Course Information Form (CIF)

Course Code: SRV 133

Course Title: Surveying Computations I

Department: Applied Sciences and Technologies
PCS Code: 1.2 - Occupational/Technical Instruction
CIP Code: 15.1102
Repeatability: 0

Effective Date: Summer 2026

Credit Hours

Catalog Notation: 2-0-2
Credit Hour Distribution:

Lecture: 2	Lab: 0	Clinical: 0	**Total: 2**

General Course Information

Catalog Description

Computational processes relevant to land surveying: azimuth, bearing, slope, stationing, trigonometry, coordinate geometry, and earth volumes.

General Course Objectives

Students will demonstrate the ability to select and apply computational processes found in surveying.

Minimum Placement Levels

English	Reading	Math
None	None	Placement out of MAT 072 or credit in MAT 131 with a grade of C or higher

Prerequisites

Credit in SRV 113

Methods of Evaluation

Students will be given a minimum of 4 problem sets and 1 exam.

Instructional Materials and Additional Supplies

Surveying with Construction Applications, 978-0132766982
Scientific calculator, Casio fx-115MS or equivalent
Circular protractor
Straight edge

Course Content

General Learning Outcomes (GLOs)

- Critical Thinking and Information Literacy: Students will demonstrate the ability to evaluate perspectives, evidence, and implications, and to locate, assess, and use information effectively.
- Reasoning and Inquiry: Students will demonstrate the ability to solve problems using deductive reasoning and logic, quantitative reasoning, or the scientific method.

Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Angle and Direction	1. Compute azimuths and bearings from land survey data.	4	0	0
Stationing	1. Apply station and offset data to compute location and elevation.	4	0	0
Trigonometry	1. Apply trigonometric functions in the reduction of land survey data.	4	0	0
Earth Volumes	1. Compute earth volumes for route design by multiple methods.	8	0	0
Coordinate Geometry	1. Calculate traverse positions, side shots, line inverses, offsets, intersections, and areas by manual methods.	10	0	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
30	0	0