

IM 478 WATER RESOURCES ENGINEERING II		CIVIL ENGINEERING	
Semester	Credit Structure		
	Lecture	Recitation	Laboratory
8	3	0	0
Language	Turkish		
Compulsory / Elective	Compulsory		
Prerequisites	IM 376		
Catalog Description	Dam reservoirs and design. Types of dams. Control structures of dam. Diversion from dams. Hydropower. Water conveyance and distribution (elements of water conveyance systems, pumps and pipes, Hardy-Cross methods). Waste water collection and removal. Stable channel design		
Course Objectives	Fundamentals of design in water resources engineering		
Course Outcomes	In respect of engineering, general information about dams, hydropower, water supply and distribution, detailed information about stable channel design		
Textbook and /or References	“Water Resources Engineering” by Erkek and Ağırlioğlu and lecture notes prepared from international references		
Assessment Criteria		Quantity	Percentage
	Midterm Exams	2	40
	Quizzes	-	-
	Homeworks	5	10
	Projects	-	-
	Term Paper	-	-
	Laboratory Work	-	-
	Other	-	-
	Final Exam	1	50
Course Category by Content (%)	Mathematics and Basic Sciences	20	
	Engineering Science	20	
	Engineering Design	50	
	Social Sciences	10	
Instructors	Prof. Dr. Tülay Özbek, Prof. Dr. Osman N. Özdemir		

COURSE PLAN

Week	Topics
1	Dam reservoirs and design
2	Types of dams
3	Types of dams
4	Control structures of dams
5	Control structures of dams + Water intake from dams
6	Water intake from dams
7	I. Midterm
8	Hydropower
9	Hydropower
10	Water conveyance and distribution
11	Water conveyance and distribution
12	Waste water collection and removal
13	Stabile Channel Design
14	II. Midterm

RELATIONSHIP BETWEEN THE COURSE AND DEPARTMENT CURRICULUM

	Program Outcomes	1	2	3
1	An ability to apply knowledge of mathematics, science, and engineering			x
2	An ability to design and conduct experiments, as well as to analyze and interpret data	x		
3	An ability to design a system, component, or process to meet desired needs		x	
4	An ability to function on multi-disciplinary teams		x	
5	An ability to identify, formulate, and solve engineering problems		x	
6	An understanding of professional and ethical responsibility			x
7	An ability for effective written and oral communication in Turkish and English	x		
8	The broad education necessary to understand the impact of engineering solutions in a global and societal context		x	
9	A recognition of the need for, and ability to engage in life-long learning			x
10	A knowledge of contemporary issues		x	
11	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice			x

Contribution of the course : 1:None 2:Partially 3:Completely