
MIDDLESEX COUNTY COLLEGE

COURSE SYLLABUS

Department:	Engineering Technologies
Program:	Civil Engineering Technology
Course Number:	CIT 125
Title of Course:	Construction Estimating
Curriculum Coordinator:	Daniel Grek
Designation:	Required Course

Course Description:

An introduction to drawing and quantity takeoff with related material and labor costs used in the construction industry. Students will examine and interpret construction drawings to determine quantities and related costs of materials and labor. Topics will include: area and volume calculations, use of engineering scales, material costs, labor costs, overhead and profit. Laboratory projects reinforce the lecture material and emphasize proper estimating procedures and format. The students will be exposed to Microsoft Excel in preparation of the material and cost summaries. Students will prepare a quantity estimate for a small construction project. Basic discussions will be presented for cost estimating of residential and commercial construction projects. Unit cost estimating will be incorporated in the proposed estimate.

Prerequisite:

MAT 013 or higher

Co-requisite:

None

Textbooks (s) and /or other required material:

Estimating in Building Construction by Dagastino and Peterson, Pearson, 9th Edition

Course objectives and their relationships to Student Outcomes:

1. Analyze construction plans to determine types and quantities of materials needed.
2. Determine the labor hours for a construction project.
3. Determine the operating costs for construction equipment.
4. Determine the excavation costs for a construction project.
5. Prepare an estimate for a concrete project. (SO e, j)
6. Prepare an estimate for a masonry project.
7. Prepare an estimate for a steel project. (SO e, j)
8. Prepare an estimate for a Rebar project.

Topics Covered:

- Introduction to the building process

- Concrete
- Masonry
- Excavation
- Structural Steel
- Site Work and Excavation
- Framing
- Roofing and Flashing

Class/Laboratory Schedule. Number of sessions each week and duration of each session:

1 lecture hour per week for 14 weeks

2 lab hours per week for 14 weeks

Criterion 5 Contribution: Technical Content

Prepared By:	Jay Edelson	Date:	4/16/08
Updated By:	Thom Sabol	Date:	February 13, 2009
Rev 2:	Edelson Update mapping of course outcomes to new 2014-2015 ABET student outcomes	Date:	4/7/14
Rev 3:	General Update	Date:	3/5/21