstrate knowledge of breakfast cookery.
- Identify proper use of food service equipment including proper knife skills and cuts.
- Demonstrate professionalism standards relating to appearance, attendance and conduct.
- Demonstrate appropriate knowledge and applied practices for proper food handling procedures and personal hygiene practices.

PROFESSIONAL COOKING II

CUIS 121
8 Credits 176 hours of lab

Hands-on preparation of product utilizing those skills introduced in Culinary Fundamentals I and II through kitchen station rotation. Emphasis on breakfast cookery, healthy cooking, regional and international dishes for customer service. Apply cooking techniques and refine customer service through kiosk service and station rotation. Concurrent enrollment in CUIS 120. Prerequisites: A grade of "C" or better in CUIS 110 and CUIS 111 or consent of Instructional Unit. Valid Washington State food handlers card.

Course Outcomes:

- Ability to apply proper cooking techniques and management of deliverable product.
- Demonstrate professionalism in direct contact with ;the public and proper customer relation practices.
- Demonstrate the importance of mise en place in preparation of ingredients for daily menu.
- Demonstrate safe handling practices of proteins and vegetables including their preparation and storage.
- Demonstrate proper step-by-step process for preparing stocks, sauces and dressings.
- Demonstrate knowledge and proper cooking practices for a variety of international dishes, healthy cooking and breakfast cookery.

CULINARY FUNDAMENTALS III

CUIS 130
5 Credits 22 hours of lecture
66 hours of lab

Introduction to restaurant-level cooking, menu planning, preparing/producing complete meals, restaurant and dining organization. Focus on recipe conversions, yields, and yield grades, fabrication, plate presentation, inventory and cost controls. Concurrent enrollment in CUIS 131. Prerequisites: A grade of "C" or better in CUIS 120 and CUIS 121 or consent of Instructional Unit. Valid Washington State food handlers card.

Course Outcomes:

- Ability to articulate the definition of the classic "brigade" style kitchen management.
- Demonstrate various plating and presentation techniques for fast casual and full service restaurant operations.
- Plan usable menu in relation to specific style of cuisine.
- Articulate the planning and production of complete restaurant type meals.
- Understand dining room planning, set up and service based on varied international styles.
- Ability to accurately perform recipe and menu conversions and yields.
- Demonstrate proper restaurant cuts of poultry, meats and fish.
- Articulate understanding of product inventory, ordering, cost and control for efficient food service management.

PROFESSIONAL COOKING III

CUIS 131
8 Credits 176 hours of lab

Hands on preparation of product utilizing those skills introduced in culinary fundamentals theory through kitchen station rotation. Emphasis on breakfast cookery, healthy cooking, regional and international dishes for customer service. Apply cooking techniques and refine customer service through kiosk service and station rotation. Concurrent enrollment in CUIS 130. Prerequisites: A grade of "C" or better in CUIS 120 and CUIS 121 or consent of Instructional Unit. Valid Washington State food handlers card.

Course Outcomes:

- Plan and execute assigned meals for on campus dining.
- Understand mis en place as it relates to kitchen organization and management.
- Using acquired skills, supervise campus meal preparation and execution.
- Plan menu based on inventory and flexibility of product on hand.
- Plan and execute variety of international dishes for campus dining services.

- Ability to facilitate proper dining room set up, control and table service.

CLASSIC AND MODERN SOUPS AND SAUCES

CUIS 140
2 Credits 11 hours of lecture
22 hours of lab

Hands-on exploration of classic soups and sauces and their advancement into the modern cuisine. Create updated versions to reflect today's culture and healthy lifestyle. Prerequisites: A grade of "C" or better in CUIS 110 and CUIS 111 or consent of Instructional Unit. Valid Washington State food handlers card.

Course Outcomes:

- Prepare classic stocks, sauces, soups and explore their modern versions to reflect today's culture.

MEAT CUTTING AND FABRICATION

CUIS 141
3 Credits 11 hours of lecture
44 hours of lab

Identification of carcass and boxed meats and their fabrication into restaurant cuts. Cutting of poultry, beef, hog, lamb, fish and introduction to sausage production. Prerequisites: A grade of "C" or better in CUIS 110 and CUIS 111 or consent of Instructional Unit. Valid Washington State food handlers card.

Course Outcomes:

- Become familiar with a wide variety of proteins, muscle structure and the proper fabrication to produce restaurant cuts.

WINE, BEER, SPIRITS AND FOOD PAIRINGS

CUIS 142
2 Credits 11 hours of lecture
22 hours of lab

Gain an understanding of how to choose a wine, beer or spirit to compliment a dish. Discuss flavor profiles and how incorporating beverages can elevate the dining experience. Hands on use of beverages in production of a variety of flavorful dishes. Prerequisites: A grade of "C" or better in CUIS 110 and CUIS 111 or consent of Instructional Unit. Valid Washington State food handlers card.

Course Outcomes:

- Understanding of how to choose a wine, beer or spirit to either compliment and be incorporated into a dish to elevate the dining experience.

RESTAURANT BAKING

CUIS 143
2 Credits 11 hours of lecture
22 hours of lab

Introduction of restaurant style baking including yeast breads, biscuits, scones, muffins, cookies, pies, quick breads, plated desserts and sauces. Basic understanding of baking science. Prerequisites: A grade of "C" or better in CUIS 110 and CUIS 111 or consent of Instructional Unit. Valid Washington State food handlers card.

Course Outcomes:

- Ability to demonstrate the step-by-step processes to typical restaurant style baking, prepare product and have a basic understanding of baking science.

BANQUET AND BUFFET PLANNING AND EXECUTION

CUIS 144
2 Credits 11 hours of lecture
22 hours of lab

Effective planning and execution of banquet and buffet operations including service, buffet settings, menu design, yields, and cooking techniques. Includes hors d'oeuvres production and basic garniture. Prerequisite: A grade of "C" or better in CUIS 110 and CUIS 111 or consent of Instructional Unit. Valid Washington State food handlers card.

Course Outcomes:

- Ability to understand the planning and execution of banquet and buffet service.
- Practical knowledge of Hors d'oeuvres production, display and garnitures.

WINE APPRECIATION

CUIS 145
3 Credits 33 hours of lecture

A course designed for the student to understand the components necessary to becoming a competent and consistent wine taster and appreciator, a valuable asset for the wine enthusiast.

Course Outcomes:

- Ability to identify and differentiate the five basic types of wine.
- Have essential knowledge of how and where grapes are grown.
- Basic knowledge of how to match wine with foods and how to suggest a practical wine list for restaurant service.
- Ability to judge wines and articulate opinions about them.

APPLIED PROFESSIONAL DEVELOPMENT

CUIS 200
9 Credits 11 hours of lecture
176 hours of lab

Apply acquired knowledge providing food service to the campus community through Kiosk cookery. Students will rotate within various cooking stations to hone culinary

skills preparation of second year curriculum. Prerequisite: A grade of "C" or better in CUIS 130 and CUIS 131 or consent of Instructional Unit. Valid Washington State food handlers card.

Course Outcomes:

- Skill development gaining confidence with cooking techniques and course competencies.

ADVANCED CULINARY FUNDAMENTALS

CUIS 210

5 Credits 22 hours of lecture

66 hours of lab

Advanced theory with emphasis on international and regional cuisine including terminology, nutrition discussion, menu feasibility and ingredient identification, international cooking methods and adaptations. Advanced plate presentation, garnitures, menu writing and recipe study. Understanding of management skills focusing on team leadership. Introduction to banquet and buffet. Concurrent enrollment in CUIS 211. Prerequisite: A grade of "C" or better in CUIS 130, CUIS 131, and CUIS 200 or consent of Instructional Unit. Valid Washington State food handlers card.

Course Outcomes:

- Interpret international and regional cuisine as it relates to nutrition, menu, identification, cooking methods and adaptations.
- Articulate and demonstrate plate organization and presentation.
- Demonstrate recipe function and menu writing as it pertains to the successful operation of dining services.
- Understand banquet and buffet set-up, production and service.
- Prepare plate and buffet garniture.

ADVANCED CULINARY PRACTICES

CUIS 211

8 Credits 176 hours of lab

Utilizing skills and knowledge gained, focusing on international and regional cuisine, prepare meals for campus service. Build management skills by supervision of students in skills and teamwork to achieve food service goals through rotation within the food service areas and/or banquet and buffet settings applying appropriate customer relations. Concurrent enrollment in CUIS 210. Prerequisite: A grade of "C" or better in CUIS 130, CUIS 131 and CUIS 200 or consent of Instructional Unit. Valid Washington State food handlers card.

Course Outcomes:

- Utilize acquired management skills in supervision of students in skills and teamwork to achieve campus food service goals.
- Manage, through service area rotation, campus food service focusing on regional, international and healthy cuisine.
- Demonstrate and apply appropriate customer service applications through interaction in campus food service.

MANAGEMENT AND BANQUET THEORY

CUIS 220

5 Credits 22 hours of lecture

66 hours of lab

Explores the expectations of a kitchen manager through numerous aspects of the position including leadership, safety and sanitation, training, production and service, menu and sales analysis and cost control. Banquet and catering practices. Identify and arrange internship with a local food service vendor. Plan activities in preparation of final quarter capstone project. Concurrent enrollment in CUIS 221. Prerequisite: A grade of "C" or better in CUIS 210 and CUIS 211 or consent of Instructional Unit. Valid Washington State food handlers card.

Course Outcomes:

- Articulate the aspects of kitchen and restaurant management as it relates to training, production, banquet service and sales analysis.

MANAGEMENT PRACTICES

CUIS 221

8 Credits 176 hours of lab

Utilizing acquired skills, supervise workers in food service settings. Manage product ordering, inventory and control for selected menu. Display proper execution of the entire menu including preparation, personnel management, service, menu and sales analysis. Concurrent enrollment in CUIS 220. Prerequisite: A grade of "C" or better in CUIS 210 and CUIS 211 or consent of Instructional Unit. Valid Washington State food handlers card.

Course Outcomes:

- Manage and supervise food service workers in a campus food service setting.
- Manage storeroom services to include product ordering, receiving and quality control, inventory and cost control.
- Manage campus food service areas to include all aspects of service including menu, product ordering, production, worker supervision and menu and sales analysis.

CUISINE CAPSTONE

CUIS 230

6 Credits 11 hours of lecture

110 hours of lab

In conjunction with the management of assigned kitchen

stations, students in their final quarter shall plan and execute one or more restaurant dinner service, and/or banquet service to include menu planning, inventory and requisition, kitchen management and function execution. Concurrent enrollment in CUIS 231. Prerequisite: A grade of "C" or better in CUIS 220 and CUIS 221 or consent of Instructional Unit. Valid Washington State food handlers card.

Course Outcomes:

- Demonstrate knowledge and skills by executing a complete dinner service analyzing customer feedback. Provide written report and verbal analysis of completed project.

INDUSTRY INTERNSHIP

CUIS 231

4 Credits 132 hours of clinical

Supervised on-the-job work experience at an approved industry location in the local community with specific learning objectives and employer evaluation. Students will apply and hone their culinary skills, as well as, further develop employment skills within industry. Concurrent enrollment in CUIS 230. Prerequisite: A grade of "C" or better in CUIS 220 and CUIS 221 or consent of Instructional Unit. Valid Washington State food handlers card.

Course Outcomes:

- Demonstrate current knowledge and acquire new in an approved off campus food service facility.

Dental Hygiene

PHARMACOLOGY I

DH 282

1 Credit 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

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

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 Credit 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

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

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

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 Credit 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-diag-

nostic 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 prediagnostic 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 Credit 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

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 Credit 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 Credit 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 Credit 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 176 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.
- 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 176 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 176 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

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

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

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

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 Credit 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 Credit 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 Credit 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 Credit 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] [PNP]

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.

Diesel Technology

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 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. Prerequisite: Eligibility for ENGL 098 and MATH 030. [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. Prerequisite: Eligibility for ENGL 098 and MATH 030 and successful completion with a "C" or better in DIES 111 and 112. [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. Prerequisite: Eligibility for ENGL 098 and MATH 030 and successful completion with a "C" or better in DIES 111 and 112. [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. Prerequisite: Eligibility for ENGL 098 and MATH 030 and successful completion with a "C" or better in DIES 113 and 114. [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. Prerequisite: Eligibility for ENGL 098 and MATH 030 and successful completion with a "C" or better in DIES 113 and 114. [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. Prerequisite: Eligibility for ENGL 098 and MATH 030. [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 it uses in electronic circuits

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: Eligibility for ENGL 098 and MATH 030 and successful completion with a "C" or better in DIES 121. [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

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. Prerequisite: Eligibility for ENGL 098 and MATH 030. [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. Prerequisite: Eligibility for ENGL 098 and MATH 030. [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. Prerequisite: Eligibility for ENGL 098 and MATH 030 and successful completion with a "C" or better in DIES 221 and 222. [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: Eligibility for ENGL 098 and MATH 030 and successful completion with a "C" or better in DIES 221 and 222. [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. Prerequisite: Eligibility for ENGL 098 and MATH 030 and successful completion with a "C" or better in DIES 223 and 224. [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: Eligibility for ENGL 098 and MATH 030 and successful completion with a "C" or better in DIES 223 and 224. [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 term 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.

INTRODUCTION TO CINEMA

DRMA 154
5 Credits 55 hours of lecture

An introductory course in film history, production techniques, aesthetics, and the social impact of the American film industry from 1900 to the present. [HA]

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 1900 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.
- Identify and discuss the political, economic, and social issues that affect the production and distribution of films.

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.

SELECTED TOPICS

DRMA 280
1 - 3 Credits 33 hours of lecture

Varying topics in theatre, as listed in the term 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.

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.

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.

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.

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.

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.

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.

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:

- Describe family child care licensing standards.
- Evaluate specific practices, determining effectiveness in meeting children's needs for maintaining good health, safety and nutrition
- Compare strategies for establishing developmentally appropriate, socially /culturally relevant, safe child care environments in the home setting.
- Demonstrate developmentally/socially / culturally appropriate plans and activities meeting the needs of children in multi-age groups.
- Describe and evaluate guidance methods fostering responsibility, independence, self-reliance, and positive social /emotional growth in children.
- Identify strategies for family child care business management including marketing, risk management, staffing, tax planning, accounting, and record keeping.
- Discuss strategies for family child care providers to balance the demands of operating their business with meeting the needs of their families.

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.

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:

- Articulate early learning program's philosophy, mission statement, and corresponding daily practice
- Create program policies and practices in compliance with state child care licensing codes, food program guidelines, and accreditation standards.
- Plan for appropriate staffing, meals, equipment and materials and programing for specific age groups and settings.
- Use a variety of strategies to maintain regular communication with families and provide opportunities for parent engagement and education
- Plan a balanced budget.
- Identify methods for recruiting, hiring, evaluating, supervising, and supporting the professional development of program personnel.
- Use tools to evaluate program effectiveness and identify areas for improvements.
- 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 ECED& 190. [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.

COOPERATIVE WORK EXPERIENCE

ECE 199

1 - 3 Credits 99 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 connection between the student goals and the program outcomes and the "Co-op (ECE199) training agreement" will become the document for the measures of assessment of the individual goals.

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 44 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 child and his/her culture and all domains of learning for self, the child and for the larger community.
- 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 44 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 term 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.

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.

MANAGERIAL AND GLOBAL ECONOMICS

ECON 405

5 Credits 55 hours of lecture

Reviews basic issues in microeconomics, macroeconomics, and global economics. Topics include allocation of resources, economic systems, economic institutions and incentives, market structures and prices, and productivity. Also included are issues related to the global marketplace, aggregate supply and demand, and governmental policy towards business. [SS]

Course Outcomes:

- Evaluate basic introductory level of econometric analysis and its role in managerial decision making.
- Analyze and apply economic concepts and tools that have direct managerial applications.
- Apply analytical skills through integrating knowledge of the economic theory with decision making techniques.
- Research and apply economic models to isolate the relevant elements of a managerial problem, identify the relevant relationships, and formulate managerial models and apply decision making tools.
- Evaluate and analyze various economic theories and models, including price determination in alternative market structures, demand theory, production and cost functions, and decision making under uncertainty.

