



KARADENİZ TECHNICAL UNIVERSITY
DEPARTMENT OF MINING ENGINEERING
ENGINEERING MECHANICS (3+0) SYLLABUS
2023-2024 Spring

Instructor : Dr. Gökhan ADIYAMAN

(Room: 403, Dept. Of Civil Eng.; E-mail: gadiyaman@ktu.edu.tr)

Lectures : Friday 9:00-12:00 (14 Weeks)

Textbook (Required) :

- Hibbeler, R.C., “Engineering Mechanics: Statics”, Pearson-Prentice Hall. (14th ed.)
- Hibbeler, R.C., “Engineering Mechanics: Dynamics”, Pearson-Prentice Hall.

Other Books (recommended) :

- Beer, F.P., Johnston, E.R., “Vector Mechanics for Engineering Statics”, McGraw-Hill International Book Company (9th ed.)
- Beer, F.P., Johnston, E.R., “Vector Mechanics for Engineering Dynamics”, McGraw-Hill International Book Company
- Mehmet H. Omurtag, “Mühendislik Mekaniği - Statik”, Birsen Yayınevi (5th ed.)
- Mehmet H. Omurtag, “Mühendislik Mekaniği – Dinamik”, Birsen Yayınevi

Grading :

- Midterm (50%)
- Final (50%)

Prerequisites :

- Calculus

Attendance : 75% attendance is compulsory.

Course Content :

Week	Topic
1	General principles, Introduction to Statics
2	Force vectors
3	Equilibrium of a particle (Coplanar force systems)
4	Force system resultants
5	Equilibrium of a rigid-body
6	Structural analysis: Trusses
7	Structural analysis: Frames & Machines
8	Center of gravity and centroid
	Midterm (1 weeks)
9	Friction
10	Introduction to Dynamics
11	Kinematics of a Particle
12	Kinetics of a Particle: Force and Acceleration
13	Kinetics of a Particle: Work and Energy
14	Kinetics of a Particle: Impulse and Momentum
	Final
	Make-up (Resit)