

### Course Description Form

1. Course Name:	
<b>Sanitary and Environmental Engineering I</b>	
2. Course Code:	
<b>WCV-41-02</b>	
3. Semester / Year:	
<b>First Semester / 2025-2026</b>	
4. Description Preparation Date:	
<b>1 September 2025-2026</b>	
5. Available Attendance Forms:	
<b>Presence</b>	
6. Number of Credit Hours (Total) / Number of Units (Total)	
<b>Number of hours: 75 hours (30 hours theoretical, 15 hours tutorial, and 30 hours practical) Number of units: 3 units</b>	
7. Course administrator's name (mention all, if more than one name)	
8. Course Objectives	
<b>Course Objectives</b>	<ul style="list-style-type: none"> <li>• <b>Understand the Fundamentals of Water Supply Systems</b></li> <li>• <b>Analyze Water Quality Parameters</b></li> <li>• <b>Design Water Supply Systems</b></li> <li>• <b>Apply Water Treatment Techniques</b></li> <li>• <b>Evaluate Water Demand and Consumption</b></li> </ul>

	<ul style="list-style-type: none"> <li>• <b>Implement Sustainable Water Management Practices</b></li> </ul>
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**9. Teaching and Learning Strategies**

<b>Strategy</b>	<ul style="list-style-type: none"> <li>• <b>Interactive Lectures and Discussions</b></li> <li>• <b>Practical Labs and Field Visits</b></li> <li>• <b>Project-Based Learning and Case Studies</b></li> </ul>
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**10. Course Structure**

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1-3	12	Quantity of water	Sanitary and Environmental Engineering I	Presence	Exams Participation Attendance
3-6	12	Collection and distribution of water			
6-7	4	Intakes			
7-9	4	Pump and pumping stations			
9-10	4	Quality of water supply			
11-15	20	Treatment of water			

**11. Course Evaluation**

<p>10 marks (daily preparation, daily and oral exams, homework, and classroom activities)                  10 marks (Practical aspect: Reporting, discussion and exams)                  30 marks (monthly exams)                  50 marks (final exam)</p>
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**12. Learning and Teaching Resources**

<b>Required textbooks (curricular books, if any)</b>	Steel, E.W. and McGhee, T.J., 1979. Water supply and sewerage (5th edition). New York: McGraw-Hill.
<b>Main references (sources)</b>	Baruth, E.E. and American Water Works Association, 2005. Water treatment plant design.
<b>Recommended books and references (scientific journals, reports...)</b>	Metcalf, I.N.C., 2003. Wastewater engineering; treatment and reuse. McGrawHill.

**Electronic References, Websites**

**Davis, M.L., 2010. Water and wastewater engineering. McGraw-Hill.**

