

**COURSE IDENTIFICATION FORM**

**Course Code and Name:** IM5033 ADVANCED HYDROLOGY

**Department of :** CIVIL ENGINEERING / MASTER PROGRAMME

Semester	Theoretic Hour	Practice Hour	Total Hour	Credits	ECTS	Education Language	Type: Compulsory Elective
Atumn/Spring	3	0	3	3	5	Turkish	Optional

**Prerequisite (s)**

**Instructor**

Asst. Prof. Dr.Hilal ARSLANOĞLU IŞIK

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**Course Assistant**

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**Groups / Classes**

**Course Aim**

Rainfall-Runoff relationship and development of hydrological analysis techniques

**Course Goals**

Application of hydraulic principles to precipitation and runoff problems / Application of mathematical, statistical and graphical techniques to hydrological elements / Frequency analysis / Statistical distributions, samples, hypotheses, correlation and regression analysis / Flood routing / Reservoir regulation

**Course Learning Outs and Proficiencies**

1. Knowledge and skills about the application of hydrological analysis and analysis techniques, flood routing and reservoir operation can be gained.
2. Students will be able to learn the rainfall-runoff relationship and hydrograph analysis methods.
3. Students will be able to learn about groundwater and the methods of obtaining water from underground using wells.

**Course Basic and Auxiliary Contexts**

1. Lecture notes,
2. Ray K. Linsley , Joseph B. Franzini , David L. Freyberg , George Tchobanoglous , 1992. Water Recources Engineering ,
3. V. T. Chow et al., 1988 Applied Hydrology ,

**Methods of Give a Lecture**

Face to Face

<b>Assessment Criteria</b>		<b>If Available, to Sign (x)</b>	<b>General Average Percentage (%) Rate</b>
	<b>Midterm Exam</b>	<b>X</b>	<b>50</b>
	<b>1. Quiz</b>		
	<b>2. Quiz</b>		
	<b>3. Quiz</b>		
	<b>4. Quiz</b>		
	<b>Oral Examination</b>		
	<b>Practice Examination (Laboratory, Project etc.)</b>		
	<b>Final Exam</b>	<b>X</b>	<b>50</b>
<b>Semester Course Plan</b>			
<b>Week</b>	<b>Subjects</b>		
<b>1</b>	Application of hydraulic principles to precipitation and runoff problems		
<b>2</b>	Application of hydraulic principles to precipitation and runoff problems		
<b>3</b>	Application of mathematics, statistics and graphical techniques to hydrological elements.		
<b>4</b>	Application of mathematics, statistics and graphical techniques to hydrological elements.		
<b>5</b>	Frequency analysis		
<b>6</b>	Frequency analysis		
<b>7</b>	Statistical distributions, samples, hypotheses		
<b>8</b>	Midterm Exam		
<b>9</b>	correlation and regression analysis		
<b>10</b>	correlation and regression analysis		
<b>11</b>	Flood diversion		
<b>12</b>	Flood diversion		
<b>13</b>	Reservoir regulation		
<b>14</b>	Reservoir regulation		