



HASAN KALYONCU UNIVERSITY
Faculty of Engineering
Course Description Form

COURSE: Engineering Hydrology				
CODE: CE371	SEMESTER: FALL			
LANGUAGE: ENGLISH	TYPE: COMPULSORY			
PRE-REQUISITES: - CO-REQUISITES: -	THEORY	PRACTICAL	CREDIT	ECTS
WEEKLY HOURS: 3	3	0	3	5

CONTENT OF THE COURSE:

The course serves as an introduction to the field of engineering hydrology. It covers fundamentals such as the hydrological cycle, catchment, losses, hydrographs and hyetographs. Design topics covered will be selected from: flood frequency analysis, determination of design rainfall intensity and hyetographs, peak flow estimation, design hydrograph estimation, groundwater process and modelling, and drought risk analysis/ yield hydrology.

OBJECTIVE OF THE COURSE:

To provide an introduction to hydrology, including a study of the most important hydrological processes operating in the environment, and to hydrological ways of thinking.

WEEKLY SCHEDULE AND PRE-STUDY PAGES

Week	Topics
1	Definition of hydrology, importance, scope, hydrological cycle and basic equations
2	Analysis of precipitation records
3	Evaporation and perspiration, measurement of evaporation, factors causing evaporation
4	Definition of infiltration, factors affecting infiltration and measurement
5	Definition and calculation of infiltration indices
6	Groundwater formation, groundwater
7	Free and pressurized aquifer, groundwater flow
8	Midterm
9	Surface flow
10	Definition of hydrograph, direct flow, base flow and unit hydrograph
11	Extraction of unit hydrograph
12	Level and flow measurements in rivers
13	Watershed hydrology
14	Importance of hydrology in agricultural production

TEXTBOOK: Hydrology in practice (Shaw, M.E. 1993),Ç.Ü. Hidroloji Ders Kitabı 1996 (Prof.Dr. Kazım Tülücü), Hidroloji Ders Notları(Prof.Dr. Nizamettin Çiftçi)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
LO1	2	2	0	3	3	0	0	0	0	0	0
LO2	2	2	0	3	3	0	0	0	0	0	0
LO3	2	2	0	3	3	0	0	0	0	0	0
PO: Program Outcomes LO: Learning Outcomes Values: 0: None 1: Low 2: Medium 3: High											

INSTRUCTOR(S):	Asst.Prof.Dr. H.Çağın Kılınç
FORM PREPARATION DATE:	22.05.2019

LEARNING OUTCOMES OF THE COURSE:
<p>LO1: Analyze precipitation records LO2: measure groundwater flows LO3: Learns the importance of hydrological cycle and design of water structures.</p>

CONTRIBUTION OF THE COURSE TOWARDS PROVIDING VOCATIONAL EDUCATION
<p>The student can analyze field and statistical precipitation with the information he/she has received in the course and calculate the speed and flow in the river or lake sections. He can do hydrograph analysis. Learns concepts such as the intensity, duration and recurrion of precipitation.</p>