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&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. .
- Analyze the effectiveness of the environment and recommend changes reflecting the following stan-

dards: Bias free, respectful of cultural and individual diversity; Developmentally appropriate; Promotes positive self-esteem and social interaction; and Supports activity, involvement, initiative, responsibility, creativity, and a growing sense of autonomy.
- Discuss the dynamics impacting behavior of children in after school care environments and identify guidance strategies promoting academic and social growth.
- Develop a plan for curriculum and program implementation that reflects responsive respect for the local community context
- Describe state and local school age care regulations and procedures related to group size, health, nutrition, and safety.
- Identify resources supporting school age care and school age care/youth development specialists.

CHILD/FAMILY/COMMUNITY

EDUC&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

EMERGENCY MEDICAL TECHNICIAN (ACCELERATED)

EMT 103
12 Credits 77 hours of lecture
110 hours of lab

Training in pre-hospital emergency care with clinical education experience. This is an accelerated EMT program that provides for supervised practice of skills taught in each lesson. As required by the Department of Transportation (DOT), this course is under the supervision of a Medical Program Director and EMT Coordinator. The course meets the requirements of State EMT certification. Course length is approximately 186 clock hours including the four integrated phases of education (lecture, laboratory, clinical and field experience.

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 CAP 087 if score on college reading skills placement test recommends it. Prerequisite: Recommending score on college writing skills placement test. [CA]

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. [CA]

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 or IELP 091 taken at 5 credits or recommending score on the writing skills placement test for ENGL 101. [CA,SE,CT,WC]

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. [CA,CT,WC,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). [CA,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. [CA,WC,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). [CA,SE,WC]

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 activities and in pairs or small groups, stay focused, offer input that is helpful, occasionally record and report, avoid distracting socializing.
- 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 the College Writing Center; Come prepared for conferences, tutoring sessions, and workshops; Use instructor and peer feedback to make improvement in essays and apply skills to new assignments; Experiment with various strategies during different stages of the process, observe what approaches work best for the individual student, and use self-knowledge to optimize the efficiency and quality of work; Use the language of academic writing to articulate strengths and weaknesses in peers' writing with specific references to peers' papers to offer constructive criticism. Use revision to strengthen elements such as thesis, organization, and supporting evidence; Evaluate own papers for revision; proofread and edit to eliminate grammatical errors and follow the conventions of Standard English; Use self-assessment to increase independence and effectiveness in all areas listed above.

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). [WC,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.

ETHICS AND POLICY IN HEALTHCARE I

ENGL 112

2 Credits 22 hours of lecture

ENGL 112 explores values, ethics, and legal decision-making frameworks and policies used to support the well-being of people and groups within the context of the healthcare professions. Foundational concepts are introduced and discussed in the context of a first year nursing student. Concurrent enrollment in NURS 110, NURS 111, NURS 113, NURS 114, and NURS 115. Prerequisite: Consent of the Nursing Department. [HA]

Course Outcomes:

- Discuss nursing care of and healthcare policy related issues for 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 within the ethical and legal framework of the current healthcare system.
- Accurately obtain and report client data utilizing a variety of formats and following applicable ethical, healthcare policy, and college guidelines regarding appropriate sharing of client information.
- 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 implement ethical treatment of diverse populations.

INTRODUCTION TO CREATIVE WRITING

ENGL 121
3 Credits 33 hours of lecture

In this introduction to creative expression, students will be introduced to and practice at least two of the following genres: fiction, creative nonfiction, and poetry. Students will also practice peer critique and the stages of the creative writing process, including prewriting, drafting, and revision. Completion of ENGL& 101 recommended, but not required. [HB, SE]

Course Outcomes:

- Write original creative texts in at least two of the following genres--short fiction, creative nonfiction, or poetry--that demonstrate knowledge of the fundamentals of craft and form.
- Provide written and/or verbal responses to creative texts (peers' texts and/or published texts) with constructive and substantive comments that demonstrate knowledge of the fundamentals of craft and form.
- 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.

CREATIVE NONFICTION WRITING

ENGL 127
3 Credits 33 hours of lecture

Exploration of 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. [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 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 drama influences or reflects cultures.
- Analyze, interpret, and critique works of dramatic literature using textual evidence and the vocabulary and methods of literary analysis.
- Identify and explain the importance of major authors and key elements of drama.

INTRODUCTION TO SHORT FICTION

ENGL 133

3 Credits 33 hours of lecture

Study of short fiction, 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.

INTRODUCTION TO NATIVE AMERICAN LITERATURE

ENGL 136

3 Credits 33 hours of lecture

Introduction to Native American literature as a lens for the experience, culture, and history of Native people within larger American historical contexts. By integrating active learning strategies, coursework focuses on the multicultural nature of Native American literature and on the strategies with which Native writers mediate imbalances of power and systems of oppression within the Americas. Eligibility for ENGL& 101 recommended. [GE, HA]

Course Outcomes:

- Describe the context of power, privilege, and inequity in which the works of Native American literature were written and how this literature influences and reflects culture.
- Closely read, analyze, interpret, and critique works of literature by various Native American authors using textual evidence and the vocabulary and methods of literary analysis.
- Identify and explain the importance of authors, themes, characters, or literary movements in Native American 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 ideological oppression.

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 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.

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.

POPULAR CULTURE

ENGL 173

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 subgroups that thrive in America. [HA]

Course Outcomes:

- Identify a branded product and discuss its role in the lives of American consumers, paying special attention to the psychological and/or sociological messages from the company for the consumer who is the identified target.
- Identify and discuss the development of characters and plots from areas of popular culture such as television, film, popular music, and video games, paying attention to the psychological and/or cultural messages of the work.
- Interpret and evaluate works of popular culture by judging success or failure to stimulate the popular imagination, to draw together a like-minded audience, and to promote the overt or covert messages inherent in the text.
- Analyze and interpret past and current examples of American popular culture and their impact on the way Americans live their lives today, including promotional material aimed at American consumers.

INTRODUCTION TO LGBTQ STUDIES

ENGL 175

5 Credits 55 hours of lecture

An interdisciplinary survey of lesbian, gay, bisexual, and trans issues in the sciences, social science, and humanities with an emphasis on the period from 1900 to the present

in the United States. Introduction to the most compelling aspects of modern cultural representation of and discourse on sexual and gender identity. [HA or SS]

Course Outcomes:

- Identify major figures, events, trends, themes, and developments in LGBTQ history, science, social and behavioral theory, 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 relevant to the LGBTQ community 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 experiences of power, privilege and inequality.

NATURE AND THE HUMANITIES

ENGL 176

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 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]

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.

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.

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 PTWR 135/ENGL 135. [CA,CT,SE,WC] [PNP]

Course Outcomes:

- 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.
- Collaborate successfully in the process of producing 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: A grade of "C" or better in ENGL& 101 or eligibility for ENGL& 102. [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, institutional, and ideological oppression.

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. Prerequisite: A grade of "C" or better in ENGL& 101 or eligibility for ENGL& 102. [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. Prerequisite: A grade of "C" or better in ENGL& 101 or eligibility for ENGL& 102. [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. Prerequisite: A grade of "C" or better in ENGL& 101 or eligibility for ENGL& 102. [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. Prerequisite: A grade of "C" or better in ENGL& 101 or eligibility for ENGL& 102. [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. Prerequisite: A grade of "C" or better in ENGL& 101 or eligibility for ENGL& 102. [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 meth-

ods 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. Prerequisite: A grade of "C" or better in ENGL& 101 or eligibility for ENGL& 102. [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. Prerequisite: A grade of "C" or better in ENGL& 101 or eligibility for ENGL& 102. [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. Prerequisite: A grade of "C" or better in ENGL& 101 or eligibility for ENGL& 102. [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. Prerequisite: A grade of "C" or better in ENGL& 101 or eligibility for ENGL& 102. [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. Prerequisite: A grade of "C" or better in ENGL& 101 or eligibility for ENGL& 102. [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. Prerequisite: A grade of "C" or better in ENGL& 101 or eligibility for ENGL& 102. [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.

ETHICS AND POLICY IN HEALTHCARE II

ENGL 273

3 Credits 33 hours of lecture

ENGL 273 explores values, ethics and legal decision-making frameworks and policies used to support the well-being of people and groups within the context of the healthcare professions including nurse practice acts, and state and federal laws. ENGL 273 is taught concurrently with NURS 261. The role of the professional nurse is examined in relation to policy and ethics with analysis of case studies allowing for application of concepts in the health care setting. Concurrent enrollment in NURS 261, NURS 262, NURS 263 and NURS 264. Prerequisite: A grade of "C" or better in NURS 251, NURS 252, NURS 253 and NURS 254.

Course Outcomes:

- Compare and contrast the major leadership theories and the essential elements of leadership.
- Describe the legal and ethical scope and responsibilities of the professional nurse.
- Integrate principles of diversity, holism, stewardship, dignity, and respect to reflect a caring environment.
- Analyze the role of nursing in reference to policy, advocacy and ethics.
- Define and apply to nursing practice the eight ethical principles of autonomy, beneficence, Nonmaleficence, veracity, fidelity, justice, paternalism, and respect for others.
- Propose strategies nurses can utilize to influenze the healthcare policy making process.

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

ENGINEERING AND COMPUTER SCIENCE ORIENTATION

ENGR 101

1 Credit 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

For students interested in pursuing a degree in aerospace engineering. Topics include history of aviation and spaceflight, careers in aerospace, foundations of physical principles that underlies aerodynamics, dynamic pressure, the standard atmosphere, and lift and drag coefficients. The course includes a team design project. Prerequisite: Completion of with a grade of "C" or concurrent enrollment in MATH 103 and MATH 111.

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 AUTOCAD

ENGR 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.

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 sketchs.
- 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.

FUNDAMENTALS OF FLIGHT

ENGR 208
3 Credits 22 hours of lecture
22 hours of lab

Introduction to the fundamentals of the flight of air and space craft. Topics include review of basic fluid flow and aerodynamics, circulation theory of lift, finite wings, aerodynamic performance, stability and control, propulsion, and space flight. The course includes a team design project. Prerequisite: Concurrent enrollment in or completion of ENGR 107, ENGR 150, and MATH& 151 with a grade of "C" or better in all courses. [GE, SE]

Course Outcomes:

- Discuss aspects of flight for aircraft and spacecraft.
- Analyze, solve, and document problems in fluid flow and aerodynamics.
- Analyze, solve, and document foundational problems in aerodynamic performance.
- Analyze, solve, and document foundational problems in stability and control.

INTRODUCTION TO GAS DYNAMICS

ENGR 209
3 Credits 22 hours of lecture
22 hours of lab

Introduction to compressible flow as applied to aerodynamics of aerospace systems. Topics include review of foundational principles, control volume analysis, compressible flow, normal and oblique shocks, Prandtl-Meyer flow, and overview of Fanno and Reyleigh flow. The course includes a team design project. Prerequisite: Completion of with a grade of "C" or concurrent enrollment in ENGR 207, and MATH& 152.

Course Outcomes:

- Analyze, solve, and document problems of compressible flow.
- Analyze, solve, and document problems involving normal shock waves.
- Analyze, solve, and document problems involving oblique shock waves.
- Analyze, solve, and document problems of Prandtl-Meyer flow.
- Discuss aspects of thermodynamics, Fanno flow, and Reyleigh flow.

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.

INTEGRATED COMPUTATIONAL DESIGN

ENGR 216

3 Credits 11 hours of lecture

44 hours of lab

Use computational SolidWorks Simulation CADD applications in the design and analysis of engineering problems. Also, integrated surface/solid modeling techniques, motion analysis, and use of CADD in documentation of designs and analyses. Prerequisite: Completion of or concurrent enrollment in ENGR 150, and ENGR& 214.

Course Outcomes:

- Demonstrate use of combined surface/solid modeling techniques.
- Demonstrate foundational use of SolidWorks Simulation application.
- Demonstrate introductory use of SolidWorks Flow Simulation application.
- Demonstrate introductory use of SolidWorks Motion application.
- Document engineering design and analysis problems with SolidWorks Simulation tools.

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 Malab 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 ODEs.

DIGITAL LOGIC DESIGN

ENGR 250

5 Credits 44 hours of lecture

33 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
33 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
33 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.
- Covert C programing code to assembly cod and Machine code.
- Demonstrate the ability to design and analyze digital and computer systems.
- Design performance bench marks 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.

Environmental Science

INTRODUCTION TO ENVIRONMENTAL SCIENCE

ENVS&101
5 Credits 33 hours of lecture
44 hours of lab

Introduction to current topics in environmental science and fundamental principles of ecology. Topics include human population growth, natural resource use, biodiversity, climate change, species interactions, habitat alteration and fragmentation, ecosystem services, carrying capacity and sustainability. Labs will be hands-on investigations of the local environment where students will get an opportunity to collect samples and analyze the environmental quality through the study of soils, biodiversity and water. Many of the labs will be conducted in the field. This course is primarily intended for students majoring or minoring in environmental science or environmental studies. Prerequisite: A grade of "C" or better in MATH 089 or equivalent level as determined by college entrance testing. [NS]

Course Outcomes:

- Identify ecosystem services, the role they play in the environment and current threats to them.
- Describe techniques environmental scientists employ to determine ecosystem health.
- Demonstrate application of appropriate field methodologies to determine ecosystem health.
- Predict potential outcomes of how human activities impact ecological processes.
- Describe the main reasons for key environmental issues such as climate change, loss of biodiversity, water pollution and soil degradation.
- Identify potential solutions to key environmental issues such as climate change, loss of biodiversity, water pollution and soil degradation.

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 and their application to ecosystem functions.
- Use the scientific inquiry process to 1) evaluate ecosystem health and 2) develop and implement original experiments to address a research question.
- Analyze how human activities can harm or benefit ecosystem health and sustainability.

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. [SS, 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.

SUSTAINABILITY & ENVIRONMENTAL PRACTICES

ENVS 430
5 Credits 44 hours of lecture
22 hours of lab

Investigate how environmental problems have arisen due to human activities (global warming, air pollution, waste disposal) and their impact on corporate practices, to include the corporate mission, competitive strategy, technology choices, production development decisions, production processes, and corporate responsibilities. Regulations and permits will be reviewed from the perspective of local planning departments. Changes to the environment by using resources at rates that exceed the system's ability to replenish them will also be covered. [NS]

Course Outcomes:
- Articulate the scope of environmental problems affecting businesses.
- Recognize and articulate the impact of environmental pressures on the corporate mission.
- Determine the appropriate permits required for establishing and on the ground projects.
- Perform field assessments as a team including impacts and enhancements, in order to prepare permit applications and present results.
- Research and report the environmental problems that have arisen due to human activities.
- Critique the environmental issues that have arisen due to human activities.

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 term 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.

INTENSIVE FOUNDATIONS: PROBLEM-SOLVING/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.

INTENSIVE FOUNDATIONS: 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 rephrasing, or drawing a picture.
- 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 familiar, predictable communication tasks.
- 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 I-DEA

ESL 010

1 - 18 Credits 99 hours of lecture

99 hours of lab

This class will help you to improve your English skills in listening, speaking, reading, and writing. You will learn new skills to help you in your everyday life. You will learn about technology by using a computer to do some of your schoolwork. I-DEA is a blended course; half of your class

time will be face-to-face (in the classroom with teacher and students), and half will be online (on the computer). Your teachers can help you with online work during lab time, after the face-to-face class time. Prerequisite: CASAS score below 200 in Listening or Reading.

Course Outcomes:

- Read, write, and say basic vocabulary related to life, job, and education.
- Write and speak sentence-level utterances.
- Complete a variety of forms.
- Use a variety of software to complete schoolwork.

FOUNDATIONS: COMMUNICATION

ESL 013

6 Credits 66 hours of lecture

Learn how and/or improve ability to listen, speak, read, and write basic English with the support of two teachers. Upon successful completion of Foundations (ESL 013): Communications and Foundations (ESL 015): Problem-solving and Technology, students will have gained the skills for higher level Transitional Studies courses. Prerequisite: CASAS scores below 200 in Listening and/or Reading.

