

Fall 2019

CET 411-101: Construction Estimating

Zachary Porcello

Follow this and additional works at: <https://digitalcommons.njit.edu/saet-syllabi>

Recommended Citation

Porcello, Zachary, "CET 411-101: Construction Estimating" (2019). *School of Applied Engineering and Technology Syllabi*. 10.
<https://digitalcommons.njit.edu/saet-syllabi/10>

This Syllabus is brought to you for free and open access by the NJIT Syllabi at Digital Commons @ NJIT. It has been accepted for inclusion in School of Applied Engineering and Technology Syllabi by an authorized administrator of Digital Commons @ NJIT. For more information, please contact digitalcommons@njit.edu.

FACULTY COURSE ASSESSMENT REPORT- FALL 2019

GENERAL COURSE INFORMATION

Course Name:	Construction Estimating
Course Number:	CET 411
Course Structure:	3-0-3 (lecture hr./wk. – lab hr./wk. – course credits)
Course Coordinator:	Prof. John, Wiggins, P.E., P.P., Esq., F.ASCE
Course Instructor:	Zachary A. Porcello, P.E., LEED AP
Course Description:	Take off of quantities of materials from typical building and highway projects. Pricing for labor, materials, and equipment. Crew sizes, productivity and manpower leveling. Computerized cost estimating and take off methods. Prepare a complete bid estimate for a construction project.
Prerequisites:	CET 313, CET 314, CET 317
Corequisites:	None
Required, Elective, or Selected Elective:	Required Course
Required Materials:	<u>Estimating in Building Construction, 9th Edition</u> Steven J. Peterson and Frank R. Dagostino – Pearson, 2019
Computer Usage:	Microsoft Word, Excel, PowerPoint, Autodesk AutoCAD/Revit, Microsoft Project
Course Learning Outcomes (CLO):	By the end of the course students should be to: <ol style="list-style-type: none">1. Prepare a detailed cost analysis for a construction project.2. Understand and apply basic principles of construction cost analyses to a construction project.3. Performing standard economic analysis of a construction project.
Student and Program Specific Outcomes Assessment:	Student Outcomes: <ol style="list-style-type: none">(1) an ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline;(2) an ability to design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline;

(3) an ability to apply written, oral, and graphical communication in broadly-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature;

(4) an ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes; and

(5) an ability to function effectively as a member as well as a leader on technical teams.

Program Outcomes:

- a. utilization of techniques that are appropriate to administer and evaluate construction contracts, documents, and codes;
- b. estimation of costs, estimation of quantities, and evaluation of materials for construction projects;
- c. utilization of measuring methods, hardware, and software that are appropriate for field, laboratory, and office processes related to construction;
- d. application of fundamental computational methods and elementary analytical techniques in sub-disciplines related to construction engineering;
- e. production and utilization of documents related to design, construction, and operations;
- f. performance of economic analyses and cost estimates related to design, construction, and maintenance of systems associated with construction engineering;
- g. selection of appropriate construction materials and practices;
- h. application of appropriate principles of construction management, law, and ethics; and
- i. performance of standard analysis and design in at least one sub-discipline related to construction engineering.

MODIFICATIONS MADE TO COURSE SINCE LAST OFFERING

1. Utilization of semester-long case study.
2. Special attention to reading construction drawings, specifications, and typical contract documents (AIA Document Family).

SECTION SPECIFIC INFORMATION

Semester: Fall
Number of Students: 32

Year: 2019

Section: 101

NEWARK COLLEGE OF ENGINEERING

SECTION COURSE STUDENT OUTCOME AND COURSE OUTCOMES ASSESSMENT

In the table below, actions are required in the Percent of Students >70% is less than 30%, for those students who hand in the assignments or have taken the tests. That number of students can be derived by adding the first two columns and can be compared to the total number of students.

#	Student Outcome	Course Outcome	Assessment Tool or Metric Used	Number of Students > 70%	Number of Students < 70%	Percent of Students >70%	Actions Yes/ No

FACULTY REFLECTION

PROPOSED ACTIONS FOR CONTINUOUS IMPROVEMENT