

Vocational School / Construction Technology
2024 - 2025 Academic Year
CONSTRUCTION MATERIALS II
Syllabus

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
CONSTRUCTION MATERIALS II	İNŞ2276930	Spring Semester	3+0	3	4
Prerequisites Courses					
Recommended Elective Courses					
Language of Instruction	Turkish				
Course Level	Short Cycle (Associate's Degree)				
Course Type	Elective				
Course Coordinator	Assist.Prof. Berk KESKİN				
Name of Lecturer(s)	Assist.Prof. Berk KESKİN, Assist.Prof. Serkan BAŞLAYICI				
Assistant(s)					
Aim	To learn				
Course Content	This course contains; 1) Introduction and terminology,2) Microstructure of concrete, ettringite, hydration,3) Viscoelastic behaviour of concrete,4) Concrete admixtures, binders,5) Diacrete high-density concrete, morphology and areas of usage,6) Underwater concrete casting, shotcrete, jetcrete,7) Fibrous concrete,8) Fibrous concrete, polymer concrete,9) Polymer concrete,10) Self propagating concrete,11) Vacuum concrete casting,12) High performance concrete,13) Low-strength concrete,14) Testing methods.				
Course Learning Outcomes				Teaching Methods	Assessment Methods
1. To explain why need to special concrete					
2. To explain special concretes along with their physical, mechanical and chemical properties.					
3. To select the correct type of special concrete with respect to requirements					
Teaching Methods					
Assessment Methods					
Lecture Schedule					
Sequenc e	Topics	Preliminary Preparation			
1	1) Introduction and terminology				
2	2) Microstructure of concrete, ettringite, hydration				
3	3) Viscoelastic behaviour of concrete				
4	4) Concrete admixtures, binders				
5	5) Diacrete high-density concrete, morphology and areas of usage				
6	6) Underwater concrete casting, shotcrete, jetcrete				
7	7) Fibrous concrete				
8	8) Fibrous concrete, polymer concrete				
9	9) Polymer concrete				
10	10) Self propagating concrete				
11	11) Vacuum concrete casting				
12	12) High performance concrete				
13	13) Low-strength concrete				
14	14) Testing methods				
Evaluation Methods		Weight(%)			
Midterm Exam		40			
General Exam		60			

Resources
1) Baradan, B., Yazıcı, H., Aydın, S., "Beton", Dokuz Eylül Üniversitesi Mühendislik Fakültesi Yayınları No: 334, 20151) Prof.Dr. Süheyl Akman, "Yapı Malzemeleri", İTÜ Yayınları No:1336, 1987. 2) Turhan, Y.E., "Beton", ODTÜ Geliştirme Vakfı ve İletişim A.Ş. 2003.