Course Outcomes:

- Respond to sentence-level explanations, conversations, instructions, and narratives on familiar topics; apply strategies for asking for clarification; apply knowledge to understand the speaker or writer and respond appropriately.
- Use vocabulary related to common topics and personal experiences; use basic grammar and sentence structure in familiar spoken or written communication tasks.
- Decode and recognize words in simple texts by applying pronunciation rules, tapping out syllables, using picture aids, and recalling vocabulary and sight words; monitor accuracy using various strategies.
- Determine the purpose for communicating in writing and speaking; organize information about a familiar topic in simple structures of several sentences.
- Make simple content changes based on review and feedback from others; make basic edits in handwriting, spelling, grammar, punctuation, and capitalization.
- Access CANVAS to complete various study modules; including surveys, language learning webpage assignments.

FOUNDATIONS: PROBLEM-SOLVING AND TECHNOLOGY

ESL 015

5 Credits 55 hours of lecture

Learn to apply numeracy, and collaborative reading for basic problem-solving and use technology to improve listening, reading and numeracy. Upon successful completion of Mini-ESL Foundations Part 2: Problem-solving and Technology and Mini-ESL Foundations Part 1: Spoken/Written Communication, students will have gained the skills for higher level Transitional Studies courses. Prerequisite: CASAS score below 200 in Listening and/or Reading.

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 problemsolving
- tasks using simple strategies to select and relay information.
- Follow a highly structured plan to organize information in very simple grammatical structures.
- Learn and 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.

INTENSIVE EXPLORATIONS: 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 Intensive Explorations, students will have gained the technology (especially computer) and study skills as well as the oral and written communication skills to transition into Fast Track one. 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.

EXPLORATIONS: ORAL COMMUNICATION/ TECH

ESL 046

6 Credits 66 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 Explorations: Oral Communication/Tech., students will have gained the technology (especially compute) and study skills as well as the oral communication skills to transition into Fast Track 1. Prerequisite: Current CASAS test scores in all skills. CASAS Listening test score between 200 and 209.

Course Outcomes:

- Use the telephone to make appointments, make requests and communicate at work or school, etc.
- Talk about academic and work skills/experience and goals using accurate past, present, and future verb tenses.
- Give and follow oral instructions; ask and answer questions using accurate past, present, and future verb tenses.
- Give a basic PowerPoint presentation.

INTENSIVE EXPLORATIONS: 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 Intermediate ESL, and sufficient to prepare students for Fast Track 1 (both Intensive and Stand-alone courses). Upon successful completion of Intensive Explorations, 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 (both Intensive and Stand-alone courses). 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.

EXPLORATIONS: WRITTEN COMMUNICATION/TECH

ESL 048

5 Credits 55 hours of lecture

Introduction and development of technology (especially computer) skills to support written communication. Development and practice of reading and writing communication skills appropriate to Intermediate ESL and sufficient to prepare students for Fast Track One. Upon successful completion of Explorations, students will have gained the technology (especially computer) and the oral and written communication skills to transition into Fast Track One. Prerequisite: Current CASAS test scores in all skills. CASAS Reading test score between 201 and 210. OR successful completion of Foundations or ESL I-DEA.

Course Outcomes:

- Understand short texts in books & articles (online & print) on familiar topics; understand & use vocabulary well (work, education, health).
- Determine writing purpose, audience, & organization of short, structured paragraphs on familiar topics; revise based on review & feedback from others (make edits in spelling, grammar, punctuation, & capitalization).
- Use English conventions correctly (capitalization, spelling, punctuation, simple-compound sentences, & grammar, including past/present/future verb tenses).
- Apply instructions for basic computer steps using basic technology concepts & vocabulary to write/reply to email, use Canvas, search the web, fill out online job application, prepare PowerPoint presentation.

INTENSIVE EXPLORATIONS: 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 Intermediate ESL, and sufficient to prepare students for Fast Track One. 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 One. Concurrent enrollment in ESL 045 and ESL 047.

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 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.

ESL LITERACY SUPPORT

ESL 090

1 - 2 Credits 22 hours of lecture

Learn how and/or improve ability to read with understanding and convey ideas in writing. Upon successful completion of ESL Literacy Support, students will have gained skills to improve performance on ESL reading/writing assessments. Prerequisite: CASAS Reading test score under 210 and teacher recommendation.

Course Outcomes:

- Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.
- Ask and answer questions about key details in a text.
- Identify the main topic and retell key details of a text.
- Know and 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 text to describe its key ideas (e.g., maps, charts, photographs, political cartoons, etc.).

ESL MATH FOR TRANSITION

ESL 093

1 - 2 Credits 22 hours of lecture

Math such as fractions, decimals, operations, will be contextualized in real-life contexts, so students can transfer the skills outside of the classroom while they are preparing to transition to CAP Math. Prerequisite: Current CASAS test scores in all skills. CASAS Listening score of 200 or higher. CASAS Reading score of 201 or higher. [PNP]

Course Outcomes:

- Understand, interpret and work with words and phrases, pictures, numbers and symbolic information to determine technical meaning.
- Locate and use information to answer questions and solve problems, as well as to translate information expressed mathematically or in words.
- Conduct short research projects to answer questions or solve problems.
- Communicate results using a variety of mathematical representations including graphs, charts, and tables.
- Use language related to all areas of math covered, as well as demonstrate understanding of cross-cultural differences in computing, problem solving, mathematical notation and understand words/phrases in math context.
- 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.

READING, SPEAKING AND US CITIZENSHIP

ESL 095

3 Credits 33 hours of lecture

Learn reading, writing and oral communication strategies including 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 US Citizenship interview preparation and engaged citizenship. Prerequisite: Current CASAS scores in all skills. CASAS Listening and Reading scores of 190 or higher.

Course Outcomes:

- Demonstrate familiarity with simple, USCIS citizenship 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.

- Appropriately use simple sentence structures to produce several sentences using USCIS vocabulary.
- Apply language skills to follow instructions and access on-line materials.
- Independently apply language and technology strategies practiced in the classroom to increase learning opportunities.
- Understand and make individual choices to personalize in-class civics education to self and community.
- Accurately understand and transcribe information to engage in discussion and activities related to civics and citizenship.

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 term, 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 term, 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 term, 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 Credit 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.

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&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]

Course Outcomes:

- Learn the basics of supply and demand, and how to apply supply and demand analysis to a variety of different situations, including labor markets, interest rates, aggregate supply and demand, foreign trade, and foreign exchange rates.
- Learn theories of economic geography.
- Learn the economics and geographical implications of topics such as population and migration, energy and natural resources, agriculture, manufacturing, services, transportation and communication systems, cities, and international development.
- Learn a smattering of finance and macroeconomics.
- Learn how to find, interpret and present economic data.

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 prinicples 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
44 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
44 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.

Human Development

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,HR]

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,HR]

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, and developing emotional intelligence.

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,HR]

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,HR]

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 Credit 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,HR]

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.

WORKPLACE SUCCESS

HDEV 195

1 Credit 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,HR]

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 Credit 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,HR]

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,HR]

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.

SELECTED TOPICS

HDEV 280

1 - 3 Credits 33 hours of lecture

Variety of topics in human development as listed in the term 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:

- 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.
- Locate and name basic anatomical structures and associate them with their functions.
- Provide examples of clinical relevance for each body system.

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:

- Evaluate and demonstrate ethical and professional behaviors, to include HIPAA compliance and cultural competence in the healthcare setting.
- Apply an understanding of the U.S. Healthcare delivery system.
- Develop awareness of work environment, skills, and pathways pertaining to healthcare professions including requirements for professional licensing and/or certification.

AIDS EDUCATION

HEOC 120

1 Credit 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] [PNP]

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

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 term 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 superivsing 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 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 BCE to the High Middle Ages, c. 950 CE. 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, Progressive reform movement and World War I. [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

The Twenties, the Great Depression and the New Deal, World War II, the Cold War consensus, Vietnam and the Watergate era, globalization and the 21st century. [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 behav-

ior, 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 countriesand 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 term 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:

- Describe health as a multi-dimensional model.
- Evaluate current wellness priorities in each dimension.
- Develop behavior change strategies.
- Assess 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 multiple factors that contribute to weight-related behaviors and body image. Focus on developing a healthy relationship with food and physical activity, and practicing sustainable skills for effective lifestyle management. [HE, SE] [PNP]

Course Outcomes:

- Identify, evaluate, and apply strategies that result in positive health behavior.
- Determine the credibility of health related information.
- Describe biological, psychological, social, and behavioral patterns that influence weight, eating, and physical activity.
- Investigate factors that influence body image and the impact of a negative body image on health behaviors.
- Practice mindfulness strategies to improve eating, physical activity, and body image.

HAPPINESS AND YOUR HEALTH

HLTH 108

2 Credits 22 hours of lecture

Exploration of the connection between happiness and your health. Focuses on science-based strategies to increase happiness, including gratitude, social connections, mindfulness, and stress management. 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 Credit 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.

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 Credit 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.

Course Outcomes:

- Obtain certification for first aid, child and infant CPR and AED.

HEALTHCARE PROVIDER CPR AND FIRST AID

HLTH 124

1 Credit 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. [PNP]

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:

- Discuss health as a multi-dimensional model.
- Evaluate personal behaviors and their influence on wellness.
- 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.

CANNABIS AND YOUR HEALTH

HLTH 212
2 Credits 22 hours of lecture

Explores the connection between cannabis and health with a focus on comparing marijuana and hemp, examining scholarly peer-reviewed research findings for medicinal and recreational use, discussing local legalization issues and developing behavior change strategies to advance health. [HPE, SE]

Course Outcomes:

- Examine the relationship between cannabis and health.
- Evaluate the credibility of cannabis-related information.
- Examine the difference between hemp and marijuana.
- Identify factors that influence marijuana use.
- Identify current Washington state laws and federal laws.

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.

Honors

SPECIAL PROJECTS: HONORS

HONS 290
1 - 6 Credits

Opportunity to plan, organize and complete special projects approved by the department. Prerequisite: Consent of the Instructional Unit.

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

22 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 the Health and Physical Education general education requirement. [HPE, SE]

Course Outcomes:

- Evaluate personal fitness status based on established guidelines.
- Develop behavior change strategies.
- Engage in physical activity.
- Evaluate the reliability of health related information.
- Develop and practice strategies for optimal wellness.

MIND BODY HEALTH

HPE 266

3 Credits 22 hours of lecture

22 hours of lab

Exploration of the mind/body connection. Focusing on health, illness, healing, and developing personalized behavior change strategies to advanced 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 the Health and Physical Education general education requirement. [HPE, SE] [PNP]

Course Outcomes:

- Developing body awareness, relaxation and mindfulness skills Evaluating personal wellness status Develop behavior change strategies Explain the stress response Engage in movement activities Determine the credibility of health related information.

SELECTED TOPICS

HPE 280

1 - 5 Credits 55 hours of lecture

Varying topics in Health Physical Education and sports, as listed in the term 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.

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 who 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; Written assessment score of 0-2 and CaMLA EPT score of 1 to 38; or consent of Instructional Unit.

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 audiences.
- 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; CaMLA EPT score of 1 to 38; or consent of Instructional Unit.

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, 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; CaMLA EPT score of 1 to 38; or consent of Instructional Unit.

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; Written assessment score of 0-2 and CaMLA EPT score of 1 to 38; or consent of Instructional Unit.

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; Written assessment score of 3 and CaMLA EPT socre of 39-46; a grade of "C" or better in IELP 061; or consent of Instructional Unit.

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; CaMLA EPT score of 39-46; ESL Compass Listening score of 67-74; or consent of Instructional Unit.

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; CaMLA EPT score of 39-46; a grade of "C" or better in IELP 063; or consent of Instructional Unit.

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; Written assessment score of 3 and CaMLA EPT score of 39-46; a grade of "C" or better in IELP 064; or consent of Instructional Unit.

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), pronuncia-

tion and grammar appropriate for task.

- 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, identifying information needed for reaching an answer for a question posed).
- 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; Written assessment score of 4 and CaMLA EPT score of 47-52; a grade of "C" or better in IELP 071; or consent of Instructional Unit.

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; ESL Compass Listening score of 75-81; CaMLA EPT score of 47-52; or consent of Instructional Unit.

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' comprehension.
- 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; CaMLA EPT score of 47-52; a grade of "C" or better in IELP 073; or consent of Instructional Unit.

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; Written assessment score of 4 and CaMLA EPT score of 47-52; a grade of "C" or better in IELP 074; or consent of Instructional Unit.

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 given, communicating reasoning, identifying information needed for reaching an answer for a question posed).
- 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; Written assessment score of 5 and CaMLA EPT score of 53-60; a grade of "C" or better in IELP 081; or consent of Instructional Unit.

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 from complex or extensive ideas in preparation for communication in writing.
- 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; ESL Compass Listening score of 82-91; CaMLA EPT score of 53-60; or consent of Instructional Unit.

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 to listeners' comprehension.
- 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; CaMLA EPT score of 53-60; a grade of "C" or better in IELP 083; or consent of Instructional Unit.

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; Written assessment score of 5 and CaMLA EPT score of 53-60; a grade of "C" or better in IELP 084; or consent of Instructional Unit.

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 topics.
- 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 on familiar topics and activities. Handle very short social exchanges.
- 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 announcements.
- 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&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 on familiar topics and activities. Handle very short social exchanges.
- 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 announcements.
- 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 Credit 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 Credit 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 Credit 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 expe-

rience 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 Credit 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 approximately150 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 approximately170 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 and furniture is used. Exhibit proper manners at a Japanese house.

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 fre-

quency 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 newsworthy 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.

DIGITAL NEWS
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:
- Explain steps news organizations are taking to transition to their roles as creators of combined print/web news products.
- Assess the value and appropriateness of current multimedia platforms.
- Plan, report, edit and produce basic audio, photo slide show and video reports as well as web text stories, Tweets and blogs.
- Report news accurately, fully and fairly, utilizing traditional news conventions and adhering to the Society of Professional Journalists Code of Ethics.
- Practice ethical 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 newsworthy 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 newsworthy 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:

- Master concepts and skills introduced in JOUR 101, including, Associated Press style; story organization; thorough reporting; principles of fairness; and ethical and legal journalism standards
- Master more complex reporting, writing and communication and delivery of news in digital venues.
- Gain greater understanding of 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 - others.

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 newsworthy 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 newsworthy 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 newsworthy 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.

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 term 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.

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 HAAS ST-10 CNC lathe. Produce and edit NC programs on the CNC lathe. 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. 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 term 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.

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 a quadratic, logarithmic, or exponential equation.

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

A study of a variety of mathematical topics including mathematical models, finance, statistics, and probability. Additional topics may include number theory, geometry, voting theory, networks, apportionment and other topics. For students who do not plan to take additional mathematics. 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-term 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-term 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:

- Identify, derive and use geometric formulas.
- Use and convert units of measurement.
- Describe and apply appropriate problem solving strategies to geometric problems.

MATH FOR ELEMENTARY TEACHERS

MATH 124

5 Credits 55 hours of lecture

The third of a three-term 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:

- Demonstrate multiple representations of functions, and of integer and decimal operations.
- Organize and analyze data.
- Identify and interpret valid probability numbers.

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.

INTRODUCTION TO STATISTICS

MATH&146

5 Credits 55 hours of lecture

Descriptive statistical methods, probability, binomial and normal probability distributions, estimation of parameters, tests of hypotheses, and regression analysis are included among other statistical topics with applications to fields of nursing, science, engineering, and social science. Prerequisite: A grade of "C" or better in MATH 093 or 095, or recommending score on placement test. [Q]

Course Outcomes:

- Organize statistical information using appropriate visual and numerical descriptors.
- Identify and interpret valid probability numbers.
- Given bivariate data, determine the line of best fit and interpret the associated correlation coefficient.
- Compute the likelihood of an event pertaining to a normally distributed population.
- Interpret a confidence interval.
- Construct, perform, and interpret results of a hypothesis test.

