

CE 231 ENGINEERING ECONOMY

2026-27 Fall Semester

Instructor:

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Time and Location:

Friday 09.45 - 12.30 B213

Course description:

This course introduces students to the fundamental principles and analytical tools of engineering economics used in evaluating investment decisions and financial alternatives in engineering practice. Topics include the time value of money through simple and compound interest, as well as effective and nominal interest rates, followed by systematic methods for comparing competing project alternatives. Students will learn to apply rate of return (RoR) and internal rate of return (IRR) analysis, conduct break-even analysis, and calculate depreciation using various methods. The course further examines after-tax economic analysis, cash flow analysis, and total cost management, equipping students with the quantitative skills necessary to make informed engineering and business decisions under conditions of risk and uncertainty. By the end of the course, students will be able to apply these economic principles to real-world engineering projects and support sound decision-making processes.

Prerequisite(s): None

References:

Blank, L. and Tarquin, A. (2012). Engineering Economy. Seventh Edition, McGraw-Hill, USA.
Halpin D. W.
Construction Management, D. W. Halpin, Wiley; 3rd edition, 2005
Okka, O. (2006). Mühendislik Ekonomisine Giriş Cilt 1: Konular, Nobel Yayın Dağıtım.

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%	06.11.2026 (Tentatively)
Midterm II	30%	11.12.2026 (Tentatively)
Final Exam	40%	15.01.2026 (Tentatively)

Tentative Course Outline

WEEK	SUBJECT COVERED
1	Introduction to Fundamental Concepts of Engineering Economics and Decision Parameters
2	Simple and Compound Interest
3	Effective and Nominal Interest
4	Methods for Comparison of Alternatives-I
5	Methods for Comparison of Alternatives-II
6	Midterm-I
7	Rate of Return (RoR) and Internal Rate of Return (IRR)
8	Break-even Analysis
9	Depreciation
10	After-Tax Economic Analysis
11	Midterm -I
12	Cash Flow Analysis
13	Total Cost Management
14	Final