



COURSE INFORMATION FORM

Course Name	Course Code
BRIDGES AND PROJECT	151417653

Semester	Number of Course Hours per Week		ECTS
	Theory	Practice	
7	3	0	5

Course Category (Credit)				
Basic Sciences	Engineering Sciences	Design	General Education	Social
	5			

Course Language	Course Level	Course Type
Turkish	Undergraduate	Elective

Prerequisite(s) if any	Reinforced Concrete, Structural Analysis
Objectives of the Course	Design of bridges
Short Course Content	Design and manufacturing methods of reinforced concrete, suspension and mixed bridges.

Learning Outcomes of the Course	Contributed PO(s)	Teaching Methods *	Measuring Methods **
1 Identifies the bridge types	3, 9	1, 11, 14	J
2 Selects the appropriate type of bridge.	3, 9	1, 11, 14	J
3 Determines the spans in reinforced concrete and steel bridges.	3, 9	1, 11, 14	J
4 Designs bridges under vertical loads.	3, 9	1, 11, 14	J
5 Designs bridges under earthquake loads.	3, 9	1, 11, 14	J
6 Designs bridges under wind loads.	8, 9, 11	1, 11, 14	J
7 Designs bridges for maximum loads under moving loads.	3, 9	1, 11, 14	J
8			
9			
10			

*Teaching Methods 1:Expression, 2:Discussion, 3:Experiment, 4:Simulation, 5:Question-Answer, 6:Tutorial, 7:Observation, 8:Case Study, 9:Technical Visit, 10:Trouble/Problem Solving, 11:Individual Work, 12:Team/Group Work, 13:Brain Storm, 14:Project Design / Management, 15:Report Preparation and/or Presentation

**Measuring Methods A:Exam, B:Quiz, C:Oral Exam, D:Homework, E:Report, F:Article Examination, G:Presentation, I:Experimental Skill, J:Project Observation, K:Class Attendance; L:Jury Exam

Main Textbook	Course notes
Supporting References	
Necessary Course Material	

Course Schedule	
1	Introduction to types of bridges and regulations
2	Determining the maximum section effects under moving loads on bridges
3	Reinforced concrete bridges
4	Design of reinforced concrete sections in reinforced concrete bridges
5	Post-tensioning method in reinforced concrete bridges
6	Manufacturing and assembly of reinforced concrete bridges
7	Manufacturing and assembly of reinforced concrete bridges
8	Mid-Term Exam
9	Steel bridges
10	Section design in steel bridges
11	Post-tensioning method in steel bridges
12	Manufacturing and assembly of steel bridges
13	Suspension bridges
14	Elements of suspension bridges
15	Manufacturing and assembly of suspension bridges
15,17	Final Exam

Calculation of Course Workload			
Activities	Number	Time (Hour)	Total Workload (Hour)
Course Time (number of course hours per week)	14	3	42
Classroom Studying Time (review, reinforcing, prestudy,...)	14	3	42
Homework			
Quiz Exam			
Studying for Quiz Exam			
Oral exam			
Studying for Oral Exam			
Report (Preparation and presentation time included)			
Project (Preparation and presentation time included)	1	60	60
Presentation (Preparation time included)			
Mid-Term Exam			
Studying for Mid-Term Exam			
Final Exam			
Studying for Final Exam			
Course Time (number of course hours per week)			
Classroom Studying Time (review, reinforcing, prestudy,...)			
Total workload			144
Total workload / 30			4,8
Course ECTS Credit			5

Evaluation	
Activity Type	%
Mid-term	0
Project Observation	100
Final Exam	0
Total	100

RELATIONSHIP BETWEEN THE COURSE LEARNING OUTCOMES AND THE PROGRAM OUTCOMES (PO) (5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low)		
NO	PROGRAM OUTCOME	Contribution
1	Sufficient knowledge in mathematics, science, and fundamental engineering; ability to apply theoretical and practical knowledge in these fields to model and solve Engineering problems.	
2	Skills to identify, define, formulate complex engineering problems in civil engineering and related fields, and to select and apply appropriate analysis and modeling methods to solve them.	
3	Ability to design a complex system, device, or product under realistic constraints and conditions, applying modern design methods towards a specified goal.	5
4	Ability to develop, select, and use modern techniques and tools necessary for Civil Engineering applications, and to effectively utilize information technologies.	
5	Ability to design experiments, conduct experiments, collect data, analyze and interpret results for the investigation of Civil Engineering problems.	
6	Ability to work effectively in intra-disciplinary and inter-disciplinary teams.	
7	Effective communication skills in Turkish, both oral and written, and ability to use/improve knowledge of a foreign language.	
8	Recognition of the need for lifelong learning; ability to access information, follow developments in science and technology, and continuously renew oneself.	4
9	Consciousness of professional and ethical responsibility.	
10	Knowledge about business life practices such as project management, risk management, and change management; awareness about entrepreneurship, innovation, and sustainable development.	
11	Knowledge about the effects of engineering practices on health, environment, and safety in universal and societal dimensions; awareness about national and international legal regulations and standards, and the legal consequences of engineering solutions.	4

LECTUTER(S)				
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Signature(s)				

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