STATISTICS II

MATH 147

3 Credits 33 hours of lecture

Inference techniques involving two or more populations; regression inference, analysis of variance (ANOVA), and Chi-square tests are included among other statisti-

cal topics with applications to fields of nursing, science, engineering, and social science. Prerequisite: A grade of "C" or better in MATH& 146. [Q]

Course Outcomes:

- Interpret a confidence interval for a two population comparison.
- Draw a useful conclusion from a two population hypothesis test.
- Interpret the outcome of a Chi-Square hypothesis test.

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

First course in the four term 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 term 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 term 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. Comple-

tion 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.

INFERENTIAL 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 term 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 term 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
22 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 application of scientific methodology.
- 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,HR]

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,HR]

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. [CA,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,HR]

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,HR] [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,HR]

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,HR]

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,HR]

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 views and reports.

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,HR]

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,HR]

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 and public employees.

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 telephone communications; projecting a professional image; demonstrating the knowledge, attitudes, and skills necessary for a successful job performance.
- 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 term 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.

Mechatronics

INDUSTRIAL SAFETY
MTX 100
1 Credit 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 089 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
4 Credits 22 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 089. [GE]

Course Outcomes:

- Demonstrate accurate conversion between scientific and engineering notation using proper prefixes.
- Indentify 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
3 Credits 22 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 race-

ways, 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.

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 instrumenta-

tion 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 PandID 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 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

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 term 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 children's acquisition of the grade level expectations and Music National Standards.
- 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 Kodaly hand positions for solfege 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 the guitar.)
- 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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

1 Credit 22 hours of lab

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

1 Credit 22 hours of lab

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

1 Credit 22 hours of lab

Continuation of MUSC& 122. 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& 122 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 Credit 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 Credit 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 Credit 11 hours of lecture

Private cello lessons. Continuation of MUSCA 103. Pre-

requisite: 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 Credit 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.

APPLIED INSTRUMENT: TRUMPET

MUSCA135

1 Credit 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.

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: GUITAR

MUSCA136

1 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Kodaly 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 Kodaly 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 Kodaly 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 Credit 11 hours of lecture

Private voice lessons. 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.
- Demostrate 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 demonstrate a willingness to correct perceived errors.

APPLIED VOICE

MUSC 171

1 Credit 11 hours of lecture

Private voice lessons. 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.
- Demostrate 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 demonstrate a willingness to correct perceived errors.

APPLIED INSTRUMENT: FLUTE

MUSCA171

1 Credit 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 Credit 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 Credit 11 hours of lecture

Private voice lessons. 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.
- Demostrate 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 demonstrate a willingness to correct perceived errors.

APPLIED PIANO

MUSC 173

1 Credit 11 hours of lecture

Private piano lessons. 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 INSTRUMENT: CELLO

MUSCA173

1 Credit 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 Credit 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 Credit 11 hours of lecture

Private piano lessons. 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 Credit 11 hours of lecture

Private piano lessons. 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 INSTRUMENT: TRUMPET

MUSCA175

1 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 term. 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 term. 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 Credit 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 Credit 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 term. 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 term. 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 Kodaly 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 Credit 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 Credit 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 term. 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 Kodaly 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 term. 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 Kodaly 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 Credit 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 Credit 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 prospective instrument.
- 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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

1 Credit 22 hours of lab

Continuation of MUSC& 123. Trains students to write what they hear in harmonic and polyphonic textures. Examples coordinated with theory classes. Prerequisite: MUSC& 123. [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

1 Credit 22 hours of lab

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

1 Credit 22 hours of lab

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, and study of two part inventions and fugue. Concurrent enrollment in MUSC& 221 required. Prerequisite: MUSC& 143 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 Credit 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 Credit 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 altered dominants, chromatic mediants, variation form, sonota form, and rondo form. Concurrent enrollment in MUSC& 222 required. Prerequisite: MUSC& 231 or consent of Instructional Unit. [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

Extensions of harmonic language and compositional style of the 20th/21st century, including atonal forms. Concurrent enrollment in MUSC& 223 required. Prerequisite: MUSC& 232 or consent of Instructional Unit. [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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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.

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.

APPLIED INSTRUMENT: BASS

MUSCA238

1 Credit 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.

APPLIED INSTRUMENT: HORN

MUSCA239

1 Credit 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.

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: BASSOON

MUSCA240

1 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Kodaly 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 Kodaly 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 Kodaly 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 Credit 11 hours of lecture

Private voice lessons. 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.
- Demostrate 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 demonstrate a willingness to correct perceived errors.

APPLIED VOICE

MUSC 271

1 Credit 11 hours of lecture

Private voice lessons. 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.
- Demostrate 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 demonstrate a willingness to correct perceived errors.

APPLIED INSTRUMENT: FLUTE

MUSCA271

1 Credit 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 Credit 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 Credit 11 hours of lecture

Private voice lessons. 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.
- Demostrate 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 demonstrate a willingness to correct perceived errors.

APPLIED PIANO

MUSC 273

1 Credit 11 hours of lecture

Private piano lessons. For students with some previous keyboard experience. 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 Credit 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 Credit 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 Credit 11 hours of lecture

Private piano lessons. For students with some previous keyboard experience. 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 Credit 11 hours of lecture

Private piano lessons. For students with some previous keyboard experience. 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 term. 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 term. 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 Credit 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 Credit 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 term. 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 term. 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 Kodaly 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 Credit 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 Credit 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 term. 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 Kodaly 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 term. 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 Kodaly 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 Credit 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 Credit 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.

Network Technology

IP SUBNETTING

NTEC 103

3 Credits 22 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 hierarchical addressing schemes. No prior computer or network knowledge or experience is required. Prerequisite: A grade of "C" or better in CAP 042 or eligible for MATH 089. [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

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 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 or concurrent enrollment in NTEC 103 or consent of Instructional Unit. [GE]

Course Outcomes:

- Set up a Microsoft computer network.
- Manage users and groups.
- Demonstrate communication across a network.
- Demonstrate effective troubleshooting methodology.

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

LINUX ESSENTIALS

NTEC 151
6 Credits 44 hours of lecture
44 hours of lab

Explores the basics of Linux, the world's most popular operating system. Includes system administration skills (using the command line, how to configure a computer running Linux, and basic networking), basic open source concepts. This course may help students prepare for attaining the LPI (Linux Professional Institute) Linux Essentials industry certification. Prerequisite: Eligibility for MATH 030, or consent of Instructional Unit. [GE]

Course Outcomes:

- Demonstrate knowledge of open source applications in the workplace as they relate to closed source equivalents.
- Understand basic concepts of hardware, processes, programs and the components of the Linux Operating System.
- Have a basic understanding of how to work on the command line and with files.
- Demonstrate how to create and restore compressed backups and archives.
- Understand system security, users/groups and file permissions for public and private directories.
- Understand how to create and run simple scripts.

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.

DEPLOYING LINUX SERVER SERVICES

NTEC 220
6 Credits 44 hours of lecture
44 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 151, or consent of Instructional Unit. [GE]

Course Outcomes:

- Install Linux network servers.
- Manage Linux network servers.
- Configure Linux 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 founda-

tion 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: Completion of NTEC 103 with a grade of "C" or better, or concurrent enrollment 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 team 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 222, 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
- Demonstate 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
- Demonstarate the abiulity 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

MICROSOFT SERVER ADMINISTRATOR 1

NTEC 234
6 Credits 44 hours of lecture
44 hours of lab

Covers installing and configuring Windows Server. 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; 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 both NTEC 132 and NTEC 103, 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 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 132 and NTEC 103, 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.

MICROSOFT SQL SERVER ADMINISTRATION

NTEC 238
4 Credits 22 hours of lecture
44 hours of lab

Covers the skills necessary for installing and configuring Microsoft's SQL Server along with setting up a database and associated objects. Course focuses upon the role of Database Administrator in managing procedures to ensure that data is consistently, reliably available, and recoverable. Students will manage SQL Server instances and databases. Also includes optimizing and troubleshooting SQL Server, implementing basic security and data integrity measures, and granting data access privileges to individual users. Prerequisite: A grade of "C" or better or concurrent enrollment in NTEC 103 and NTEC 132, or consent of Instructional Unit. [GE]

Course Outcomes:

- Install and configure SQL Server.
- Manage SQL Server instances and databases.
- Optimize and troubleshoot SQL Server.
- Manage SQL Server data.

MICROSOFT OFFICE 365 ADMINISTRATION

NTEC 239
3 Credits 22 hours of lecture
22 hours of lab

Microsoft Office 365 is powered by the cloud and designed to help meet reliability, security, and user productivity needs. Students will plan, deploy, and operate Microsoft Office 365 including its identities, dependencies, requirements, and supporting technologies. Students will configure administrative roles, manage user and group accounts, implement security and monitor Office 365 availability. Prerequisite: A grade of "C" or better or concurrent enrollment in NTEC 103 and NTEC 132, or consent of Instructional Unit. [GE]

Course Outcomes:

- Setup a Office 365.
- Configure Office 365 roles, users, and groups.
- Configure security measures Office 365.
- Monitor Office 365 availability.

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.

LINUX ADMINISTRATION 1

NTEC 252
6 Credits 44 hours of lecture
44 hours of lab

Builds on the skills learned in NTEC 151 - Linux Essentials course. Covers the following: system architecture, Linux installation and package management, GNU and UNIX commands, devices, Linux file systems, and file system hierarchy standards. This course may help students prepare for taking the COMPTIA LINUX+/LPI (Linux Professional Institute) LPIC-1 industry certification (Exam 101). Prerequisite: A grade of "C" or better in NTEC 151 or consent of Instructional Unit. [GE]

Course Outcomes:

- Understand system architecture.
- Demonstrate Linux installation and package management.
- Demonstrate knowledge of GNU and Unix commands.

- Understand devices, Linux filesystems, the filesystem hierarchy standard.

LINUX ADMINISTRATION 2

NTEC 253
6 Credits 44 hours of lecture
44 hours of lab

Course description revision: Builds on the skills learned in the NTEC 151 and NTEC 252. Covers the following: shells, scripting and data management, interfaces and desktops, administrative tasks, essential system services, networking fundamentals, and security. This course may help students prepare for taking the COMPTIA LINUX+/LPI (Linux Professional Institute) LPIC-1 industry certification (Exam 102). Prerequisite: A grade of "C" or better in NTEC 252 or consent of Instructional Unit. [GE]

Course Outcomes:

- Understand shells, scripting and data management.
- Understand user interfaces and desktops.
- Demonstrate knowledge of administrative tasks.
- Demonstrate knowledge of essential system services.
- Understand networking fundamentals.
- Understand security.

SELECTED TOPICS

NTEC 280
1 - 6 Credits 66 hours of lecture

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 - 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.

CAPSTONE EXPERIENCE: NETWORK TECHNOLOGIES

NTEC 297
3 Credits 11 hours of lecture
22 hours of lab

This course will normally be taken during the final term of the program. Students will apply their skills on many topics covered in the other degree program courses. Students will complete a project in a team/small group setting as they create a network design proposal document, design an enterprise network to meet established user requirements, create detailed documentation plans for implementation, create a functional demo/mock-up, and make a final presentation to the class. This course will provide students a hands-on experience designing an enterprise network based on user requirements. Topics include all aspects of network planning, design, and troubleshooting. Prerequisite: Cisco CCENT certification, or Microsoft MCP Server 2012/2016 certification required, completion of all required core coursework related to degree, and consent of Instructional Unit.

Course Outcomes:

- 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

CAPSTONE EXPERIENCE: MICROSOFT TECHNOLOGIES

NTEC 298
3 Credits 11 hours of lecture
22 hours of lab

This course will normally be taken during the final term of the program. Students will apply their skills on many topics covered in the other degree program courses. Students will complete a project in a team/small group setting as they create a network design proposal document, design an enterprise network to meet established user requirements, create detailed documentation plans for implementation, create a functional demo/mock-up, and make a final presentation to the class. This course will provide students a hands-on experience designing an enterprise network based on user requirements. Topics include all aspects of network planning, design, and troubleshooting. Prerequisite: Microsoft MCP Server 2012 or 2016 certification required, completion of all core coursework related to degree, and consent of Instructional Unit.

Course Outcomes:

- 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.

CAPSTONE EXPERIENCE: CISCO TECHNOLOGIES

NTEC 299

3 Credits 11 hours of lecture 44 hours of lab

This course will normally be taken during the final term of the program. Students will apply their skills on many topics covered in the other degree program courses. Students will complete a project in a team/small group setting as they create a network design proposal document, design an enterprise network to meet established user requirements, create detailed documentation plans for implementation, create a functional demo/mock-up, and make a final presentation to the class. This course will provide students a hands-on experience designing an enterprise network based on user requirements. Topics include all aspects of network planning, design, and troubleshooting. Prerequisite: 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

2 Credits 22 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

3 Credits 66 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 Credit 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

4 Credits 88 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 Credit 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-morbitdities.
- 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 Credit 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 perioperative 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

5 Credits 110 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 Credit 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

NURSING DEVELOPMENT AND SUPPORT

NURS 150

1 - 2 Credits 11 hours of lecture
22 hours of lab

Designed to support students who withdraw from the nursing program for academic or non-academic reasons by assisting with remediation. Students may enroll concurrently with nursing courses in all six quarters of the program. The schedule is comprised of classroom, skills lab, and individual 1:1 sessions with the Student Success and Retention Faculty or other designated Nursing Faculty. Provides students with tools, skills, interventions, and resources to facilitate student readiness to re-enter

the nursing program. Prerequisite: Recommendation by Nursing Readmission Committee and/or Associate Dean of Health Sciences. [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:

- Describe methods of evaluating the patient's biopsychosocial health.
- Recognize appropriate nursing management of client care.
- Define the pharmacological management of the client.
- Determine the roles of the professional nurse.

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.

CLINICAL PRACTICE SUPPORT

NURS 250

1 - 5 Credits 110 hours of lab

Simulation and clinical practice experiences are designed to support individuals in developing safe, effective clinical practice. Focuses on enhancing critical thinking, clinical judgment, organization and prioritization and application of knowledge in clinical scenarios. Prerequisite: Recommendation by Nursing Readmission Committee and/or Associate Dean of Health Sciences. [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

1 Credit 11 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

6 Credits 132 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 Credit 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 Credit 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

NUTRITION
NUTR&101
3 Credits 33 hours of lecture

Examines the scientific, economic, cultural, ethnic, and psychological implications of nutrition in relation to health across the lifespan and in the context of healthcare professions. Covers principles of balance nutrition, physiology and metabolism of nutrients, and changing nutritional needs throughout the human life span. Prerequisite: A grade of "C" or better in CHEM& 121 or higher. [NS]

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.

NUTRITION IN HEALTHCARE II
NUTR 139
1 Credit 11 hours of lecture

Examines the scientific, economic, cultural, ethnic, and psychological implications of nutrition in relation to health across the lifespan and in the context of healthcare professions. This course will cover the principles of nutrition in nursing and nutrition in health promotion from infants to older adults. Concurrent enrollment in NURS 135, 136, 137, 138. Prerequisite: A grade of "C" or better in NUTR& 101 and successful completion of the 1st and 2nd terms of the Nursing Program.

Course Outcomes:
- Identify and discuss the principles of assessing the nurtitional status of clients throughout the lifespan, as well as the role nutrition plays in healing.
- Research, examine and discuss the pros and cons of nutritional assessment tools used in the healthcare setting.
- Discuss cultural/ethnic, socioeconomic/environmental and psychological barriers clients/populations experience in making nutritious food choices.
- Research and identify common nutritional deficiencies and at risk clients/populations throughout the lifespan.
- Explore and discuss food intolerances, conditions and diseases, as well as current eating alternatives and treatment options.
- Discuss food addiction and eating disorders, their underlying psychological components, and their current treatment options.

