

İzmir Institute of Technology - Department of Civil Engineering

CE 321 Introduction to Structural Mechanics - Fall 2026-2027 Course Outline

COURSE INSTRUCTOR	Dr. İzzet Özdemir Department of Civil Engineering Office Hours: To be announced	Office: C-206 E-mail: izzetozdemir@iyte.edu.tr
COURSE ASSISTANTS	M. Sc. Üveys Gözün Department of Civil Engineering Office Hour: To be announced	Office: E-108 E-mail: weysgozun@iyte.edu.tr
COURSE SCHEDULE	Friday 13:30 - 16:15, Room: B-211	
COURSE CONDUCT	The course will be taught in class at the campus. Teams page is going to be activated and used throughout the semester.	
TEXTBOOK & REFERENCE	• Mechanics of Materials, R.C. Hibbeler, 9th Edition, Pearson, 2014 (TB 1). • Structural Analysis, R.C. Hibbeler, T.K. Hwee, 8th Edition, Pearson, 2012 (TB 2). • Fundamentals of Structural Analysis, H.H. West, John Wiley & Sons, 1993.	
OBJECTIVES	The objective is to learn the fundamental principles of structural mechanics and their use for analysis of engineering structures.	
COURSE CONTENT	• Unsymmetrical Bending of Beams (TB 1 , Chapter 6 (Section 6.5)) • Analysis of Determinate Structures (TB 2 , Chapter 2, 3, 4, 5) • Structural behavior of trusses, beams, frames, arches and cables • Concept of stability and determinacy • Static analysis of beams, frames, arches and cables • Shear Centre (TB 1 , Chapter 7 (Sections 7.4, 7.5)) • Work and Energy Principles (TB 2 , Chapter 8 & Class notes) • Principles related to work • Principle of virtual work • Displacement calculations using the unit-dummy load method • Maxwell's reciprocal theorem • Introduction to the Force Method of Analysis (TB 2, Chapter 9)	
GRADING	There will be 2 term exams (% 30 each) and a final (% 40). The exam dates will be announced timely.	