CE 410-101 – CONSTRUCTION ESTIMATING AND SCHEDULING
Department of Civil and Environmental Engineering
New Jersey Institute of Technology
Fall 2017

Time & Location  Tuesday 6:00-9:05PM, CKB 120

Instructor  Muhammad Elgammal, PE, PMP
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862-253-1919

Office Hours  Thursday 5:30-8:00PM, COLT 261

Prerequisites  CE 210, Construction Materials & Procedures

Robert L. Peurifoy and Garold D. Oberlender

Course Description  Quantity take off, cost estimate and CPM computer analysis of typical building or highway projects. A study is made of construction project organization, contract requirements and management control techniques with an introduction to computer applications (Microsoft Project).

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<th>Topic</th>
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| 1  | 9/5   | Introduction
estimating Overview
Scheduling Overview |
| 2  | 9/12  | Contract Drawing Review
Industry Standards
Activity Relationships |
| 3  | 9/19  | Bid Documents & Preparation
Estimating Process
Conceptual Cost Estimating |
| 4  | 9/26  | Cost of Construction Labor & Equipment
Construction Safety
Handling and Transporting Material |
| 5  | 10/3  | Earthwork and Excavation                  |
| 6  | 10/10 | Highways & Pavements
Portland Cement Concrete
Asphalt Concrete |

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<th>Date</th>
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| 7  | 10/17 | Drainage & Utilities
Total Cost of Engineering Projects |
| 8  | 10/24 | Midterm Examination                        |
| 9  | 10/31 | Project Control Principles
Network Modeling |
| 10 | 11/7  | Construction Sequencing                    |
| 11 | 11/14 | Thursday Classes Meet                     |
| 13 | 11/28 | Critical Path Method                       |
| 14 | 12/5  | Monitoring & Control Change Management     |
| 15 | 12/12 | Cost Schedule Integration                  |
| 16 | 12/19 | Final Examination                          |

General Notes  Lecture slides will be uploaded to Moodle after lecture.
No late assignments accepted. No use of electronic devices.
The NJIT Honor Code will be upheld in this course. Students participating in this course agree to conform to, abide by, and agree to the sanctions of the University Code on Academic Integrity.

Grading  Participation  5%
Assignments  13%
Quizzes  12%
Midterm Examination  25%
Term Project  25%
Final Examination  20%