NUTRITION IN HEALTHCARE III
NUTR 240
1 Credit 11 hours of lecture

Builds on the concepts introduced in NUTR& 101 and NUTR 139. Examines of the scientific, economic, cultural, ethnic, and psychological implications of nutrition in relation to health across the lifespan and in the context of healthcare professions. This course will cover nutrition in the nursing clinical practice including nutrition needs and limitations of patients with acute and chronic illnesses. Concurrent enrollment in NURS 241 and 242. Prerequisite: A grade of "C" or better in NUTR& 101, NUTR 139 and successful completion of the first year of the Nursing Program. [NS]

Course Outcomes:
- Explore and discuss the principles of enteral and parenteral nutrition in patients for patients with critical illness and/or hypermetabolic conditions.
- Research and discuss the nutritional needs and limitations of patients with gastrointestinal disorders.
- Research and discuss the nutritional needs and limitations of patients with cardio- vascular and renal disorders.
- Research and discuss the nutritional needs and limitations of patients with Diabetes Mellitus.
- Explore and discuss nutrition for patients with Cancer or HIV/AIDS.

- Demonstrate understanding of the nurses' role in assessing, advocating and planning/evaluating interventions for the nutritional needs & requirements of their patients in multiple clinical settings.

Professional Baking

ARTISAN BREADS

PBAK 110
9 Credits 22 hours of lecture
154 hours of lab

Begins with straight doughs and progresses through overnight fermentation, enrichment, pre-ferments, sourdoughs, rye breads, history of bread-making, professionalism in the workplace, safety and sanitation, equipment use and safety, baker's math, weights and measures and note-taking. Concurrent enrollment in PBAK 111. Prerequisite: Eligible for ENGL 098 and MATH 030. Valid Washington State food handlers card.

Course Outcomes:

- Present thorough and accurate notes.
- Demonstrate the ability to scale formulas with speed and accuracy using both balance and digital scales.
- Describe and demonstrate correct mixing techniques of various types of doughs.
- Discuss and demonstrate correct fermentation, folding, cutting, forming, proofing and baking all doughs.
- Demonstrate proper make up of baguettes, batards, boules and rolls.
- Discuss and demonstrate mixing and use of various pre-ferments.
- Discuss and demonstrate ability to start and maintain a sourdough or natural starter.
- Demonstrate efficient use of time and work area.

EARLY MORNING PRODUCT

PBAK 111
5 Credits 22 hours of lecture
66 hours of lab

Covers early morning product and their methods; scones, biscuits and muffins. Includes many specialty and seasonal product such as cake donuts, yeast-raised donuts, fruit pies and cream pies. Covers professionalism in the workplace, bakeshop safety and sanitation, equipment use and safety, baker's math, weights and measures. Students are required to take thorough notes on all lectures, demos and processes. Concurrent enrollment in PBAK 110. Prerequisite: Eligible for ENGL 098 and MATH 030. Valid Washington State food handlers card.

Course Outcomes:

- Present thorough and accurate notes.
- Demonstrate the ability to scale formulas with speed and accuracy using both balance and electronic scales.
- Demonstrate ability to make scones, biscuits and muffins using correct methods.
- Demonstrate ability to make fruit pie fillings, cream fillings and crusts.
- Demonstrate ability to mix and fry yeast raised and cake donuts.
- Demonstrate efficient use of time and work area.
- Demonstrate production with speed and accuracy, employing safe and sanitary work habits.

VIENNOISERIE

PBAK 120
9 Credits 22 hours of lecture
154 hours of lab

Covers laminated doughs, brioche and sweet doughs. Students will learn various pre-ferments, mixing, fermentation, laminating techniques, make-up of product, proofing and baking. Also covered is professionalism in the workplace, safety and sanitation, equipment use and safety, baker's math, weights and measures and note-taking. Concurrent enrollment in PBAK 121. Prerequisite: Eligible for ENGL 098 and MATH 030. Valid Washington State food handlers card.

Course Outcomes:

- Present thorough and accurate notes.
- Demonstrate the ability to scale formulas with speed and accuracy using both balance and electronic scales.
- Describe and demonstrate correct mixing techniques of Danish, croissant, puff pastry and sweet doughs.
- Discuss and demonstrate correct fermentation and lamination of doughs.
- Demonstrate proper make up of a variety of products.
- Discuss and demonstrate mixing and use of various pre-ferments.
- Demonstrate efficient use of time and work area.
- Demonstrate production with speed and accuracy, employing safe and sanitary work habits.

COOKIES, BROWNIES, BARS AND QUICK BREADS

PBAK 121
5 Credits 22 hours of lecture
66 hours of lab

Covers production of a variety of cookies by method such as bar, rolled, cut, scooped, refrigerator and decorated. Also covered are brownies, layered bars, cheesecake bars and quick breads. Also covers professionalism in the workplace, safety and sanitation, equipment use and

safety, baker's math, weights and measures and note-taking. Concurrent enrollment in PBAK 120. Prerequisite: Eligible for ENGL 098 and MATH 030. Valid Washington State food handlers card.

Course Outcomes:

- Present thorough and accurate notes.
- Demonstrate the ability to scale formulas with speed and accuracy using both balance and electronic scales.
- Demonstrate proficiency when mixing a variety of cookies, brownies and bars.
- Demonstrate efficient use of time and work space.
- Demonstrate correct method when mixing quick breads and pound cakes.
- Demonstrate proper make up of a variety of products.
- Demonstrate ability to properly bake product.
- Demonstrate production with speed and accuracy, employing safe and sanitary work habits.

BEGINNING CAKE DECORATING

PBAK 125

3 Credits 22 hours of lecture

22 hours of lab

Covers the basics of cake decorating. Includes professionalism in the workplace, bakeshop safety and sanitation, equipment use and safety. Bas tools of cake decorating and their applications, cutting, filling, crumb frosting and final frosting a cake, borders, writings, basic flowers, and color scheme will be covered. Prerequisite: Consent of Instructional Unit. Valid Washington State food handlers card.

Course Outcomes:

- Able to pass a written exam.
- Demonstrate the ability to split, fill, crumb coat and final frost a cake.
- Participates in setting up and breaking down of the lab at the end of each class.
- Demonstrate proper make up of a variety of flowers learned.
- Understand the use of complementary colors and the color wheel.
- Demonstrate efficient use of time and work area.
- Demonstrate production with speed and accuracy.
- Demonstrate safe and sanitary work habits.

INTERMEDIATE CAKE DECORATING

PBAK 126

3 Credits 22 hours of lecture

22 hours of lab

Continuation of the basics of cake decorating. Covers professionalism in the workplace, bakeshop safety and sanitation, equipment use and safety. The basic tools of cake decorating and their applications, cutting, filling, crumb frosting and final frosting a cake, borders, writings, extended flower working, and color scheme will be covered. Fondant and fondant working tools will be introduced. Prerequisite: A grade of "C" or better in PBAK 125. Valid Washington State food handlers card.

Course Outcomes:

- Able to pass a written exam.
- Demonstrate the ability to split, fill, crumb coat and final frost a cake.
- Participates in setting up and breaking down of the lab at the end of each class.
- Demonstrate proper make up of a variety of flowers learned.
- Understand the use of complementary colors and the color wheel.
- Demonstrate efficient use of time and work area.
- Demonstrate production with speed and accuracy.
- Demonstrate safe and sanitary work habits.

ADVANCED CAKE DECORATING

PBAK 127

3 Credits 22 hours of lecture

22 hours of lab

Continuation of the Intermediate Cake Decorating course. Covers professionalism in the workplace, bakeshop safety and sanitation, equipment use and safety. The basic tools of cake decorating and their applications, cutting, filling, crumb frosting and final frosting a cake, borders, writings, basic flowers, and color scheme will be covered. Continued work with fondant and color working. Prerequisite: A grade of "C" or better in PBAK 126. Valid Washington State food handlers card.

Course Outcomes:

- Able to pass a written exam.
- Demonstrate the ability to split, fill, crumb coat and final frost a cake.
- Participates in setting up and breaking down of the lab at the end of each class.
- Demonstrate proper make up of a variety of flowers learned.
- Understand the use of complementary colors and the color wheel.
- Demonstrate efficient use of time and work area.
- Demonstrate production with speed and accuracy.
- Demonstrate safe and sanitary work habits.
- Demonstrate advanced techniques in cake decorating.

CAKES, DESSERTS AND TORTES

PBAK 130

9 Credits 22 hours of lecture

154 hours of lab

Covers the mixing methods of various types of cakes and tortes. Includes tart crusts, creams, custards, mousses, but-

ter creams and fillings. Students will learn to assemble a variety of classic cakes, tortes and desserts as well as more modern cakes, from start to finish. Also covered is professionalism in the workplace, safety and sanitation, equipment use and safety, baker's math, weights and measures and note-taking. Concurrent enrollment in PBAK 131. Prerequisite: Eligible for ENGL 098 and MATH 030. Valid Washington State food handlers card.

Course Outcomes:

- Present thorough and accurate notes.
- Demonstrate the ability to scale formulas with speed and accuracy using both balance and electronic scales.
- Describe and demonstrate correct mixing techniques of various types of cake batters.
- Discuss and demonstrate correct building and finishing of classic and modern cakes and tortes.
- Discuss and demonstrate mixing and use of various creams, custards and fillings.
- Demonstrate ability to properly bake product.
- Demonstrate efficient use of time and work area.
- Demonstrate production with speed and accuracy, employing safe and sanitary work habits.

RETAIL OPERATIONS AND BARISTA

PBAK 131

5 Credits 22 hours of lecture

66 hours of lab

Students will learn how to set up the retail area for daily operation, how to make a variety of specialty coffees, cold drinks, Italian sodas and featured drinks. Marketing for effective sales, efficient and friendly customer service and the proper operation of POS system will also be discussed. Concurrent enrollment in PBAK 130. Prerequisite: Eligible for ENGL 098 and MATH 030. Valid Washington State food handlers card.

Course Outcomes:

- Present thorough and accurate notes.
- Demonstrate the ability to set up the retail area for daily operation and sales.
- Demonstrate proper and efficient customer service.
- Demonstrate the ability to properly use the coffee machine, blenders and POS system.

APPLIED PROFESSIONAL DEVELOPMENT

PBAK 200

9 Credits 11 hours of lecture

176 hours of lab

Students will spend two weeks in each of four areas; Artisan bread, Vienoisserie, cakes and tortes, early morning/store/retail. Utilizing acquired skills and knowledge, they will be responsible for production of all product for the retail store. They will create and follow a production schedule, inventory and store product, do mise en place for the next day and clean the station at the end of each day. Prerequisite: Successful completion of PBAK 110, PBAK 111, PBAK 120, PBAK 121, PBAK 130 and PBAK 131. Valid Washington State food handlers card.

Course Outcomes:

- Present thorough and accurate notes.
- Demonstrate the ability to scale formulas with speed and accuracy using both balance and electronic scales.
- Demonstrate increased skill when scaling, mixing, make-up, baking and finishing product.
- Demonstrate safe and sanitary work habits
- Demonstrate ability to follow a production schedule and complete product in a timely manner.
- Demonstrate ability to accurately make product from all areas.
- Demonstrate ability to plan a production schedule, including mise en place.
- Demonstrate efficient use of time and work area.
- Demonstrate production with speed and accuracy.

PRODUCTION BAKING

PBAK 210

9 Credits 22 hours of lecture

154 hours of lab

Utilizing acquired skills, students will operate and manage their own production bakery. They will produce product needed for sale in the retail store from the following areas; breakfast items, Vienoisserie, artisan bread, bars, cookies, cakes and dessert items. They will be responsible for planning a daily production schedule, inventory, purchase of necessary ingredients, costing and maintaining daily operation of their station. Concurrent enrollment in PBAK 211. Prerequisite: A grade of "C" or better in PBAK 200 and eligibility for ENGL 098 and MATH 030. Valid Washington State food handlers card.

Course Outcomes:

- Present thorough and accurate notes.
- Demonstrate the ability to scale formulas with speed and accuracy using both balance and electronic scales.
- Demonstrate ability to plan and execute production for maximum efficiency and accuracy.
- Demonstrate proficiency in make- up of all products from first year classes.
- Demonstrate ability to plan a production schedule, ability to work with limited supervision and ability to mise en place for maximum production efficiency.
- Demonstrate ability to maintain an up-to-date inventory.

- Demonstrate ability to communicate purchasing supplies needed for production.
- Demonstrate efficient use of time and work area.
- Demonstrate production with speed and accuracy, employing safe and sanitary work habits.

CHOCOLATE LAB

PBAK 211
5 Credits 22 hours of lecture
66 hours of lab

Students will learn the origin of chocolate as well as the various types, brands, flavor profiles and qualities of chocolate. Practical application will include tempering chocolate, fillings, shelling and bottoming chocolates. Also covered is professionalism in the workplace, safety and sanitation, equipment use and safety, baker's math, weights and measures and note-taking. Concurrent enrollment in PBAK 210. Prerequisite: A grade of "C" or better in PBAK 210 and eligibility for ENGL 098 and MATH 030. Valid Washington State food handlers card.

Course Outcomes:

- Present thorough and accurate notes.
- Demonstrate ability to temper chocolate.
- Demonstrate ability to make a variety of fillings.
- Demonstrate efficient use of time and work area.
- Demonstrate ability to unmold, finish and bottom chocolates for sale.
- Demonstrate safe and sanitary work habits.

PASTRY CHEF/RESTAURANT BAKING

PBAK 220
9 Credits 22 hours of lecture
154 hours of lab

Students will be responsible for meeting with the chef of the CTO station to determine the baking/dessert needs for the restaurant each day. They will design and create a dessert menu for the restaurant and upon approval and will make desserts for the daily lunch service. Students will provide a variety of breads/rolls for lunch service and will be required to generate a production schedule that includes daily mise en place, purchasing of required ingredients, inventory and maintenanceof the station. Must demonstrate ability to plan and execute production for maximum efficiency and accuracy using proper sanitation practices. Concurrent enrollment in PBAK 221. Prerequisite: A grade of "C" or better in PBAK 200 and eligible for ENGL 098 and MATH 030. Valid Washington State food handlers card.

Course Outcomes:

- Present thorough and accurate notes.
- Demonstrate ability to plan and execute production for maximum efficiency and accuracy.
- Demonstrate proficiency in make- up of all products from first year classes.
- Demonstrate ability to maintain an up-to-date inventory.
- Demonstrate ability to communicate purchasing supplies needed for production.
- Demonstrate ability to work well in a group.
- Demonstrate ability to maintain industry standards for safe food handling and sanitation.
- Demonstrate efficient use of time and work area with seed and accuracy.

RETAIL/MERCHANDISING, INVENTORY/ PURCHASING

PBAK 221
5 Credits 22 hours of lecture
66 hours of lab

Students will learn how to set up the retail area for daily operation, how to make a variety of specialty coffees, cold drinks, Italian sodas and featured drinks. They will learn marketing for effective sales, efficient and friendly customer service. Students will learn proper operation of POS system as well as professionalism in the workplace, safety and sanitation, equipment use and safety. Concurrent enrollment in PBAK 220. Prerequisite: A grade of "C" or better in PBAK 200 and eligible for ENGL 098 and MATH 030.

Course Outcomes:

- Demonstrate the ability to supervise the first year students when; finishing product for display, ensuring coffee station is set up for opening, ensuring all product is displayed correctly with proper signage, all back-up work is done and store is ready for opening.
- Demonstrate the ability to communicate with the production baking class about product needs for the store.
- Demonstrate the ability to create enticing displays for special occasions, holidays or featured product sales.
- Demonstrate the ability to close the store, clean and have everything prepared for the next day.
- Demonstrate ability to keep an accurate inventory and correct formula costing.
- Demonstrate ability to lead fellow students ,step in where needed, delegate work in a professional manner.
- Demonstrate ability to maintain industry standards for safe food handling and sanitation practices.

CAPSTONE PROJECT
PBAK 230
6 Credits 11 hours of lecture
110 hours of lab

Students will have five weeks to prepare and execute a display covering one of the following areas: Vienoiserie, Artisan breads, Viennese table, Plated Desserts or Dessert Bar. Each student will receive a complete list of requirements at the beginning of the class. The project will be presented to the faculty for judging. Instruction also covers career development. Concurrent enrollment in PBAK 231. Prerequisite: A grade of "C" or bettering PBAK 200 and eligible for ENGL 098 and MATH 030. Valid Washington State food handlers card.

