

Course Description Template

Module Name: Hydraulic Structures I	
Module Code: WCV-41-07	
Semester / Year: Semester	
Date of Preparation of this Description: 22/8/2025	
Available Attendance Formats: In-person only	
Total Credit Hours / Total Units: Total hours 48 (30 theoretical + 15 practical) Total units 2	
Name of the Course Coordinator (if there are multiple names):	
Name: Eng. M. M. Wurood Hussein	
Email: wurood.hussien@uowa.ed.iq	
Module Objectives:	
☐ Identify and understand the basic terms and concepts related to hydraulics and hydraulic structures, such as pressure and discharge, etc. ☐ Understand the process of designing and constructing hydraulic structures, including material selection, dimensions, capacities, and determining suitable locations for hydraulic projects. ☐ Evaluate the performance of hydraulic structures and examine the factors that may affect their efficiency and sustainability. ☐ Assess the costs and benefits of hydraulic projects and	Module Objectives

examine the economic aspects of their implementation.					
☐ 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.					
1. Teaching and Learning Strategy					
☒ Presentations ☒ Paper lectures and scientific resources ☒ Practical lectures at work sites					Strategy:
2. Module Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
☐ Exams ☐ Assignments ☐ Reports ☐ 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
Module Evaluation					
☐ 10 points (Daily preparation, daily and oral exams, homework, and classroom activities) ☐ 30 points (Monthly exams) ☐ 60 points (Final exam)					
Learning and Teaching Resources.					
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		



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