COURSE CATALOG

Course Code: CE 465				Course Name: Concrete Roads			
Semester	T + P + L	Credits	ECTS	Language of Instruction	Course Type	Instruction Methods	Prequisite(s)
6-7-8	3 + 0+ 0	3	6	English	Departmental Elective (D2)	Lecture	CE362
Course Objectives			Advantages of concrete roads. Surface properties. Materials used in concrete roads. Physical properties of concrete. Components of concrete. Pavement design. Construction of concrete roads. Maintenance. Developments in concrete roads..				
Topics Covered			Advantages of concrete roads. Surface properties.Materials used in concrete roads. Environmental conditions. Physical properties of concrete. New materials. Components of concrete.Design. Pavement design. Construction of concrete roads. Maintenance. Developments in concrete roads. Examples from the other countries like United Kingdom and USA. Review.				
Learning Outcomes of the Course			After completing this course students should gain: 1- an understanding of concrete roads terminology. [1,2,3] 2- an understanding of the design and planning for concrete roads. [13,14] 3- an understanding of the construction and inspection requirements the concrete roads [12,13,14] *[Note that the numbers in between the brackets address the bullet numbers in the program outcomes list.]*				
ISCED Category of the Course			52 Engineering				
Textbook			E.S. Hanson, Concrete Roads and Pavements, 2010.				
Recommended Sources			1. E. Ağar, İ.Sütaş, G. Öztaş, Beton Yollar (Rijit Üstyapılar), İTÜ Yayını. 2. E.G. Nawy, Concrete Construction Engineering Handbook, CRC Press, 2008. 3. Wisconsin Transportation Information Center, PASER Concrete Roads Manual, 2002.				

WEEKLY SCHEDULE

Week	Theoretical Topic	Applied / Laboratory Topics
1	Advantages of concrete roads.	
2	Surface properties.	
3	Materials used in concrete roads.	
4	Environmental conditions.	
5	Physical properties of concrete.	
6	New materials.	
7	Components of concrete.	
8	Design. Pavement design.	
9	Construction of concrete roads.	
10	Construction of concrete roads.	
11	Maintenance.	
12	Developments in concrete roads.	
13	Examples from the other countries like United Kingdom and USA.	
14	Review.	

COURSE ASSESSMENT POLICY

	Activities	Number	Contribution (%)
Studies throughout the term	Quiz	3	05
	Term Homework/ Project	-	-
	Reports	-	-
	Graduation Thesis/ Project	-	-
	Seminar	-	-

	Homework	5	10
	Presentations	-	-
	Midterm Exams	2	40
	Project		
	Laboratory	-	-
	Other (attendance)	14	05
FINAL EXAM		1	40
Total			100

CONTRIBUTION OF THE COURSE TO CIVIL ENGINEERING PROGRAM OUTCOMES

	Program Outcomes	1	2	3
1	The ability to apply knowledge of mathematics, science, and engineering		X	
2	The ability to identify, formulate, and solve engineering problems			X
3	The ability to design a system or component to meet desired needs with realistic constraints such as economic, environmental, social, ethical, health and safety, manufacturability and sustainability			X
4	The ability to analyze and interpret data			X
5	The ability to design and conduct experiments and apply experimental results to improve processes			X
6	The ability to convey technical material through oral presentations and written papers/reports		x	
7	The ability to function within multidisciplinary teams		X	
8	The understanding of professional and ethical responsibilities		x	
9	The understanding of the impact of engineering on society		X	
10	The understanding of the necessity to engage in life-long learning		X	
11	The understanding of management and leadership principles and techniques	X		
12	The appreciation of the role of research in civil engineering problems	X		
13	A knowledge of contemporary issues in civil engineering		X	
14	The ability to use modern engineering techniques, skills, and tools		X	
15	The ability to understand and explain basic concepts in management, business, and leadership		X	
16	A commitment to quality, punctuality and continuous improvement			X

Contribution Level: 1 low, 2 medium, 3 high

ECTS-WORKLOAD TABLE

ACTIVITIES	Number	Duration (Hour)	Workload(Hour)
Lecture Time	14	3	42
Final Exam (Including Preparation Time)	1	10	10
Quiz	-	-	-
Term Homework / Project	1	10	10
Reports	-	-	-
Graduation Thesis/Project	-	-	-
Seminar	-	-	-
Study Time Outside the Class	14	4	56
Homework	5	4	20
Presentations	-	-	-
Midterm Exams (Including Preparation Time)	2	8	16
Project	-	-	-
Laboratory	-	-	-
Total Workload			154
ECTS Credits of the Course (Total Workload / 25)			6

Last update on 19.01.2014	Coordinator / PREPARED BY Esin İnan	APPROVED BY Esin İnan