Course Outcomes:

- Demonstrate experience planning, researching and executing the project.
- Demonstrate efficient use of time.
- Demonstrate ability to accurately make product.
- Demonstrate ability to display product in an attractive manner.
- Demonstrate ability to meet deadlines.
- Demonstrate production with speed and accuracy.
- Demonstrate safe and sanitary work habits.

INDUSTRY INTERNSHIP
PBAK 231
4 Credits 132 hours of clinical

Students will complete a five week externship at an approved bakeshop. Prior to starting the externship, students will generate a list of learning objectives for the externship. Students are required to keep a daily journal of their experience. All paperwork must be turned in upon completion of the externship. Concurrent enrollment in PBAK 230. Prerequisite: A grade of "C" or better in PBAK 200 and eligible for ENGL 098 and MATH 030. Valid Washington State food handlers card.

Course Outcomes:

- Students will advance their skills by working in a retail bakeshop.
- Meet the expectations laid out in the list of learning objectives.
- Gain practical experience working with others and working in the industry.
- Demonstrate ability to meet employer's expectations.
- Demonstrate ability to work well in a group.
- Demonstrate ability to maintain industry standards for safe food handling and sanitation.
- Demonstrate production with speed and accuracy.

Physical Education

CARDIO CONDITIONING
PE 100
1 Credit 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.

INTRODUCTION TO RUNNING
PE 101
1 Credit 22 hours of lab

Develop fitness through running, emphasizing various training methods, individual program development, and health benefits.

Course Outcomes:

- Consistently participates in physical activity. This includes the act of running, as well as participating in injury prevention techniques such as strength training and flexibility training.
- Demonstrate efficient and effective running techniques.
- Develop cardiovascular endurance.
- Document and reflect on the experience of running.

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 Credit 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 Credit 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. [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 Credit 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.

FUNCTIONAL FITNESS
PE 111
1 Credit 22 hours of lab

Utilizing functional movement patterns to improve core stabilization, posture, and balance. [PE, SE]

Course Outcomes:

- Consistently participate in physical activity.
- Demonstrate core stability.
- Demonstrate proper exercise technique.

STRENGTH AND STRETCH
PE 112
1 Credit 22 hours of lab

Utilizing body weight and portable fitness equipment to improve muscular strength, tone, and flexibility. [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 Credit 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 Credit 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 Credit 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 Credit 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.

HEALTHY HEART-BEGINNING

PE 123

1 Credit 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 Credit 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 Credit 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.

KETTLEBELL CONDITIONING
PE 126
1 Credit 22 hours of lab

Utilizing kettlebells in a variety of conditioning activities to develop muscular strength, power, cardiovascular endurance, and flexibility. Course will emphasize proper kettlebell technique and how to structure an exercise plan to meet individual goals. [HPE]

Course Outcomes:

- Consistently participate in physical activity.
- Demonstrate proper kettlebell exercise form and technique.
- Create exercise plan to meet personal goals.

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).

BASKETBALL
PE 140
1 Credit 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 Credit 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.

IRISH DANCE
PEDNC144
1 Credit 22 hours of lab

Introduction to Irish dance, focusing on soft shoe and Ceili (group) dances. Dances include reel, jig, and hornpipe. [PE]

Course Outcomes:

- Demonstrate "Leap 2-3's" and "side sevens" at beginning level.
- Demonstrate at least one solo soft shoe dance at beginning level.
- Participate and demonstrate at least one ceili dance together with classmates.
- Verbally be able to recognize the dances that were learned.

BELLY DANCE
PEDNC145
1 Credit 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.

FENCING-FOIL
PE 147
1 Credit 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 Credit 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 Credit 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.

TENNIS

PE 155

1 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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.

SWIM CONDITIONING-BEGINNING
PE 179
1 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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] [PNP]

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 Credit 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.

FUNCTIONAL FITNESS

PE 211

1 Credit 22 hours of lab

Continuation of PE 111. Utilizing functional movement patterns to improve core stabilization, posture, and balance. More advanced techniques introduced. Prerequisite: PE 111. [PE, SE]

Course Outcomes:

- Consistently participates in physical activity.
- Demonstrate core stability.
- Demonstrate proper exercise technique.

STRENGTH AND STRETCH

PE 212

1 Credit 22 hours of lab

Continuation of PE 112. Utilizing body weight and portable fitness equipment to improve muscular strength, tone, and flexibility. 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 Credit 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 Credit 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 Credit 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 combimations of proper kickboxing technique using striking targets.

YOGA-INTERMEDIATE

PE 221

1 Credit 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.

HEALTHY HEART-INTERMEDIATE

PE 223

1 Credit 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 Credit 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 Credit 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).

BASKETBALL-INTERMEDIATE

PE 240

1 Credit 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 Credit 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 Credit 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 guarde, 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 Credit 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 Credit 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 Credit 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.

TENNIS-INTERMEDIATE

PE 255

1 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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-STROKE IMPROVEMENT

PE 275

1 Credit 22 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 Credit 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 term 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 Credit 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 Credit 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.

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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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.

ZUMBA

PEDNC140

1 Credit 22 hours of lab

A fusion of Latin and international music-dance themes, featuring aerobic/fitness interval training with a combination of fast and slow rhythms that tone and sculpt the body.

Course Outcomes:

- Consistently participate in physical activity.
- Develop cardiovascular fitness.
- Demonstrate Zumba fitness movements.

HULA

PEDNC141

1 Credit 22 hours of lab

Focus on Hawaiian traditional dance forms.

Course Outcomes:

- Consistently participate in physical activity.
- Develop cardiovascular fitness.
- Demonstrate Hula fitness movements.

AFRICAN DANCE
PEDNC142
1 Credit 22 hours of lab

Introduction to African dance, which focuses on drumming, rhythm, and music predominantly of West Africa.

Course Outcomes:

- Consistently participate in physical activity.
- Develop cardiovascular fitness.
- Demonstrate African Dance fitness movements.

BOLLYWOOD
PEDNC143
1 Credit 22 hours of lab

Introduction to dances of India, sometimes referred to as Indian Fusion. Dance styles focus on semi-classical, regional, folk, bhangra, and everything in between--up to westernized contemporary bollywood dance.

Course Outcomes:

- Consistently participate in physical activity.
- Develop cardiovascular fitness.
- Demonstrate Bollywood fitness movements.

IRISH DANCE
PEDNC144
1 Credit 22 hours of lab

Introduction to Irish dance, focusing on soft shoe and Ceili (group) dances. Dances include reel, jig, and hornpipe. [PE]

Course Outcomes:

- Demonstrate "Leap 2-3's" and "side sevens" at beginning level.
- Demonstrate at least one solo soft shoe dance at beginning level.
- Participate and demonstrate at least one ceili dance together with classmates.
- Verbally be able to recognize the dances that were learned.

BELLY DANCE
PEDNC145
1 Credit 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 Credit 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 Credit 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 Credit 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 Credit 22 hours of lab

Intermediate techniques with opportunities for individual and group composition. Prerequisite: PEDNC 134.

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 Credit 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 Credit 22 hours of lab

Refinement of jazz technique and skill improvement. Prerequisite: PEDNC 136.

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 Credit 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.

ZUMBA INTERMEDIATE
PEDNC240
1 - 3 Credits 66 hours of lab

A fusion of Latin and International music-dance themes, featuring aerobic/fitness interval training with a combination of fast and slow rhythms that tone and sculpt the body. Prerequisite: PEDNC 140.

Course Outcomes:

- Consistently participate in physical activity.
- Develop cardiovascular fitness.
- Demonstrate Zumba fitness movements.

HULA INTERMEDIATE
PEDNC241
1 Credit 22 hours of lab

Focus on Hawaiian traditional dance forms. Prerequisite: PEDNC 141.

Course Outcomes:

- Consistently participate in physical activity.
- Develop cardiovascular fitness.
- Demonstrate Hula fitness movements.

AFRICAN DANCE INTERMEDIATE
PEDNC242
1 Credit 22 hours of lab

Continuation of African dance, which focuses on drumming, rhythm, and music predominantly of West Africa. Prerequisite: PEDNC 142.

Course Outcomes:

- Consistently participate in physical activity.
- Develop cardiovascular fitness.
- Demonstrate African Dance fitness movements.

BOLLYWOOD INTERMEDIATE
PEDNC243
1 Credit 22 hours of lab

Continuation of the dances of India, sometimes referred

to as Indian Fusion. Dance styles focus on semi-classical, regional, folk, bhangra, and everything in between--up to westernized contemporary bollywood dance. Prerequisite: PEDNC 143.

Course Outcomes:

- Consistently participate in physical activity.
- Develop cardiovascular fitness.
- Demonstrate Bollywood fitness movements.

IRISH DANCE-INTERMEDIATE

PEDNC244

1 Credit 22 hours of lab

Intermediate Irish Dance course on more advanced soft shoe solo and Ceili (group) dances. Dances include the reel, jig, and hornpipe. Prerequisite: PEDNC 144.

Course Outcomes:

- Demonstrate "Leap 2-3's" and "side sevens" at beginning level.
- Demonstrate at least one solo soft shoe dance at beginning level.
- Participate and demonstrate at least one ceili dance together with classmates.
- Verbally be able to recognize the dances that were learned.

BELLY DANCE-INTERMEDIATE

PEDNC245

1 Credit 22 hours of lab

Continuation of the skills learned in PEDNC 145, 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.

SPORT IN SOCIETY
PEEXS294
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
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 Credit 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.

MARTIAL ARTS: TAE KWON DO
PEMAR151
1 Credit 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 Credit 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 Credit 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]

Course Outcomes:

- Consistently participates in physical activity.
- Demonstrate basic/fundamental skills of Brazilian Jiu-Jitsu that would allow the student to utilize Brazilian Jiu-Jitsu for participation in lifelong physical activity.

MARTIAL ARTS: JUDO
PEMAR154
1 Credit 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]

Course Outcomes:

- Consistently participates in physical activity.
- Demonstrate basic/fundamental skills of Judo that would allow the student o utilize Judo for participation in lifelong physical activity.

SELF DEFENSE
PEMAR155
1 Credit 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 participates in physical activity.
- Develop fundamental striking and defensive skills.
- Develop situational awareness with or without improvised tools.

T'AI CHI - INTERMEDIATE
PEMAR250
1 Credit 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: PEMAR 150. [PE, SE]

Course Outcomes:

- Consistently participate in physical activity.
- Practice Yang Style T'ai Chi exercises.
- Demonstrate Yang Style T'ai Chi Meditation Form.

MARTIAL ARTS-INTERMEDIATE: TAE KWON DO
PEMAR251
1 Credit 22 hours of lab

Tae Kwon Do is a Korean martial art that predominately focuses on kicking. Prerequisite: PEMAR 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 Credit 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: PEMAR 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 Credit 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]

Course Outcomes:

- Consistently participates in physical activity.
- Demonstrate Intermediate skills of Brazilian Jiu-Jitsu that would allow the student to utilize Brazilian Jiu-Jitsu for participation in lifelong physical activity.

MARTIAL ARTS-INTERMEDIATE: JUDO
PEMAR254
1 Credit 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]

Course Outcomes:

- Demonstrate Intermediate skills of Judo that would allow the student to utilize Judo for participation in lifelong physical activity.
- Consistently participates in physical activity.

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 Credit 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-term sequence in pharmacology. Topics include pharmacokinecic and pharmacodynamic principles of drug therapy, with focus on absorption, distribution, metabolism, excretion, drug classification, indication for sue, 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

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-term 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-term 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

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-term 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.

CRITICAL THINKING

PHIL&115

5 Credits 55 hours of lecture

An informal, non-symbolic introduction to logic and critical thinking emphasizing real-life examples, natural language applications, and the informal logical fallacies. Prerequisite: Completion of MATH 030 or CAP 042 with a grade of "C" or better or qualifyng placement score. [SE]

Course Outcomes:

- Formulate, clarify and evaluate arguments
- Explain and use basic philosophic concepts relevant to critical thinking (e.g., truth, validity, soundness, strength, cogency)
- Recognize and name informal fallacies
- Analyze and evaluate arguments in scientific, causal, and analogical reasoning
- Analyze and evaluate developed arguments in context

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,Q,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 adaptions 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, includ-

ing 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 term 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.

ETHICS IN MANAGEMENT

PHIL 420

5 Credits 55 hours of lecture

Examines the role of ethics and social responsibility in the management of public and private sectors of organizations and businesses. Theoretical concepts in business ethics will be applied to real-world situations based on challenges managers face. An emphasis on contemporary trends and corporate responsibilities with respect to ethical, legal, economic, regulatory conditions, and the needs of stakeholders in the global marketplace will be included. Case studies will be used to explore real-world ethical and social responsibility situations. [HA]

Course Outcomes:

- Establish ethical practices for both legal consistencies and moral codes.
- Analyze decision making processes for fairness and inclusion.
- Design organizational policies to ensure balanced and effective internal and external environments.
- Assess fairness and justice in policies and leadership styles.
- Demonstrate various power and leadership styles appropriate for specific situations.
- Analyze the relationship between business ethics, the law and society, and the integrity of an organization.

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.

BASIC LABORATORY FOR THE PHLEBOTOMIST

PHLE 116
3 Credits 11 hours of lecture
44 hours of lab

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.
- Identify and articulate the appropriate method of specimen collection for testing.
- Demonstrate proper quality control practices with laboratory equipment.
- Demonstrate competence in utilizing laboratory equipment with specimen processing and testing procedures.

PHLEBOTOMY CLINICAL EXPERIENCE

PHLE 197
5 Credits 165 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 Credit 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 four "mock" board exams 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 though 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

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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit 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 Credit33 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 Credit33 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&125

1 Credit33 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&126

1 Credit33 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&134

4 Credits 44 hours of lecture

First of a three-term 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-term 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-term 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 Credit33 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 Credit33 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 Credit33 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-term sequence offered each year starting fall and winter terms. 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 term of a three-term 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 term of a three-term 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 States Constitution and state constitutions and founding documents, B) democracy, civil rights, and civil liberties in the states.C) The institutions of our state political systems, D) The interplay of parties, groups, and ideologies in the state political process, E) The roles, responsibilities, and rights of citizens in state government and politics.

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, and cultural exchange.
- 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 interconnect-

edness 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.

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.

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: Eligibility for enrollment in ENGL& 101. [SE,HR,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.

PSYCHOSOCIAL ISSUES IN HEALTH CARE I
PSYC 122
1 Credit 11 hours of lecture

Examines some determinants of health and illness including social, psychological, environmental, spiritual, and cultural dimensions across the lifespan and within the context of health care. Application of concepts from previous courses in psychology and sociology to the direct care of patients/clients in various healthcare settings. Focus on women, children, and families. Taught concurrently with NURS 122. Concurrent enrollment in NURS 122, NURS 123, NURS 124, NURS 127, NURS 128, and PSYC 124. Prerequisite: A grade of "C" or better in PSYC& 100, NURS 110, NURS 111, NURS 113, NURS 114, and ENGL 112. [SS]

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 and how this relates to psychosocial challenges.
- Explain pharmacologic management of the care of the maternity, neonatal, pediatric and women's health patient including psychological components.
- Determine the role of the professional nurse in the community in relation to the maternity, neonatal, pediatric and women's health patient and as relates to psychosocial aspects of healthcare.

- Demonstrate effective interpersonal/human relations skills appropriate to the setting and population.
- Describe how concepts related to social determinants of health are used to influence practice in the health care setting.

