

CE 232 Construction Management

2025-26 Spring Semester

Instructor:

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Teaching Assistant:

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Time and Location:

Friday 09.45 - 12.30 B212

Course description:

The Construction Management course provides a comprehensive introduction to the construction industry. The course introduces students to foundational principles of construction project management, covering project life cycles, delivery methods, the roles and responsibilities of project participants, and the coordination required to enhance project performance. Core managerial knowledge areas _such as cost estimating, quantity take-off, earned value analysis, scheduling techniques, procurement, risk, quality, communication, and human resource management_ are complemented by insights into professional responsibility, engineering ethics, and the environmental and economic implications of construction activities.

The course also assists students in comprehending the roles and responsibilities of all parties involved in a construction project, the fundamental phases of a construction project, and how different parties collaborate to enhance its performance. Additionally, the course introduces modern tools, approaches, and trends to strengthen decision-making skills and prepare students for executive functions in complex project environments.

Prerequisite(s): None

References:

Halpin, D.W., Senior B.A. *Construction Management*. John Wiley & Sons, Inc., 4th ed., 2011.

Jackson, B.J., *Construction Management -JumpStart*. Wiley Publishing, 2nd. ed., 2010.

Hinze, J.W. *Construction Planning and Scheduling*. Prentice Hall. 3rd ed. 2008.

Gültekin, A.T. *Proje Yönetimi –Yapım Öncesi Süreci*. Palme Yayıncılık, 2007.

Harris, F., McCaffer, R. *Modern Construction Management*. Blackwell, 6th ed. 2006.

PMI, *The standard for project management and a guide to the project management body of knowledge*. 7th ed., Project Management Institute, Inc., 2021.

METU Department of Civil Engineering, Construction Eng. & Man. Dep., *Construction Engineering and Management Lecture Notes*. METU, 2014.

Course Website:

All announcements and course material will be posted online.

Grading:

The final grades will be computed according to the following scheme:

Assessment	Weight	Date
Midterm I	30%	17.04.2026 (Tentatively)
Midterm II	30%	22.05.2025 (Tentatively)
Final Exam	40%	26.06.2025 (Tentatively)

Tentative Course Outline

WEEK	SUBJECT COVERED
1	Introduction, Syllabus Review, Course Review and Basic Requirements, Construction Management, Project and Management Definitions, Life Cycle of a Project, Phases of Projects
2	Project Delivery Methods, FIDIC Contract, Tender & Procurement
3	Introduction to PMBOK, Project Integration Management, Project Scope Management, Introduction to Quantity Take off
4	Project Cost Management (Quantity Take off cont.)
5	Project Cost Management (Earned Value Analysis)
6	Project Quality Management, Project Communications Management, Project Human Resource Management, Organizational Charts in Construction Companies
7	MIDTERM I
8	Project Schedule Management (Sources: Equipment, Labor, Time, Budget, etc.)
9	Project Schedule Management (CPM, PERT)
10	Project Risk Management, HSE & QA/QC
11	MIDTERM II
12	Lates Trends in Construction Management: Lean, BIM, AI, Agents, Construction, 4.0 etc.
13	Engineering Ethics and Final Review
14	FINAL