Course Information Form (CIF)

Course Code: SRV 234

Course Title: Design Surveying

Department: Applied Sciences and Technologies
PCS Code: 1.2 - Occupational/Technical Instruction
CIP Code: 15.0201
Repeatability: 0

Effective Date: Summer 2026

Credit Hours

Catalog Notation: 2-3-3
Credit Hour Distribution:

Lecture: 2	Lab: 3	Clinical: 0	**Total: 3**

General Course Information

Catalog Description

Survey field processes and theories for civil engineering projects, topographic surveys, as-built surveys, and route surveys.

General Course Objectives

- Students will demonstrate understanding of basic engineering surveying concepts, methods, and documents.
- Students will perform basic engineering surveying field practices and computational processes.

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 1 objective exam, 7 homework assignments, and 3 lab exercises.

Instructional Materials and Additional Supplies

Surveying with Construction Applications, 978-0132766982
Spiral-bound field book
Mechanical pencil, 0.5 mm lead recommended
Scientific calculator, Casio fx-115MS or equivalent
Straight edge

Course Content

General Learning Outcomes (GLOs)

- Reasoning and Inquiry: Students will demonstrate the ability to solve problems using deductive reasoning and logic, quantitative reasoning, or the scientific method.
- Technology: Students will demonstrate the ability to evaluate, select, and appropriately use current and emerging tools.

Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Plan Reading and Interpretation	1. Extract survey information from civil engineering construction plans. 2. Explain the relationships between field data and finished engineering plans.	4	0	0
Civil Engineering Projects	1. Explain the various methods required to collect survey data for a broad range of civil engineering projects and apply information in field-related applications.	5	3	0
Topographic Surveys	1. Plan and perform topographic surveys using multiple field methods and produce basic survey maps.	8	19	0
As-built Survey	1. Plan and perform surveys of as-built conditions and properly annotate construction plans with field data.	3	8	0
Route Surveys	1. Plan and perform basic route surveys for roadways and utility corridors.	10	15	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
30	45	0