

## 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:** Required Texts: Construction Management Fundamentals, Second Edition by Knutson, Schexnayder, Fiori, and Mayo, 2009, ISBN 978-0-07-340104-1.

**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:**

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

**Prepared by:** Hakan Sahin (2018)