

Spring 2022

CE 410-104: Construction Scheduling/Estimating

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**New Jersey Institute of Technology
Department of Civil and Environmental Engineering
CE 410 – Construction Estimating and Scheduling**

Spring 2022

Professor: Carlos E. Meneses, P.E.
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Office Hrs.: TBD

Text: Estimating Construction Costs, 6th Edition

Authors: Robert L. Peurifoy and Garold D. Oberlender

Published by: McGraw Hill, ISBN No. 978-0-07-339801-3

Prerequisites: CE 210, Construction Materials and Procedures

Course Description: Quantity takeoff, cost estimates and computer scheduling analysis of typical building and heavy construction analyses (Microsoft Project). Studies include construction project organization, contract requirements and management control.

Course Outline

<u>Week No. /Date</u>	<u>Topics</u>	<u>Chapters</u>
1/ Jan. 20 (Thurs.)	Introduction Construction Safety Progress Schedule Overview	Chap. 1 Supplemental Reading Supplemental Reading
2/ Jan. 27	Bid Documents Estimating Process	Chap. 2 Chap. 3
3/ Feb. 03	Conceptual Cost Estimating Cost of Labor and Equipment	Chap. 4 Chap. 5
4/ Feb. 10	Handling & Transporting Material Earthwork and Excavation	Chap. 6 Chap. 7
5/ Feb. 17	Highway and Pavement Foundations	Chap. 8 Chap. 9

Week No. /Date	Topics	Chapters
6/ Feb. 24	Concrete Structures Masonry	Chap. 10 Chap. 14
7/ Mar. 03	Computer Estimating	Chap. 22
8/ Mar. 10	Midterm Examination	
	Spring Break Mar. 14 to 19	
9/ Mar. 24	Types of Progress Schedules Pre-Bid Conference	Supplemental Reading 8:00 PM
10/ Mar.31	Project Control Principles Critical Path Method Construction Sequencing	Supplemental Reading
11/ Apr. 07	Plumbing Electric Wiring Preliminary Project Quantity Takeoff Due	Chap. 17 Chap. 18
12/ Apr. 14	Sewerage Systems Water Distribution Systems Preliminary Project Progress Schedule Due	Chap. 19 Chap. 20
13/ Apr. 21	Steel Structures Total Cost of Engineering Projects	Chap. 11 Chap. 21
14/ Apr. 28	Final Projects Due-Bid Opening-Apparent Award of Bid	
May 4 and 5	Reading Days	
15/ May 12	Final Examination	

Homework

Homework will be assigned by the professor weekly. All homework is due the following week at the beginning of class. Late homework will not be accepted.

Class Project Schedule and Quantity Takeoff are to be turned in at beginning of class in which it is due. Late Project submissions shall be subjected to a reduction of points.

Grading

Class Participation (Including Attendance)	10%
Homework	15%
Midterm Exam	20%
Project	30%
Final Exam	<u>25%</u>
	100%

Term Projects

The term project will involve the preparation of **a quantity takeoff**, an **estimate** and **schedule** for a project based on plans and specifications provided by the professor. The final quantity takeoffs, estimates and schedules will be presented on April 30th in the form of a competitive bid.

Students will be assigned work groups, keeping in mind that each student in the group will receive the same grade for the work.

Important Notes:

1. The NJIT Honor Code will be upheld in this course. Any violations will be brought to the immediate attention of the Dean of Students.
2. Any modifications or deviations to the syllabus throughout the semester will be made through consultation and agreement with the class.