



COURSE INFORMATION FORM

Course Name	Course Code
SPECIAL CONCRETES	151415368

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

Course Category (Credit)				
Basic Sciences	Engineering Sciences	Design	General Education	Social
	3			

Course Language	Course Level	Course Type
Turkish	Undergraduate	Elective

Prerequisite(s) if any	
Objectives of the Course	Recognition of special types of concrete, materials used and production methods of learning.
Short Course Content	Specific concrete as a ready-mixed concrete, high-strength concrete, reactive powder concrete, light-heavy concrete, self-compacting concrete, fiber concrete, wash concrete, shotcrete, concrete road and airport runway concrete, exposed concrete, mass concrete, vacuum concrete, polymer concrete, prepakt concrete and roller compacted concrete materials and design.

Learning Outcomes of the Course	Contributed PO(s)	Teaching Methods *	Measuring Methods **
1 With different materials and production methods, the desired appearance, durability and the ability to design	1, 7, 4, 9	1,2,5,6,15	A, D
2 the ability to implement the acquisition of durable concrete.	2, 3, 5, 6	1,2	A, D
3 Design and production of material for desired strength and durability, experimental study for developing the properties of construction material and ingredients	8, 10, 11	1,2,5,6,15	A, D
4			
5			
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: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	Beton, Prof. Dr. Turhan Y. Erdoğan, ODTÜ Geliştirme Vakfı Yay. ve İletişim A.Ş. Yayını, Mayıs 2003.
Supporting References	1.Beton, Prof. Dr. Turhan Y. Erdoğan, ODTÜ Geliştirme Vakfı Yay. ve İletişim A.Ş. Yay., Mayıs 2003. 2.Yapı Malzemeleri, Prof. Dr. Süheyl Akman, İ.T.Ü. İnş. Fak. Yayını, 1987. 3.Yapı Malzemesi II, Prof. Dr. Bülent Baradan, Dokuz Eylül Üniv. Yayınları, 1996. 4.Beton, C. 1-2, Prof. Bekir Postacıoğlu, Matbaa Teknisyenleri Basımevi, 1986-1987, İstanbul. 5.Çimentolar, Agregalar, Karışım ve Bakım Suları, Prof. Dr. Turhan Erdoğan, THBB Yayınları. 6.Betonarme Yapılarda Kalıcılık, B. Baradan, H. Yazıcı, H. Ün, Dokuz Eylül Üni. Yay., No. 298, 2002. 7.Beton ve Deneyleri, Ömer Lütfü Beyazıt, D.S.İ. Yayınları, 1988. TSE, DIN, BS, ENV ve ASTM Standartları, .ACI, ASCE, CCR, Mag. Con. Res., Çimento Beton Dünyası, Hazır Beton dergileri, Sika Teknik Bülteni, bildiri kitapları
Necessary Course Material	

Course Schedule	
1	Ready-mixed concrete
2	High-strength concrete
3	Reactive powder concrete
4	Light weight concrete Heavy weight concrete
5	Self-compacting concrete
6	Fiber concrete
7	Shotcrete
8	Mid-Term Exam
9	Concrete road and airport runway concrete
10	Mass concrete Exposed concrete
11	Vacuum concrete
12	Wasch concrete
13	Polymer concrete
14	Prepakt concrete Roller compacted concrete
15	Printable Concrete
16,17	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	1	14
Homework	2	3	6
Quiz Exam	1	0	0
Studying for Quiz Exam	1	0	0
Oral exam	1	0	0
Studying for Oral Exam	1	0	0
Report (Preparation and presentation time included)	1	0	0
Project (Preparation and presentation time included)	1	0	0
Presentation (Preparation time included)	1	0	0
Mid-Term Exam	1	2	2
Studying for Mid-Term Exam	1	14	14
Final Exam	1	2	2
Studying for Final Exam	1	10	10
		Total workload	90
		Total workload / 30	3
		Course ECTS Credit	3

Evaluation	
Activity Type	%
Mid-term	40
Quiz	
Homework	10
Bir öge seçin.	
Bir öge 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 civil engineering; an ability to apply theoretical and practical knowledge on solving and modeling	3
2	Ability to determine, define, formulate and solve complex civil engineering problems; for that purpose an ability to select and use convenient analytical and experimental methods.	3
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	3
4	Ability to develop, select and use modern methods and tools required for civil engineering applications; ability to effective use of information technologies.	3
5	In order to investigate civil engineering problems; ability to set up and conduct experiments and ability to analyze and interpretation of experimental results.	4
6	Ability to work effectively in inner or multi-disciplinary teams; proficiency of interdependence.	2
7	Ability to communicate in written and oral forms in Turkish/English; proficiency at least one foreign language.	3
8	Awareness of life-long learning; ability to reach information; follow developments in science and technology and continuous self-improvement.	4
9	Understanding of professional and ethical issues and taking responsibility	3
10	Awareness of project, risk and change management; awareness of entrepreneurship, innovativeness and sustainable development.	3
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	3

LECTUTER(S)				
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Signature(s)				

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