CIV 393 - Construction Management

Current Catalog Description: Introductory course in construction management with an emphasis on estimating, scheduling, administration, project delivery, project control techniques, quality control and assurance, and safety.

Prerequisite: EST 392; AMS 361 or MAT 303 or MAT 305

Corequisite: None

Textbooks and/or Other Required Material:


This course is: Required

Topics Covered:

1. Foundations of engineering economy
   a. Introduction to Construction Management
   b. Overview of Construction Industry
   c. Project Delivery Systems
   d. Construction Administration
   e. Estimating Earthwork Construction
   f. Mass Haul, Cycle Time
2. Machine Power
   a. Equipment Selection
   b. Equipment Costs, Cost Estimates
   c. Understanding the Drawings
   d. Estimating Building Projects
   e. Equipment Quantities, Labor, Cost
   f. Project Scheduling, Critical Path Method
3. Project Control and Tracking
   a. Construction Safety
   b. Quality and Productivity

Course Learning and Student Outcomes:

<table>
<thead>
<tr>
<th>Course Learning Objectives</th>
<th>ABET Student Outcomes</th>
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<tbody>
<tr>
<td>Explain the characteristics and challenges of the construction industry within the U.S.</td>
<td>3, 4, 6, 7</td>
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<tr>
<td>Explain concepts of construction administration, including project delivery systems, contracting requirements, project control, dispute resolution, safety, and quality assurance and control.</td>
<td>3, 7</td>
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<tr>
<td>Solve large earth construction problems including earthwork volumes and flow, machine power, and equipment cycle times.</td>
<td>1, 2, 7</td>
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<td>Generate building construction estimates for time, labor, and materials.</td>
<td>1, 2, 6</td>
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<td>Apply principles of project scheduling</td>
<td>6, 7</td>
</tr>
<tr>
<td>Apply principles of project control and tracking.</td>
<td>6, 7</td>
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