

Course Code: CIT 215**Course Title:** Construction Cost Estimating**Department:** Applied Sciences and Technologies**Effective Date:** Summer 2026**PCS Code:** 1.2 - Occupational/Technical Instruction**CIP Code:** 46.0403**Repeatability:** 0

Credit Hours

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

Lecture: 2

Lab: 2

Clinical: 0

Total: 3

General Course Information

Catalog Description

Exploration of construction cost estimation principles and practices. Development of accurate cost estimates for residential, commercial, and civil projects. Quantity take-offs, pricing, bid preparation, and cost control using industry-standard tools and software.

General Course Objectives

Students will understand the key principles and practices of construction cost estimation and develop accurate and comprehensive cost estimates for various types of construction projects. They will be able to perform detailed quantity take-offs for materials, labor, and equipment, and apply different methods and techniques for cost estimation. Additionally, students will learn to use industry-standard estimation software effectively, prepare competitive bid proposals, and analyze and control project costs throughout the construction process.

Minimum Placement Levels

English

None

Reading

None

Math

None

Prerequisites

Credit or concurrent enrollment in CIT 130

Methods of Evaluation

At least 2 objective exams and at least 7 graded homework assignments.

Instructional Materials and Additional Supplies

Estimating in Building Construction, 978-0134701165

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.

Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Quantity Take-offs	1. Prepare material quantity lists for excavation, concrete foundation, framing, and interior finish operations for a residential structure.	7.5	7.5	0
Unit Cost Development	1. Compute burdened wage rates. 2. Compute equipment ownership and operating costs.	5	5	0
Indirect Costs	1. Explain indirect costs. 2. List elements of field and office overhead. 3. Discuss profit.	2.5	2.5	0
Commercial Applications	1. Prepare material quantity take-offs for excavation, reinforced concrete foundation, masonry, structural steel, and interior finishes for a commercial structure.	7.5	7.5	0
Civil Construction Applications	1. Compute earth volumes for excavation and embankment. 2. Compute material quantities for pavement construction.	4	4	0
Mechanical, Electrical, and Plumbing Applications	1. Perform basic quantity take-off for ductwork, piping, and electrical projects.	3.5	3.5	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
30	30	0