PSYCHOSOCIAL ISSUES IN HEALTH CARE II

PSYC 124

2 Credits 22 hours of lecture

Examines some determinants of health and illness including social, psychological, environmental, spiritual, and cultural dimensions across the lifespan and within the context of health care. Application of concepts from previous courses in psychology to the direct care of patients/clients in various healthcare settings. focus on therapeutic communication and behavioral symptomology specific to anxiety, depression, delirium and agitation. Concurrent enrollment in NURS 122, NURS 123, NURS 127, and NURS 128. Prerequisite: A grade of "C" or better in NURS 110, NURS 111, NURS 113, NURS 114, and NURS 115. [SS]

Course Outcomes:

- DESCRIBE METHODS USED TO MANAGE CARE OF PATIENTS WITH MENTAL HEALTH CO-MORBIDITIES.
- APPLY APPROPRIATE COMMUNICATION TECHNIQUES TO PATIENT CARE SCENARIOS.
- DESCRIBE SOCIAL DETERMINANTS OF HEALTH AND ILLNESS WITHIN THE CONTEXT OF HEALTH CARE.
- DETERMINE APPROPRIATE BOUNDARY SETTINGS IN PATIENT CARE SITUATIONS.

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,HR,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 outcomes.
- 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). [HR,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.

PSYCHOSOCIAL ISSUES IN HEALTH CARE III

PSYC 253

2 Credits 22 hours of lecture

Examines some determinants of health and illness including social, psychological, environmental, spiritual, and cultural dimensions across the lifespan and within the context of health care. Application of concepts from previous courses in psychology and sociology to the direct care of patients/clients in various healthcare settings. Focus on persons with acute mental issues and/or chronic mental illnesses. Concurrent enrollment in NURS 251 and NURS 252. Prerequisite: A grade of "C" or better in NURS 241 and NURS 242. [SS]

Course Outcomes:

- Evaluate the patient's biophysical and psychological

health as it relates to normal and abnormal pathophysiology for the mental health client.
- Evaluate the spectrum of pharmacological interventions to determine potential optimal benefits for mental health clients.
- Discuss methods of overall health promotion and maintenance for individuals and their families.
- Determine the role of the professional nurse in creating therapeutic alliances with mental health clients in various health care settings.
- Analyze how concepts related to social determinants of health are used to influence practice in the health care setting.

PSYCHOLOGY: SELECTED TOPICS

PSYC 280
1 - 3 Credits 33 hours of lecture

Selected topics in psychology as listed in the term 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.

ORGANIZATIONAL BEHAVIOR

PSYC 315
5 Credits 55 hours of lecture

Focuses on managing relationships in organizations. Students will gain practical experience in managing teams, resolving conflict, and building professional and effective relationships. Special emphasis will be placed on managing difficult behavioral human situations, whether among employees within the organization or with external stakeholders. [HR]

Course Outcomes:
- Evaluate and apply effective practices to make decisions and to resolve conflicts.
- Design effective team building strategies for a variety of tasks and work situations.
- Demonstrate best practices in motivating a diverse workforce for high performance, productivity, and group behavior.
- Demonstrate leadership styles appropriate for specific situations.

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 CAP 042 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: given a side, an angle, or one trigonometric function.
- Make correct inferences based on inductive reasoning.

Professional Technical Writing

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. [CA,CT,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.
- Create visuals and content with attention to accuracy, brevity, specificity, unity, and clarity.
- Collaborate successfully in the process of producing work-world documents.

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: Eligibility for enrollment in ENGL& 101. [HR,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 inequity.
- 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. [HR,SE,SS]
Course Outcomes:

- Dfferentiate 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. [HR,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. [HR,SESS][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. [HR,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) or WS 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 term 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-term 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 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 formulate what he/she is trying to say. Ask and answer simple questions in areas of immediate need or on very familiar topics.
- 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 on familiar topics and activities. Handle very short social exchanges.
- 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 announcements.
- 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.
- 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 on familiar topics and activities. Handle very short social exchanges.
- 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 announcements.
- 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-term 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). Connect phrases in a simple way in order to describe experiences. Briefly give reasons and explanations for opinions and plans. Narrate a story or relate the plot of a book or film and describe my reactions.
- 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 the delivery is relatively slow and clear.
- 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 Credit 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 Mexico/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 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 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 of events and experiences.
- 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 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 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 of events and experiences.
- 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 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 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 of events and experiences.
- 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

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.

COMPUTATION AND PLATTING

SURV 104
5 Credits 55 hours of lecture

Basic coordinate geometry, curves and solutions, conversions, statistics and error analysis, traverse calculations, inversing, 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 drafing.

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 in 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 Credit 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 122. [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 originals surveys, deed first/survey first, common and case law, ranking/prioritizing evidence, controlling monuments and corners, errors in legal descriptions and plats. Prerequisite: Completion of or concurrent enrollment 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. Students will be graded on mathematical closures of survey work and completeness of the required applications
- Final plat design requirements. 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: Completion of or concurrent enrollment 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

INTRODUCTION TO GPS

SURV 253
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 SURV 252. [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.

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

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 tolerancing systems and welded joint geometry. Define drawing terms and definitions. Identify and describe drawing line conventions. Decipher drawing parts lists and bill of materials. Areas of competency in this course includes: Basic Lines, Orthographic Views, Isometric Views, Freehand Sketching, Welding Symbol Interpretation, Notes and Specifications, Auxiliary and Sectional Views, Detail and Assembly Prints, Welding Prints.

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 145 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 144 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.

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 METAL 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 nonferrous 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 term 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,HR,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, Christianism, patriarchy, oppression, power, privilege, inequity, entitlements, institutional power, internalized oppression, horizontal hostility, and other relevant terms.
- 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, heteronomativity, internalized subordination and domination, intersectionality, intercultural competence, and transgender inclusion.
- 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 and challenge power, privilege and inequity; and, how social justice activism can disrupt power, privilege, and inequity.
- 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, ideological, and institutional components of racism; 3) the myth of reverse racism; and 4) how colorblindness ideology maintains racism and white privilege.
- 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.

Section E:
College Information

SECTION E: College Information

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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 College, in District No. 14, is one of 34 Washington community and technical colleges, and 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 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 T-TEN program is accredited by the National Automotive Technicians Education Foundation and 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 guiding individuals to achieve their educational and professional goals. To carry out that commitment, the college continuously assesses student learning by gathering information about the effectiveness of its programs and services, and the achievements and perspectives of its alumni. This information is used to monitor the effectiveness of educational programs as well as student and academic services.

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 in 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 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. A printed copy can be requested in the Office of the Vice President for Student Affairs, Gaiser Hall 204 (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

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. 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..

Notification of Students' Rights Under the Family Educational 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, terms 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; and 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) (3 year) information for student cohorts from 2008, 2009, 2010, and 2011 along with the GRS 200% (4 year) 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 (3 year) transfer out/completion/graduation rate, 4-year average: 43%

GRS (3 year) completion or graduation rate, 4-year average: 26%

GRS (3 year) transfer out rate, 4-year average: 18%

GRS 200% (4 year) completion or graduation rate, 4-year average: 31%

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: http://nces.ed.gov/collegenavigator/

Equity in Athletics

The Equity in Athletics Disclosure Act (EADA) 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 http://www.clark.edu/clark-and-community/about/policies-procedures/consumer_information/index.php.

Information is available in paper format through the Office of the Dean of Student Enrollment and Completion located in Gaiser Hall.

Locations and Campuses

Clark College has one main campus and three satellite locations located throughout Clark County. Each of the locations includes a variety of programs to serve the community and help students complete a program at Clark College.

Main Campus

Clark College's beautiful main campus is located on 101 acres in Vancouver's Central Park, just east of Interstate 5 and north of the Columbia River and Fort Vancouver Historic Reserve. This full-service campus includes a gym, music and theatre hall, library, student center, and a new dining space, which is scheduled to open in 2017. Hours of Operation: 7 a.m. -10 p.m.

Columbia Tech Center

The Columbia Tech Center (CTC), located on the east side of Vancouver, opened in 2009. CTC provide access to education eastern portion of the college's service district, which includes Clark County communities like Camas and Washougal as well as parts of Skamania and Klickitat counties. The campus features state-of-the-art labs serving popular programs like network technology, biology, and mechatronics. Hours of Operation: 7 a.m.-5 p.m.

Clark College at WSU Vancouver

Clark College at Washington State University Vancouver, established in 2006, is the result of a longstanding partnership between Clark College and WSU Vancouver. Before WSU Vancouver moved to its current site in 1996, it was housed in Bauer Hall on Clark's main campus. The 63,334 square foot, three-story building provides additional classrooms, science laboratories, computer labs, and support space to accommodate growing enrollment and the desire to provide access to lower division courses for WSU Vancouver students. The beautiful facility is home to Clark's nationally-recognized nursing program as well as general education classes. Hours of Operation: 7 a.m.-9 p.m.

Clark College at Boschma Farms

Clark College at Boschma Farms is expected to be a boon for the region and represent a long-term visionary chapter for the college. Construction of the first building expected to start in 2017 on the 70-acre campus located just east of I-5 in Ridgefield, Washington.

Clark College Economic and Community Development

Clark College Economic & Community Development (ECD) is Southwest Washington's premier provider of

workforce training and non-credit learning, serving more than 10,000 people annually. ECD offers classes at its main location in the Columbia Bank Building, the Columbia Tech Center, and Clark's main campus. Clark College has four campuses located through out Clark County. Each of the campuses includes a variety of programs to serve the community and help students complete a program at Clark College.

Section F:
Directories and Academic Calendar

SECTION F: Directories and Academic Calendar

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Clark College Board of Trustees

Jack Burkman 2013 – 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

Jane Jacobsen 2016-2019

B.A. in Communications, University of Arkansas

Certificate of Excellence, Switzerland Cultural Art Center - Zurich, Switzerland

Master's work in Business Administration, University of Vermont

Currently working with Gramor Development and the City of Vancouver on development of the Columbia Waterfront Park.

Community activities include:

- Founding Executive Director and member of Board of Directors of Confluence
- Board President, Friends of Fort Vancouver
- Member of the Advisory Council with Columbia Land Trust
- Former member of the Columbia River Gorge Commission
- Former member of the Washington State Historical Society

Royce Pollard 2011 – 2016

B.S. in Secondary Education, University of Alabama

During his six terms as mayor of Vancouver, Wash. from 1996-2010, Mr. 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 2015 – 2020

.A. in Psychology/Education, Central Washington University

M.Ed. in School Administration, Seattle Pacific University

Superintendent Certificate, Washington State University

Certified Superintendent, School Principal, School Psychologist

As a Governor appointee, Ms. Rupley served as co-chair for the Early Learning Advisory Council building the early learning system. The Southwest Washington Child Care Consortium was a milestone for families with young children, providing over 2,000 quality child care slots in 28 centers in Clark County. In 2012-2014, she was chosen by then-Governor Kitzhaber to serve as Oregon's first Early Learning System Director, implementing legislation for early learning and child care investments for children from birth to 6 years. Currently, Ms. Rupley is the Superintendent of Clackamas Education District. The ESD serves 10 districts and about 70,000 students in Clackamas

County, Oregon.

Community activities include:

- H-RoC Board Member
- Clark College Foundation Board Liaison
- Clark County Skills Center
- Clark County Aging Task Force
- Clark County Planning Commission
- Clark County Aging Task Force
- Chair/Board Member Leadership Clark County

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 in progress

Ms. Strong is currently the Chief of Operations and Equity 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
- Board member, Partners in Diversity

Clark College Executive Cabinet

William Belden (2010)
Vice President of Student Affairs
B.A. Eastern Washington University
M.Ed. Western Washington University

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
Ed.D. University of St. Thomas (MN)

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

Robert D. Williamson (2009)
Vice President of Administrative Services
A.A. Ft. Steilacoom Community College
B.A., M.A. Western Washington University

Kevin Witte (2011)
Associate Vice President of Economic and Community Development
B.S. University of Washington
M.B.A. University of Michigan

Kelly M Woodward (2016)
Vice President of Human Resources & Compliance
B.A. University of South Carolina
J.D. Seattle University Law School

Clark College Administration

Eliot Altschul (2015)
Director of Counseling and Health
B.A. Boston University
M.A., Ph.D. California School of Professional Psychology

Rachele Bakic (2012)
Associate Dean of Instructional Operations
B.A. The College of Saint Rose
M.A. Hawaii Pacific University

Andrew T. Barsotti (2014)
Director of Data Services
B.S. University of Wisconsin
M.S. Washington State University, Pullman

Chitpasong "Chippi" Bello (2016)
Associate Dean of Financial Aid
B.S. Brigham Young University - Hawaii
M.S. Portland State University

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

Margit Brumbaugh (2017)
Student Affairs Guided Pathways Liaison
B.A. University of Washington
M.Ed. Concordia University

Barbara "Dani" Bundy (2014)
Student Affairs Operations Manager-ctcLink
A.A.S. Clark College
B.A. Warner Pacific College

Armetta Burney (2012)
Director of Workforce Education Services
B.S. Southern University
M.B.A. Cardinal Stritch University

Cathleen "Cathy" Busha (2016)
Dean of Student Engagement
B.S. Millersville University
M.S.W. Arizona State University

Heather "Colleen" Butcher (2016)
ITS Operations Manager
B.A. Western University
M.B.A. York University
D.Th. George Fox University

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

Loretta Capeheart (2017)
Associate Vice President of Diversity, Equity & Inclusion
B.A. The University of Texas
M.A. Texas State University
Ph.D. Texas Woman's University

Selena Castro (2012)
Dean of Student Enrollment
B.A., M.A., Ph.D. Washington State University

Janette Clay (2014)
Transitional Studies Learning Communities Manager
B.A. Lewis and Clark College
M.S. Portland State University

Tina Cruz (2015)
Corporate Education Client Support Specialist

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

Dolly England (2015)
Diversity Outreach Program Manager
B.A. The Evergreen State College

Wende Fisher (2015)
Educational Planner - Professional/Technical
A.A.S. Clark College
B.A. Washington State University
M.eD. Oregon State University

Kira Freed (2014)
Educational Planner - Health Occupations
B.A., M.S. Western Washington University

Joshua Giha (2015)
Application Developer
A.A. Florida Southwestern State College

Kelli Gizza (2016)
Director of Professional and Personal Development
B.S. University of Missouri

Kael Godwin (2007)
Decision Support Specialist: Data Science and Analytics
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

Douglas Helmer (2016)
Education Program Director at Larch Corrections
B.A., M.A. Warner Pacific College

Judith Hernandez Chapar (2017)
Director of the Teaching and Learning Center
B.A. Washington State University
M.S.N. Eastern Washington University
Ph.D. Oregon State University

Nicole Hopkins (2015)
Transitional Studies Coach
A.A. Clark College

Genevieve Howard (2010)
Dean of Workforce, Professional, and Technical Education
B.A., M.A. California State University, Bakersfield

Christopher Jacob (2015)
Interim Director of Athletics
B.S. Nova Southeastern University
M.Ed. Concordia 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

Megan Jasurda (2015)
Director of Disability Support Services & ADA Compliance Officer
B.A. University of Wisconsin
M.Ed. Portland State University

Joseph Jenkins (2016)
Educational Planner - College Prep and Transfer
A.A. Clark College
B.A. Washington State University
M.S. Portland State University

Kelly Jones (2015)
Veterans Resource Center Manager
B.S. West Texas A&M University
M.P.A. Washington State University

Catherine Keane (2014)
Associate Director of Career Services
B.A. Saint Martin's College
M.P.A. Washington State University

Tanya Kerr (2017)
Internal Auditor
B.A. University of Washington

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

Todd Leavitt (2016)
Director of Information Technology Services Center
A.A. Clark College
B.S. Portland State University

Laura LeMasters (2016)
Assistant Athletic Director
B.A. Washington State University
M.A. California State University - Long Beach

John Maduta (2010)
Director of Advising
B.A. Western Washington University
M.S. Warner Pacific College

Julie Madsen (2017)
Director of Grant Development
B.A. University of Puget Sound
M.F.A. Pacific University

Korene E. Marquez (2013)
Associate Director of Student Tutoring Services
B.A. University of Oregon
M.A. Portland State University

Susan Maxwell (2001)
ctcLink Manager
B.A., M.S. University of Wisconsin-Milwaukee

