

<b>Course title:</b> Field trip on water management practices				
<b>Course code:</b> WSW 101		<b>No. of credits:</b> 1	<b>L-T-P:</b> 2-2-20	<b>Learning hours:</b> 14
<b>Pre-requisite course code and title (if any):</b> NA				
<b>Department:</b> Coca-Cola Department of Regional Water Studies				
<b>Course coordinator:</b> Dr. Fawzia Tarannum				
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<b>Course type:</b> Core			<b>Course offered in:</b> Semester 2	
<b>Course description</b>				
<p>The course is designed to provide the students an exposure to selected live examples of water resources conservation techniques and management through field/organization visits. The course includes visiting operational water and wastewater treatment plants, successful sustainable water conservation practices in both rural and urban contexts, attending expert lectures, and visiting state of the art technologies in water and disaster management.</p>				
<b>Course objectives</b>				
<ul style="list-style-type: none"> <li>To provide exposure to the design, infrastructure and conservation capacities of water and wastewater management projects.</li> <li>To help the students develop a thorough understanding of the various field level factors to be considered in implementing a successful project.</li> <li>To introduce the students to the latest developments in technology and governance relevant to water resources management.</li> </ul>				
<b>Course contents</b>				
<b>Module</b>	<b>Topic</b>	<b>L</b>	<b>T</b>	<b>P</b>
1	<b>Introduction to various sites/organizations chosen (before visit)</b> <ul style="list-style-type: none"> <li>Briefing on the purpose of the site/organization visit, scope, and the expected outcomes from the visit.</li> <li>Details of the presentation to be delivered by the students post-trip.</li> </ul>	2	0	0
2	<b>Field visit and discussion (one or more of the items below)</b> <ol style="list-style-type: none"> <li>Site visit <ul style="list-style-type: none"> <li>Hydro meteorological and geological characteristics of the site visited</li> <li>Existing best practices in water conservation and management within the site</li> <li>Socioeconomic status of the community</li> <li>Status of existing technologies</li> <li>Operation and maintenance of an existing project</li> <li>Socio-environmental benefits</li> </ul> </li> <li>Organization visit <ul style="list-style-type: none"> <li>Technological and governance capabilities relevant to water management and disaster mitigation</li> <li>Demo of technologies relevant to water discipline</li> </ul> </li> <li>Water/Wastewater Treatment plant visit <ul style="list-style-type: none"> <li>Status of existing technology</li> <li>Operation and maintenance of plant and monitoring</li> <li>Performance of the plant from a sustainability perspective</li> </ul> </li> </ol>	0	0	14
3	<b>Analysis and reporting (after visit - a combination of two or more items below)</b>	0	2	6

	<ul style="list-style-type: none"> <li>• Background study</li> <li>• Hydrological analysis of the site with maps using GIS</li> <li>• Performance evaluation of a treatment plant</li> <li>• Challenges and scope of improvement in existing technologies and practices</li> <li>• Application of computational technology in water management or disaster mitigation of the site visited</li> <li>• Socioeconomic analysis of the community within the context of water management</li> </ul>			
	<b>Total</b>	<b>2</b>	<b>2</b>	<b>20</b>
<b>Evaluation criteria</b>				
	<ul style="list-style-type: none"> <li>• Presentation: 50%</li> <li>• Report: 40%</li> <li>• Interaction during visit: 10%</li> </ul>			
<b>Learning outcomes</b>				
	<ul style="list-style-type: none"> <li>• Students understand the various factors to be considered in a water management project.</li> <li>• Students learn to appreciate the state-of-the-art technologies in water and disaster management.</li> <li>• Students get exposed to live projects through field level data collection, methodology formulation and analysis.</li> <li>• Students are equipped to take up dynamic challenges in the field as water professionals.</li> </ul>			
<b>Pedagogical approach</b>				
	Class-room interactions; Field study; Group discussion			
<b>Materials</b>				
	<ul style="list-style-type: none"> <li>• Available project report or annual reports of the respective plants/projects/organizations</li> <li>• Reports available with MoEFCC, CPCB, CGWB, CWC and other national and state level reports and policies</li> </ul>			
<b>Additional information (if any)</b>				
<b>Student responsibilities</b>				
	Attendance; discipline; Q&A with the experts during field visit			

**Course Reviewer: MPEC**