New Jersey Institute of Technology  
Department of Civil and Environmental Engineering  
CE 410 – Construction Estimating and Scheduling  
Fall 2016

Professor Alan R. Slaughter, P.E., P.P.  
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Mailbox: Colton Hall, CE Dept.  
Office Hours: Tuesday, 4:30 to 5:30 PM, Colton Hall

Authors: Robert L. Peurifoy and Garold D. Oberlender  

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.

Use moodle2.njit.edu for class notes, homework and information.

Course Outline

<table>
<thead>
<tr>
<th>Week No. /Date</th>
<th>Topics</th>
<th>Chapters</th>
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</table>
| 1/ Sept. 9 (Tues.) | Introduction  
Bid Documents | Chapt. 1 
Chapt. 2 |
| 2/ Sept. 13 | Estimating Process  
Safety | Chapt. 3 
No Chapter |
| 3/ Sept. 20 | Conceptual Cost Estimating  
Cost of Labor and Equipment | Chapt. 4 
Chapt. 5 |
4/ Sept. 27  Material Handling & Transport  Chapt. 6  
Earthwork and Excavation  Chapt. 7  
Prebid Conference  8:00 PM  

5/ Oct. 4  Highway and Pavement  Chapt. 8  
Foundations  Chapt. 9  

6/ Oct. 11  Concrete  Chapt. 10  
Masonry  Chapt. 14  

7/ Oct. 18  Steel Structures  Chapt. 11  
Computer Estimating  Chapt. 22  

8/ Oct. 25  **Midterm Examination**  

9/ Nov. 1  Historic Structures, Carpentry  Chapt. 12  

10/ Nov. 8  Roofing and Flashing  Chapt. 13  
Flooring Systems and Finishes  Chapt. 15  

11/ Nov. 15  Electrical, Mechanical, Plumbing  Chapt. 17  
Chapt. 18  

12/ Nov. 22  Sewerage and Water Distribution  Chapt. 19  
Chapt. 20  

**Thanksgiving Holiday Nov. 24 to 27**  

13/ Nov. 29  Total Cost of Projects  Chapt. 21  

14/ Dec. 6  **Projects Due-Bid Opening- Apparent Award of Bid**  

15/ Dec.??  **Final Examination (on moodle)** *Date to be determined*  

**Homework**  

Homework will be assigned as directed on moodle.
All **homework** is due the week following the week it is assigned. Late homework may be subject to a reduction of points.

**Grading**

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Attendance &amp; Homework</td>
<td>15%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>25%</td>
</tr>
<tr>
<td>Project</td>
<td>30%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>30%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

**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 McGraw Hill. The quantity takeoffs, estimates and schedules will be presented on December 6th in the form of a competitive bid. Students will be allowed to work together in groups of two or three, keeping in mind that each student in the group will receive the same grade for the work, so choose your partner(s) wisely.

**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.