ESOGU CIVIL ENGINEERING DEPARTMENT
COURSE INFORMATION FORM

Course Title	Course Code
REINFORCED-CONCRETE II	151417669

Semester in Program	Number of Course Hours per Week		ECTS Credit
	Theory	Practice	
7	4	0	5

Course ECTS Credit Distribution				
Basic Sciences	Engineering Sciences	Design	General Education	Social
	2	3		

Language of Instruction	Course Level	Course Type
Turkish	Undergraduate	Compulsory

Prerequisite	Reinforced Concrete I
Objectives of the Course	Know types of structures Understand how to choose the structural system. Know types of the slabs. Design and draw the slabs. Know types of the foundations. Design and drawings the foundations. Use the related national codes.
Brief Course Content	The main aim of the course is to introduce the design principles of the reinforced concrete structures. Content of the course is as follows: Classification of buildings. Choice of structure. Structural system irregularities. Types of slabs. Joist floors, One-two way slabs, design using the TS500-2000 tables. Slabs with openings, Slabs of varying support and loading conditions. Ribbed slabs. Foundations, types of foundations. Wall footings, Single square and rectangular footings. One and two-way continuous strip foundations, mat foundations.

	Learning Outcomes of the Course	Contributed POs	Teaching Methods *	Assessment Methods **
1	Structural system irregularities.	1, 2, 3, 4	1, 6,10	A, B/D
2	Design of one-two way slabs, using the TS500-2000 tables.	1, 2, 3, 4	1, 6,10	A, B/D
3	Slabs of varying support and loading conditions. Ribbed slabs.	1, 2, 3, 4	1, 6,10	A, B/D
4	Design of single/combined foundations	1, 2, 3, 4	1, 6,10	A, B/D
5	Design of strip and mat foundations	1, 2, 3, 4	1, 6,10	A, B/D
6				
7				
8				

*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:Induvidual 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	1. **Celep, Z. , (2022).** Betonarme Yapılar, Beta dağıtım, İstanbul. 2. **Doğangün, A. (2018).** Betonarme Yapıların Hesap ve Tasarımı, Birsen Yayınevi, İstanbul. 3. **Jack C.McCORMAC & Russel H. BROWN** Design of Reinforced Concrete, Wiley 2016 4. **ERSOY, U. (2011).** Betonarme 2, Döşeme ve Temeller, Evrim Yayınevi, İstanbul. 4. **ÇETMELİ, E. (1987).** Plaklar, İTÜ, İstanbul. 5. **KÖSEOĞLU, S. (1986).** Temeller, I, II, Matbaa Teknisyenleri Basımevi, İstanbul. 6. **KÖSEOĞLU, S. (1992).** Merdivenler, Matbaa Teknisyenleri Basımevi, İstanbul.
Supplementary Resources	1. **Aydın, M. R., Akgün, Ö. R., Topçu, A. (2002).** Betonarme Kolon Tabloları, Eskişehir. **Current codes**
Necessary Course Material	

	Course Weekly Schedule
1	Classification of buildings.
2	Choice of structural system.
3	Structural system irregularities.
4	Types of slabs. One-two way slabs
5	Types of slabs. One-two way slabs
6	Design using the TS500-2000 tables.
7	Design using the TS500-2000 tables.
8	Mid-Term Exams
9	Slabs with openings, Slabs of varying support and loading conditions.
10	Design of Ribbed slabs.
11	Foundations, types of foundations.
12	Design of Single/isolated square/rectangular footings, combined footings
13	One and two-way continuous strip foundations
14	Mat foundations.
15	General Review, Q&A
16,17	Final Exams

Calculation of Course Workload			
Activities	**Count**	**Time (Hour)**	**Total Workload (Hour)**
Weekly classroom time	14	4	56
Weekly study time (review, reinforcing, preparation)	14	4	56
Homework	5	5	25
Taking a quiz			
Studying for a quiz			
Oral exam			
Studying for an oral exam			
Report writing (Preparation and presentation time included)			
Project (Preparation and presentation time included)			
Presentation (Preparation time included)			
Mid-Term Exam	1	2	2
Studying for Mid-Term Exam	1	5	5
Final Exam	1	2	2
Studying for Final Exam	1	5	5
	Total workload		**151**
	Total workload / 30		**5.03**
	Course ECTS Credit		**5**

Assessment	
Activity Type	**%**
Mid-term	30
Quiz	
Homework	20
Bir öğe seçin.	
Bir öğe seçin.	
Final Exam	50
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 of engineering subjects related with mathematics, science and own branch; an ability to apply theoretical and practical knowledge on solving and modeling of engineering problems.	4
2	Ability to determine, define, formulate and solve complex engineering problems; for that purpose an ability to select and use convenient analytical and experimental methods.	5
3	Ability to design a complex system, a component and/or an engineering process under real life constrains or conditions, defined by environmental, economical and political problems; for that	5
4	Ability to develop, select and use modern methods and tools required for engineering applications; ability to effective use of information technologies.	4
5	In order to investigate engineering problems; ability to set up and conduct experiments and ability to analyze and interpretation of experimental results.	
6	Ability to work effectively in inner or multi-disciplinary teams; proficiency of interdependence.	
7	Ability to communicate in written and oral forms in Turkish/English; proficiency at least one foreign language.	
8	Awareness of life-long learning; ability to reach information; follow developments in science and technology and continuous self-improvement.	3
9	Understanding of professional and ethical issues and taking responsibility	4
10	Awareness of project, risk and change management; awareness of entrepreneurship, innovativeness and sustainable development.	
11	Knowledge of actual problems and effects of engineering applications on health, environment and security in global and social scale; an awareness of juridical results of engineering solutions.	4

INSTRUCTORS				
Prepared by	Prof.Dr. Yunus Özçelikörs	Prof.Dr. Mizan Doğan		
Signature(s)				

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