

## Course Description Template

<b>Module Name: Hydraulic Structures II</b>	
<b>Module Code: CIV085</b>	
<b>Semester / Year: Semester</b>	
<b>Date of Preparation of this Description: 2026/2/18</b>	
<b>Available Attendance Formats: In-person only</b>	
<b>Total Credit Hours / Total Units: Total hours 48 (30 theoretical + 15 practical) Total units 2</b>	
<b>Name of the Course Coordinator (if there are multiple names):</b>	
<b>Name: Eng. M. M. Wurood Hussein</b>	
<b>Email: wurood.hussien@uowa.ed.iq</b>	
<b>Module Objectives:</b>	
<input type="checkbox"/> Identify and understand the basic terms and concepts related to hydraulics and hydraulic structures, such as pressure and discharge, etc. <input type="checkbox"/> Understand the process of designing and constructing hydraulic structures, including material selection, dimensions, capacities, and determining suitable locations for hydraulic projects. <input type="checkbox"/> Evaluate the performance of hydraulic structures and examine the factors that may affect their efficiency and sustainability. <input type="checkbox"/> Assess the costs and benefits of hydraulic projects and	<b>Module Objectives</b>

examine the economic aspects of their implementation.					
<input type="checkbox"/> Develop the ability to think analytically and solve `eving these objectives contributes to qualifying students or professionals to understand and apply the principles and techniques of hydraulics in practical projects.					
<b>1. Teaching and Learning Strategy</b>					
<input checked="" type="checkbox"/> Presentations <input checked="" type="checkbox"/> Paper lectures and scientific resources <input checked="" type="checkbox"/> Practical lectures at work sites					<b>Strategy:</b>
<b>2. Module Structure</b>					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
<input type="checkbox"/> Exams <input type="checkbox"/> Assignments <input type="checkbox"/> Reports <input type="checkbox"/> Exams + Participation	In-person	Hydraulic Structures	Introduction to Hydraulic Structures	2	2-1
			Seepage under Hydraulic Structures -Bligh's Creep Theory -Lane's Weighted Creep Theory -Khosla's Theory -thickness of floor-	8	7-3
			The Regulators -Type of regulator -The hydraulic design of regulator	4	9-7
			Hydraulic Jump	2	10
			Drop structure -Vertical drop -Inclined drop -Piped drop	4	-10 12
			Stilling Basins -Advantages, Froud , Types	4	-12 14

		Protection of approaches for concrete floors -Downstream Protection. -up stream Protection.	4	-14 16
<b>Module Evaluation</b>				
<input type="checkbox"/> 10 points (Daily preparation, daily and oral exams, homework, and classroom activities) <input type="checkbox"/> 30 points (Monthly exams) <input type="checkbox"/> 60 points (Final exam)				
<b>Learning and Teaching Resources.</b>				
San Tosh, Kumar Garg,1998: Irrigation Engineering and Hydraulic Structures.		Required Textbooks (if applicable)		
Chow.V.T.1960: Open Channel Hydraulic. Mcgraw-Hill, New York		Main References (Sources)		
		Recommended Supporting Books and References (current journals, reports, etc.)		
		Electronic Websites	Referenc	

