



# Surveying at *Clark College*

- Field Survey Tech Certificate of Proficiency
- NEW– Land Survey Tech Associates of Applied Science

*All courses are offered in the evening, taught by Licensed Professional Land Surveyors*



The Land Survey Technician program provides training in surveying of public lands, legal descriptions, subdivision and platting, and introduction to GIS. Experience with equipment with applications to real world problems are presented by licensed professional surveyors.

- Demonstrate proper use of modern technology, industry standard software, and tools to collect, analyze and interpret data for surveying solutions.
- Successfully apply problem solving skills as a member of a professional team in a field crew.
- Communicate effectively in written form, verbally, and graphically with surveyors and engineers.
- Solve applied mathematical problems related to Land Surveying.
- Prepare complete field records.
- Practice a code of ethics that meets the professional ethics prescribed by the professional organizations and state codes, along with those goals of environmental awareness and human relationship awareness prescribed by the school

## FIELD SURVEY TECHNICIAN *Certificate of Proficiency*

### FALL QUARTER

Math	103	5	Trigonometry
Engl	135	5	Technical Writing
Ctec	101	2	Computing Essentials
Surv	100	2	Introduction to GPS

### WINTER QUARTER

Surv	104	5	Survey Math
Surv	102	2	Survey Drafting
CADD	140	4	Basic AutoCAD
Surv	121	5	Field Survey I

### SPRING QUARTER

IFA	031	1	Industrial First Aid, Saturdays
Surv	122	5	Field Survey II
Surv	123	2	Survey Tech Seminar
Cmst&	210	5	Interpersonal Communication

### SUMMER QUARTER

Surv	199	5	Survey Tech Internship
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**TOTAL CREDITS 48 FST CERTIFICATE OF PROFICIENCY**

## LAND SURVEY TECHNICIAN *Associates of Applied Science*

### FALL QUARTER

Math	111	5	College Algebra
Ctec	121	5	Intro to Programming
Surv	223	3	Public Lands Surveying
Surv	202	3	Boundary Control

### WINTER QUARTER

Math&	151	5	Calculus I
Hum	xxx	5	
Surv	203	3	Legal Descriptions
CADD	143	4	Civil Drafting with AutoCAD

### SPRING QUARTER

Social Science	xxx	5	
Phsc	101	5	General Physical Science
Surv	225	3	Subdivision Planning & Platting
Surv	125	3	Introduction to GIS

### SUMMER QUARTER

HPE	258	3	Health & PE
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**TOTAL CREDITS 97 ASSOCIATE IN APPLIED SCIENCE**



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## COURSE DESCRIPTIONS

### **Surv 100 Introduction to GPS**

Introduction to global positioning tools. Fundamental concepts and use of modern handheld GPS. Includes field work and use of basic GPS software. Prerequisite: A grade of "C" or better in MATH 095 or qualifying score on placement test.

### **Surv 102 Survey Drafting**

Study of drafting methods and principles used in field surveying including topographic surveys/mapping, contour drawings, plan and profiles, improvement plats and street/highway layout.

### **Surv 104 Applied Math for Surveying**

Basic coordinate geometry, curves and solutions, conversions, statistics and error analysis, traverse calculations, inverting, coordinate positions, and area calculations. Prerequisite: A grade of "C" or better in MATH 103.

### **Surv 121 Field Surveying I**

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.

### **Surv 122 Field Surveying II**

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.

### **Surv 123 Survey Tech Seminar**

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.

### **Surv 125 Introduction to GIS**

Introduction to Geographic Information Systems (GIS) methods and theory. Background and development of GIS technology. Introduction to relational and spatial databases and spatial analysis.

### **Surv 202 Boundary Control**

Comprehension of boundary history, creation, ownership and boundary law, as it relates to the surveying profession Principles and laws relating to boundary surveys. How boundaries are created, ownership, and the role of the surveyor

### **Surv 203 Legal Descriptions**

Research and practice of the legal aspects of writing land descriptions documents used in real property; writing research project required.

### **Surv 223 Public Lands Surveying**

Overview of the requirements to determine land boundaries for Survey of Public Lands of the US. Includes history of the system, plotted sections, proportioning, subdividing, and evidence analysis. Emphasis on rules in order to perform boundary surveys

### **Surv 225 Subdivision Planning & Platting**

A study of selected state laws and regulations that pertain to the surveying profession; that that affect the surveying of division of lands; layout and design of subdivisions, environmental considerations and site analysis procedures.

## PROGRAM NOTES

- Students need to be prepared to take or have taken Math 103 trigonometry before beginning any Surv course.
- Some courses have laboratory fees.
- Success in the surveying program requires minimum grade of "C" must be achieved in all major course requirements unless they are pass/no pass.

**For more information,  
contact Tim Kent, Academic Advisor.  
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call 992-2700 x7879.**



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