

INTRODUCTION TO CIVIL ENGINEERING IM 101

2018-2019 FALL TERM

Civil Engineering (CE) plays a major role in the provision of basic infrastructure necessary to support the development and maintenance of urban and rural settlements. Students completing this subject gain an understanding of the scope of CE and acquire relevant fundamental skills and knowledge. This subject provides:

- 1) Sound foundation for further education in the processes of design, construction, operation and maintenance of community infrastructure.
- 2) Understanding of the need to develop the necessary individual and collaborative skills in CE project analysis and development.

CONTENT

1. CIVIL ENGINEERING PRACTICE, DESIGN AND ETHICS

- 1.1 Importance of Civil Engineering
- 1.2 Branches of Civil Engineering
- 1.3 Units of Variables in SI System
- 1.4 Relation of Force-Stress-Deformation
- 1.5 Hook's Law and Modulus of Elasticity
- 1.6 Economy-Risk Concept in Design
- 1.7 Structural Mechanic Laboratory of Gazi University
- 1.8 Concrete Production in Laboratory
- 1.9 Concrete Compression Tests in Laboratory
- 1.10 Reinforcement Tension Tests in Laboratory
- 1.11 Material Properties of RC
- 1.12 Statistics of Concrete Sampling at Construction Site
- 1.13 Soil Mechanic Laboratory of Gazi University
- 1.14 Transportation Laboratory of Gazi University
- 1.15 Civil Engineering Ethics

2. ENGINEERING ECONOMY & SAFETY

- 2.1 Cost and Quantity Calculations
- 2.2 Excavation
- 2.3 Materials of Construction
- 2.4 Concrete
- 2.5 Reinforcement
- 2.6 Reinforced Concrete
- 2.7 Foundations
- 2.8 Columns
- 2.9 Walls
- 2.10 Scaffoldings
- 2.11 Contracting and Bidding
- 2.12 Safety at Construction Site

Subject	Instructor
Introduction and Engineering Economy	Can Balas
Civil Engineering Projects and Job Opportunities in Private Sector	Hülya Karakuş (Yüksel Proje)
Hydraulic projects	Can Balas
Structural Mechanics and Ethics	Sinan Altın
Geotechnical Engineering	Erhan Tekin

Assessment Criteria		Quantity	Percentage
	Midterm Exams	2	% 20- % 20
	Quizzes	-	-
	Attendance*(bonus) + Homework	3	% 15
	Projects	-	-
	Term Paper	-	-
	Laboratory Work	-	-
	Other	-	-
	Final Exam	1	% 40
Course Category by Content (%)	Mathematics and Basic Sciences		% 30
	Engineering Science		% 65
	Engineering Design		%5
	Social Sciences		-

*Attendance should be minimum %70. Cannot enter final otherwise.