

# SURVEYING ASSOCIATE IN SCIENCE AND CERTIFICATE OF ACHIEVEMENT



This degree program prepares students to enter the civil engineering field. Competency in care and operation of field instruments, solution of problems in the laboratory, drafting of land survey maps and civil engineering plans, and application of studies to field practice are thoroughly explored.

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Measure angles and distances using electronic total stations and distance meters.
2. Compile field data, adjusting for error from horizontal and vertical traverses.
3. Create typical drawing title blocks accepted by local municipalities such as the City of San Diego.
4. Calculate and plot contours and other features found on a topographic map.
5. Plot easements using bearings, distances and curve information.
6. Recognize and apply the appropriate vocabulary of boundary law in discussion, reading, and writing legal descriptions of boundary.
7. Describe and solve advanced private boundary and public lands boundary problems.
8. Solve introductory property boundaries using title reports and record maps.

## Career Opportunities

Geodetic Surveyor  
 Geophysical Prospecting Surveyor  
 Instruments Surveyor Assistant  
 Land Surveyor  
 Marine Surveyor  
 Mine Surveyor  
 Oil-Well Directional Surveyor

## Associate in Science Degree Requirements

Code	Title	Units
CADD-115 or ENGR-100	Engineering Graphics Introduction to Engineering and Design	3-4
CADD-120	Introduction to Computer-Aided Drafting and Design	3
SURV-127/CADD-127	Survey Drafting Technology	3
MATH-170	Analytic Trigonometry	3
PHYC-110	Introductory Physics	4
SURV-218/ENGR-218	Plane Surveying	4
SURV-220	Boundary Control and Legal Principles	3

SURV-240	Advanced Surveying	4
<b>Total Units</b>		<b>27-28</b>

Plus General Education Requirements (<https://catalog.gcccd.edu/cuyamaca/degree-requirements-transfer-information/>)

## Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Surveying. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.