Course title: Minor Project in Water Resources Engineering and Management				
Course code: WSW 109	**No. of credits:** 6	**L-T-P:** 0-0-12		**Learning hours:** 180
Pre-requisite course code and title (if any): NA				
Department: Regional Water Studies				
Course Coordinator: Project/ Placement coordinator		**Course Instructor:** Dr Sherly MA		
Contact details: sherly.ma@terisas.ac.in				
Course type: Core		**Course offered in:** Semester 3		

Course description

The course offers thorough problem-based learning approach, guided by realistic and challenging industry/ field-level/ literature review requirements – surface and ground water assessment and management, water and waste water treatment and management, water modeling and prediction (quality & quantity), hazard, vulnerability & risk mapping of floods and droughts, water-related disaster management and so on. The course includes research and/or application-oriented problem solving to challenges in water resources management through supervised self-learning approach. The student shall apply her/his classroom learning for identification of problem, execute analysis based on available literature, data collected and reports and present the outputs.

Course objectives

- To work on ideas that are aligned with the government programmes on water management.
- To provide hands-on exposure to the student on the real time problems in water resources management that includes scientific, technological, socioeconomic, policy making and/or governance aspects.
- To enable a student to work on short-term projects and come up with the solutions commensurate with the assigned problem.
- To impart skills in preparing detailed report and describing the project and results/findings.

Course contents

Module	Topic	L	T	P
1	• Problem identification on thematic area in consultation with the host industry/organization/internal supervisors • Define objectives and relevant tasks to be performed • Define a broad methodology to be followed and identify the materials/modeling tools to be used for achieving each objective.	0	0	40
2	• Primary and/or secondary data collection or other relevant work depending on the objectives • Systematic review of literature, internal or external reports etc. relevant on the specific problem and create benchmark • Develop methodology/framework to be followed and identify materials/modeling tools to be used for achieving each objective • Perform laboratory experiments and/or modeling (statistical, numerical and/or geospatial) • Develop overall conclusion based on inferences and findings and enlisting the limitations of the work. • Preparing draft thesis with the results and findings from the study.	0	0	140
	Total	**0**	**0**	**180**

Evaluation criteria

- Response/feedback from the host organization/supervisor (20%)
- Minor project report (40%)
- Presentation and Viva (30%)
- Meeting timeline (10%) (Consisting of: joining report (2%), progress reports (2% each), feedback form (2%), and final thesis (2%).
- If plagiarism is detected using plagiarism checking software (e.g. Turnitin), it will be referred to the Minor Project Committee (comprising of supervisors and faculty members), which would take a decision and penalty to be imposed/disciplinary action to be taken. The guidelines for the Minor Project Committee are as follows:

Levels of Plagiarism	Percentage of similarity	Maximum percentage marks to be deducted from dissertation/thesis
Level 3	> 60%	Student's registration to the program stands cancelled
Level 2	> 40% ≤ 60%	Student repeats the course next year
Level 1	> 10% ≤ 40%	The student is required to resubmit the report within a week
Level 0	≤ 10%	0%

• The students scoring less than or equal to 50% (or ≤ 50%) overall marks in the evaluation would be considered to have failed in this course. Grading of the Minor Project will be absolute in nature and would be done as per the following criteria:

>90	A+
>80≤90	A
>70≤80	B+
>60≤70	B
>50≤60	C+
>45≤50	C
>40≤45	D
≤40	F

Learning outcomes

☐ Student develops an understanding of real time problems/challenges in water resources management projects and their alignment with the government programmes.
☐ Student is exposed to a short-term project through field level and/or secondary data collection, methodology formulation and analysis.
☐ Student learns and applies relevant scientific methods and modeling techniques (statistical, numerical and/or geospatial) in problem-solving.
☐ Student is trained to effectively communicate and demonstrate the learning through structured thesis/dissertation and oral presentation.

Pedagogical approach

Self-learning; discussion with supervisors; interaction with experts;

Materials

Literature and reports related to the specific problem.

Additional information (if any)

A detailed guideline along with important dates and format will be notified by the department, in advance, with other relevant details.
If there is any change in evaluation criteria/policy, it will be updated in the guideline every year.
Report submission and schedule of presentation will be coordinated by Project/Programme coordinators.

Student responsibilities

Attendance; Discipline; Research Ethics etc.

Course Reviewer: MPEC