

**COURSE IDENTIFICATION FORM**

**Course Code and Name: IM5030 FLOOD PROTECTION STRUCTURES**

**Department of : CIVIL ENGINEERING / CIVIL ENGINEERING DEPARTMENT / HYDRAULICS MASTER'S PROGRAM WITH THESIS**

Semester	Theoretic Hour	Practice Hour	Total Hour	Credits	ECTS	Education Language	Type: Compulsory Elective
Fall	3	0	3	3	5	Turkish	Optional
Prerequisite (s)							
Instructor		Assist. Prof. Meral Korkmaz				Mail : meralkorkmaz@munzur.edu.tr Web :	
Course Assistant						Mail : Web :	
Groups / Classes							
Course Aim		Determination of the causes of the occurrence of floods Classification of flood damages and collection of flood damages Notification of floods in advance Design of flood control structures Flood insurance issues are given.					
Course Goals		It aims to examine various engineering solutions to minimize the risks and damages caused by flood events.					
Course Learning Outs and Proficiencies		<ul style="list-style-type: none"><li>Students will be able to design effective flood protection structures such as levees, dams, and floodwalls, taking into consideration environmental and structural factors.</li><li>Through case studies, students will be able to critically evaluate the effectiveness of different flood protection strategies and propose improvements.</li></ul>					
Course Basic and Auxiliary Contexts		<ul style="list-style-type: none"><li>Introduction to hydrological concepts, flood dynamics, and the use of models to predict flood events.</li><li>Overview of engineering principles for designing structural solutions like levees, floodwalls, and stormwater management systems.</li></ul>					
Methods of Give a Lecture		Providing detailed real-world examples for students to analyze and discuss, facilitating practical understanding of flood protection strategies.					

Assessment Criteria		If Available, to Sign (x)	General Average Percentage (%) Rate
	1. Quiz	X	30
	2. Quiz		
	3. Quiz		
	4. Quiz		
	5. Quiz		
	Oral Examination		
	Practice Examination (Laboratory, Project etc.)	X	20
	Final Exam	X	50
Semester Course Plan			
Week	Subjects		
1	What is flooding? What are the types and causes of floods?		
2	Floods in history and their causes		
3	Damages caused by floods and collection of damages		
4	Relationship of floods with time and advance notice of floods		
5	Reporting of floods according to the level and flow rates upstream and downstream		
6	Determination of flood waves		
7	Determination of flood wave by Waller method		
8	MIDTERM EXAM		
9	Flood periods		
10	Flood control works, unstructured flood control works		
11	Design of flood control structures		
12	Delaying floods from dam reservoirs		
13	Design of flood embankments and walls		
14	Upstream and downstream planning in flood control. Flood insurance.		