

**CE 410 -102 – CONSTRUCTION ESTIMATING AND SCHEDULING**

Department of Civil and Environmental Engineering

New Jersey Institute of Technology

Spring 2018

**Time & Location** Tuesday 6:00-9:05PM, COLT 416**Instructor** Muhammad Elgammal, PE, PMP  
[njcivilengineer@gmail.com](mailto:njcivilengineer@gmail.com)**Office Hours** TBD, COLT 261**Prerequisites** CE 210, Construction Materials & Procedures**Text** Estimating Construction Costs, 6th Edition  
Robert L. Peurifoy and Garold D. Oberlender  
McGraw Hill, ISBN No. 978-0-07-339801-3**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).

Wk	Date	Topic	Wk	Date	Topic
1	1/16	Introduction Estimating Overview Scheduling Overview	7	2/27	Drainage & Utilities Total Cost of Engineering Projects
2	1/23	Contract Drawing Review Industry Standards Activity Relationships	8	3/6	<i>Midterm Examination</i>
3	1/30	Bid Documents & Preparation Estimating Process Conceptual Cost Estimating	9	3/13	<i>Spring Recess</i>
4	2/6	Cost of Construction Labor & Equipment Construction Safety Handling and Transporting Material	10	3/20	Project Control Principles Network Modeling
5	2/13	Earthwork and Excavation	11	3/27	Construction Sequencing
6	2/20	Highways & Pavements Portland Cement Concrete Asphalt Concrete	12	4/3	Contract Requirements & Provisions
			13	4/10	Critical Path Method
			14	4/17	Monitoring & Control Change Management
			15	4/24	Cost Schedule Integration
			16	5/8*	<i>Final Examination</i>

**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%	Midterm Examination	25%
Assignments	13%	Term Project	25%
Quizzes	12%	Final Examination	20%