

CE 372 HYDROLOGY		CIVIL ENGINEERING	
Semester	Credit Structure		
	Lecture	Recitation	Laboratory
2	3	0	0
Language	English		
Compulsory / Elective	Compulsory		
Prerequisites	No		
Catalog Description	Hydrologic cycle, precipitation measurements, analysis of records, watershed characteristics, hyetograph, average precipitation height, depth-area- duration curves, intensity-duration-return period curves, evaporation, computational methods for evaporation and evapotranspiration, infiltration, infiltration index, snowmelt runoff, flow, water level, velocity and discharge measurements, hydrograph analysis, statistical methods for flood, data analysis, frequency analysis, normal, log-normal and Gumbel distributions, hypothesis control and regression, flood routing for rivers and reservoirs.		
Course Objectives	The objective of this course is provide the basic hydrological information & tools which are essential in the design of hydraulic structures.		
Course Outcomes	The main hydrological concepts, methodologies and information are provided to assess the design data of hydraulic structures.		
Textbook and /or References	Mc. Cuen, R.H., 1998, Hydrologic Analysis and Design, Prentice Hall, Second Ed. USA, ISBN: 0-13-134958-9.		
Assessment Criteria		Quantity	Percentage
	Midterm Exams	2	%20+%20
	Quizzes	2	%5
	Homework	6	%10
	Projects	-	-
	Term Paper	-	-
	Laboratory Work	-	-
	Other	%70	Attendance
	Final Exam	1	%60
Course Category by Content (%)	Mathematics and Basic Sciences	%20	
	Engineering Science	%70	
	Engineering Design	%10	
	Social Sciences	%0	
Instructors	Prof. Dr. Can E. BALAS		

COURSE PLAN	
Week	Topics
1	Introduction, hydrologic cycle, water balance
2	Precipitation
3	Evaporation
4	Watershed characteristics
5	Stream flow measurements
6	Infiltration
7	Frequency analysis, peak discharge estimation
8	Hydrograph analysis and synthesis
9	Hydrograph analysis and synthesis
10	Water yield and snowmelt runoff
11	Flood routing
12	Statistical methods in hydrology
13	Statistical methods in hydrology

RELATIONSHIP BETWEEN THE COURSE AND DEPARTMENT CURRICULUM				
	Program Outcomes	1	2	3
1	An ability to apply knowledge of mathematics, science, and engineering			*
2	An ability to design and conduct experiments, as well as to analyze and interpret data	*		
3	An ability to design a system, component, or process to meet desired needs			*
4	An ability to function on multi-disciplinary teams		*	
5	An ability to identify, formulate, and solve engineering problems			*
6	An understanding of professional and ethical responsibility			*
7	An ability for effective written and oral communication in Turkish and English			*
8	The broad education necessary to understand the impact of engineering solutions in a global and societal context			*
9	A recognition of the need for, and ability to engage in life-long learning		*	
10	A knowledge of contemporary issues			*
11	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice			*
Contribution of the course: 1:None 2:Partially 3:Completely				