Amy McIntosh (2017)
Educational Planner
B.S. Minnesota State University
M.S. Portland State University

Sherri Meadors (2016)
payroll Manager
A.A. Clark College

Jeffery Miller (2013)
Environmental Health and Safety Manager
B.S., M.S. Troy University

Phillip Oaks (2016)
Facilities Maintenance Manager
B.S. University of Oregon

Cindi M. Olson (1999)
Executive Assistant to the Vice President of Student Development

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

Felisciana K. Peralta (2008)
Multicultural Retention Manager
B.A. Central Washington University
M.Ed. Heritage University

Timothy D. Petta (2013)
Director of Facilities Services
Avis Contractor's License School

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)
Decision Support Specialist: Continuous Improvement and Analytics
B.S. Lewis & Clark College
M.S., M.S.W. Portland State University

Darcy Rourk (2017)
Interim Vice President of Human Resources and Compliance

B.S., M.S., Ph.D., Kansas State University

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

Ashley Schumacher (2014)
Advanced Registered Nurse Practitioner
B.S.N. Oregon Health Sciences University
M.S.N. University of California

Natalie 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

Jody Shulnak (2007)
International Student Recruitment & Outreach Manager
B.S. Northern Arizona University
M.S. Portland State University

Toccara Stark (2015)
Director of Marketing
B.A. Macalester College
M.A. University of St. Catherine
Ed.D. University of St. Thomas

Julie F. Taylor (2005)
Administrative Secretary

Tasaday Turner (2015)
Associate Director of Advising - College Preparation and Transfer
A.A.S. Clark College
B.A. Washington State University
M.S. Portland State University

Laurel E. Tygart (2013)
Executive Assistant to the Vice President of Instruction
B.A. Western Oregon University

Linda Valenzuela (2016)
Interim Associate Dean of Health Sciences
A.S. College of Sequoia
B.S.N. California State University Dominquez Hills
M.S. Portland State University

Jacquelynn Vigeon (2015)
Clinical Placement Manager
B.A., M.A. The University of New Mexico

Michele Volk (2015)
Director of Services for Children and Families
A.A. Clark College
B.S. Concordia University

Brenda Walstead (2015)
Dean of Business and Health Sciences
A.A.S. Portland Community College
B.S. Warner Pacific College
M.S. Portland State University
Ed.D. Walden University

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

Vanessa Watkins (2015)
Associate Director of Entry Services
B.S. Oregon State University
M.S. Portland State University

Francois Wevers (2016)
Director of Economic Partnerships and Customized Learning
B.S. Pacific Lutheran University

Brenda Wierschin (2016)
Disability Support Services Accommodation Specialist
B.S. University of California
M.S.W. Portland State University

Jim Wilkins-Luton (2015)
Dean of Basic Education, English, Communication and Humanities
B.A Whitworth University
M.A. Gonzaga University

Rashida Willard (2015)
Operations Manager, Administrative Services
A.A.O.D., B.B.A Warner Pacific College

Melissa Williams (2015)
Student Success and Retention Manager
A.A. Clark College
B.A. University of Washington
M.A. Washington State University

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)
Director of Human Resources
A.A.S. Clark College
B.A. Washington State University, Vancouver

Patrick Willis (2014)
Career Advisor
B.A., M.Div. George Fox University

Monica Wilson (2014)
Transitional Studies Administrative Manager
B.S. Political Science, Portland State University
B.S. Liberal Studies, Portland State University

Nancy E. Young (2014)
Educational Planner - International
B.A. Hendrix College
M.A. Rutgers University
M.A. University of the Pacific

Clark College Faculty

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

Glenna Afflerbaugh (2015)
Dental Hygiene
B.S. Eastern Washington University

Roberto P. Anitori (2013)
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)[T-T]
Economics
B.S. Marist
M.S. Portland State University

Julie A. Austad (2013)
Librarian
B.A. Linfield College
M.L.S. Emporia State University

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

Rheannin Becke (2016)[T-T]
Transitional Studies
M.S. Marquette University
M.A University of Alaska Southeast

Carol L. Beima (1999)
Adult Basic Education
B.A. Wittenberg University
M.Ed University of Washington

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

Laura Blackhurst (2016)[T-T]
Nursing
B.S. Portland Sate University
B.S.N.,M.S. University of Portland

Mark E. Bolke (2000)
Biology
B.S., M.S. Portland State University

Amy Bratton (2017) [T-T]
Communication Studies
B.A. University of Memphis
M.S. Portland State University

Veronica P. Brock (1995)
Health & Fitness
B.S. Eastern Washington University
M.S. East Stroudsburg University

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)[T-T]
Adult Basic Education
A.S. Bakersfield College
B.A. San Francisco State University
M.A California State University

Paul A. Casillas (1990)
Mathematics
B.A. Augustana College, Illinois
M.A. University of Iowa
M.S. University of Oregon

Amy Castellano (2016)[T-T]
Phlebotomy
B.S. University of Arizona
N.D. National College of Natural Medicine

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)
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

Cara Cocchiarella (2016)[T-T]
Health and Physical Education
B.A., M. S., Ed.D. University of Montana

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)[T-T]
Mathematics
B.A. Principia College
M.S. California State University

Amanda Crochet (2011)
Chemistry
B.S. Tulane University
Ph.D. University of California, Berkeley

Catherine Crosby (2016)[T-T]
Biology
B.S. Western Washington University
M.S., PhD. Washington State University

William T. Cushwa (1995)
Biology
B.S. Virginia Polytechnic Institute and State University
M.S., Ph.D. University of California, Davis

Jill C. Darley-Vanis (2006)
English
B.A. Oregon State University
M.A. Portland State University

Kushlani de Soyza (2013)
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

Alison Dolder (2017) T-T
Baking
A.A. Clark College

Elizabeth Donley (2011)
English
B.A. DePaul University
M.A., M.F.A. Chapman University

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

Rebecca Engel (2017) T-T
American Sign Language
B.S. Oregon State University
M.Ed. Western Oregon University

Mary E. Evens (2000)
Business Technology
B.A. Central Washington University
M.A. Pepperdine University

Nadine L. Fattaleh-Diggs (2002)
Chemistry-General
B.A. Scripps College
M.S. Carnegie Mellon University

Dee Anne Finken (2013)
Journalism
B.A. California State University, Sacramento
B.A. Washington State University
M.F.A. Portland State University

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

Marina B. Frost (1996)
Mathematics
B.S., Ph.D. University of Novosibirsk, Russia

Jacob Funk (2016)T-T
Music
B.S. John Brown University
M.S. University of British Columbia
D.M.A. University of Missouri - Kansas City

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)
Communication 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

Rosa Grajczyk (2016)[T-T]
Chemistry
B.S. Central Washington University
Ph.D. Oregon 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

Marilyn Hale (2010)
Business Technology
B.S. University of Montana-Western
M.Ed. Montana State University

Kathrena L. Halsinger (2001)
Art/Graphic Design
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)[T-T]
Dental Hygiene
A.S. Clark College
B.S., M.S. Concordia University

Grant N. Hottle (2013)
Art
B.F.A. University of Oklahoma
M.F.A. University of Oregon

Garrett L. Hoyt (2013)
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

Richard H. Inouye (2007)
Music
B.M.E. University of Northern Colorado
M.M. University of Colorado, Boulder

Hannah Jackson (2016)[T-T]
Mathematics
B.S. Willamette University
M.S. Syracuse University

Debra R. Jenkins (2000)
Early Childhood Education/Psychology
A.A.S Clark College
B.A., M.A. Pacific Oaks College
M.S. University of Phoenix

Elizabeth Jochim (2012)
Nursing
B.S. Saint Martin's University
B.S.N. Seattle University
M.S. Grand Canyon University

Andrew B. Johnson (2013)
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

Yusufu Kamara (2015)[T-T]
Economics
B.S. University of Sierra Leone
M.A., Ph.D. Univeristy of Kansas

Sally J. Keely (1996)
Mathematics
B.S., M.S. Portland State University

Izad Khormaee (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

Sarah Kuzera (2017) [T-T]
Business Technology
A.S., B.S., Everest College
M.B.A., Bryan University
Ed.D. Capella University

Christopher R. Lewis (1999)
Electronics
A.A.S., B.A.S. ITT Technical Institute
M.B.A. City University of Seattle

Xiunu "Sophie" Lin (2016)[T-T]
Physics
B.S. Xiamen University
Ph.D. University of Washington

Kenneth S. Luchini (2013)
Mechatronics
A.S. Diablo Valley College
B.S. California State University, Chico

Donald Ludwig (2015)[T-T]
Sociology
A.A Spokane Community College
B.A. Whitworth College
M.S. Princeton Theological Seminary
M.S. Rutgers University
Ph.D. International University of Graduate Studies

Michael Ludwig (2014)
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)
Mathematics
B.A., M.A. Lewis and Clark College
M.S. Texas A&M University

Meredith Lynch (2016)[T-T]
Transitional Studies
B.A., M.A. University of Washington

Kitty J. Mackey (2001)
Librarian
B.A. University of Montana
M.L.S. Indiana University

Michelle D. Mallory (2008)
Family Life/Early Childhood Education
B.S. Western Oregon State College
M.S. Portland State University

Angie Marks (2009)
Nursing
B.S.N., M.N. Washington State University

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)
Psychology
B.A. Utah State University
M.S., Ph.D. Portland State University

Kanchan Mathur (2005)
Mathematics
B.A. Delhi University
M.S., Ph.D. Indian Institute of Technology

Samuel May-Varas (2016)[T-T]
Transitional Studies
B.A. University of South Florida
M.A.T. City University of Seattle
Ed.D. Lewis & Clark College

Heather J. McAfee (2013)
Geography
B.A. University of Colorado, Colorado Springs
M.A. University of Oregon

Joshua McDaniel (2016)[T-T]
Mathematics
B.S., M.A. Arizona State University

Brian McVay (2014)
Welding
Journeyman Ironworker Certification

Natalie R. Miles (2013)
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

Meredith A. Moore (2009)
Nursing
A.D.N. Carl Sandburg College
B.S.N., M.N. Oregon Health Sciences University

Laura Nagel (2015)[T-T]
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)
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

Nancy E. Novak (2002)
English as a Second Language
B.A. Dartmouth College
Ed.M. Oregon State University
TESL Seattle University School of TESL

Michiyo Okuhara (2010)
Japanese
A.A. Seisen Women's Junior College
A.A. Clackamas Community College
B.S., M.E. Portland State University

Kathleen M. Perillo (1999)
Biology
B.A. University of Delaware
M.S. University of New Haven

Tobias Peterson (2014)
English
B.A. Texas State University
M.A. George Mason University

Mary Ellen Pierce (2014)
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

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

Marcia R. Roi (2000)
Chemical Dependency
B.S., M.S. Oklahoma State University
Ph.D. Oregon State University

Michele Roth (2016)[T-T]
English as a Second Language
B.A. Reed College
M.A.T. University of Washington

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

Katherine D. Sadler (2005)
History
B.A. Portland State University
M.A., Ph.D. University of California, Los Angeles

Erin K. Schoenlein (2013)
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

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

Michelle Stoklosa (2016)[T-T]
Geology
B.A. Franklin & Marshall College
M.S., Ph.D. University of Wisconsin - Madison

Kimberly A. Sullivan (1992)
English
B.A. Belhaven College
M.A. Mississippi State University

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

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

Linda Valenzuela (2009)
Nursing
A.S. College of Sequoias
B.S.N. California State University
M.P.H. Portland State University

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
Ed.D. Walden University

Bruce F. Wells (2000)
Machine Technology
A.G.S. Clackamas Community College

Robert Weston (2015)[T-T]
Mathematics
B.S. Oregon State University
M.S. The City College of New York

Caleb N. White (2013)
Welding
A.O.S. Universal Technical Institute

Lora Whitfield (2014)
Early Childhood Education
A.A.S. Clark College
B.A., M.A. Pacific Oaks College

Alan Wiest (2012)
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

Tess Yevka (2015)[T-T]
Psychology
B.S. Marylhurst University
M.S. Portland State University

Joan Zoellner (2009)
Mathematics
B.A. Humboldt State University
M.A. Indiana University

Tenure Track is indicated by T-T

Clark College Foundation

Hal Abrams, J.D., LL.M (2017)
Associate VP of Development Operations
LL.M. Golden State University
J.D. University of San Francisco
B.S. University of California, Los Angeles

LouAnn Blocker, M.I.S. (2015)
Research & Records Specialist
B.A. University of Tennessee
M.I.S. University of Tennessee

Taylor Bowen (2017)
Associate Director of Annual Fund & Sponsorships
B.S. University of Oregon

Cecelia Connors (2016)
Administrative Assistant
B.S.W Arizona State University

Lyndy Day (2017)
Accounting Specialist
A.A. Columbia Basin Community College
A.A.S. Clark College

Lisa Gibert, CPA, CFRE (1998)
President/CEO
B.S. University of Oregon
M.B.A. University of California, Irvine

Karen Hagen, bCRE (1994)
Assistant VP for Advancement Services
CP Clark College

Miranda Harrington (2015)
Prospect Development Manager
B.A. University of Arkansas

Kelsey Hukill (2014)
Director of Alumni Relations
B.S. The Ohio State University

Kandice King (2015)
Development & Special Events Assistant
A.A.S Clark College

Terri Lunde (2010)
Executive Assistant to the President/Board
A.A. Clark College

Vivian Cheadle Manning, CFRE (2010)
Director of Development
B.A. Southern Methodist University
C.F.M. IUPUI/School of Philanthropy

Rhonda Morin, M.L.S., EMT (2012)
Director of Communications
B.S. University of Maine
M.L.S. Eastern Michigan University
EMT Maine Community College

Joel B. Munson (2016)
Senior VP of Development
M.A. Barry University
B.A. Brigham Young University

Kathleen O'Claire (2015)
Director of Special Events & Donor Relations
B.A. Portland State University

Chris Plamondon (2000)
Controller
B.A. Washington State University

Sam Pollach (2011)
Associate Director of Prospect Research & Development
B.A. Lewis & Clark College

Daniel Rogers, CPA (2010)
Chief Financial Officer
B.A. Washington State University

Shirley Schwartz (1999)
Director of Scholarships
A.A., B.A. West Coast Christian College
M.A. Multnomah University

Abigail Soto (2016)
Gift Entry & Records Manager
B.A. Portland State University
M.A. Portland State University

Clark College Phone Directories

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 2017-2018 Academic Calendar

SUMMER QUARTER 2017

July 4th Holiday ..... July 4 (T)
Classes Begin ..... July 10 (M)
End of 1st 4-week session ..... August 4 (F)
2nd 4-week session begins ..... August 7 (M)
Last day of 2nd 4-week session ..... September 1 (F)
Last day of 8-week session ..... September 1 (F)

FALL QUARTER 2017

Labor Day Holiday ..... September 4 (M)
Classes Begin ..... September 25 (M)
Faculty Workday (no classes) ..... October 13 (F)
Veteran's Holiday ..... November 10 (F)
Faculty Workday (no classes) ..... November 22 (W)
Thanksgiving Holiday ..... November 23-24 (Th-F)
Last Day of Classes ..... December 8 (F)
Final Exams December ..... 11-14 (M-T-W-Th)
Faculty Workday ..... December 15 (F)
Christmas Holiday ..... December 25 (M)

WINTER QUARTER 2018

New Year's Day ..... January 1 (M)
Classes Begin ..... January 8 (M)
Martin Luther King Holiday ..... January 15 (M)
Presidents' Day Holiday ..... February 19 (M)
Last Day of Classes ..... March 16 (F)
Final Exams ..... March 19-22 (M-T-W-Th)
Faculty Workday ..... March 23 (F)
Faculty Workday ..... March 26 (M)

SPRING QUARTER 2018

Classes Begin ..... April 9 (M)
Memorial Day Holiday ..... May 28 (M)
Last Day of Classes ..... June 15 (F)
Final Exams ..... June 18-21 (M-T-W-Th)
Graduation ..... June 21 (Th)
Faculty Workday ..... June 22 (F)