# PROJECT I

**ENCE 404**

**Credits: 2** **Year: IV** **Part: I**

**Course Objectives:**

The objective is to empower students to synthesize their coursework into practical civil engineering solutions. Working in groups under faculty supervision, students will tackle real-world engineering challenges and document their findings in a comprehensive project report.

**General Procedures:**

Under the direction of the project supervisor, each group of 4-6 students will select a topic related with civil engineering, with particular emphasis on design, research and experiment. Students will have opportunities to conduct field visits to collect relevant data and information. Each group will progress through key stages, including topic selection, field visits for data collection, report preparation, and final report submission and presentation of their findings. Throughout the course, the supervisor will provide guidance and supervision to support students in achieving their objectives. The choice of project will depend upon the interests of students, faculty and the facilities available in the campus.

A project may involve:

1. Preparation of a design for an extensive civil engineering project
2. Preparation of a research/study report involving a literature survey and a correlation of existing knowledge or an experimental investigation

The project work is divided into two parts: Project I and Project II. In Project I students are required to complete following works for above mentioned categories of project works:

**1. Design Stream**

- 1.1. Background
- 1.2. Project description
- 1.3. Study area
- 1.4. Literature review and design standards
- 1.5. Methodology
- 1.6. Preliminary data collection; site survey if necessary
- 1.7. Preliminary design/Conceptual sketches

**2. Research Stream**

- 2.1. Background
- 2.2. Problem statement and need of the research
- 2.3. Objectives and scope of the work
- 2.4. Comprehensive literature review (Identification of the research gap)
- 2.5. Study area/case study selection/ physical model set-up
- 2.6. Research methodology (Analytical/numerical/experimental)
- 2.7. Data collection and initial analysis/ pilot testing

**Activities and Timeline** **(30 hours)**

1. **Selection of Project Type and Supervisor**
   Each group will select a relevant project type in consultation with the supervisor (Appointed by the Department) at the start of the term and submit a proposal within two weeks, clearly mentioning the objectives, scope of work and outcome.

2. **Start of Project Work**
   Initially, faculty may provide a series of lectures and discussions regarding the project's methodology and approach. As the project progresses, students are expected to work independently, consulting their supervisors as needed for technical guidance.

3. **Mid-term Progress Presentation**
   A mid-term progress presentation is required 2 weeks before the end of the term. Group will present progress to the supervisor and will be evaluated for 20 marks. The supervisor has to provide individual marks to students based on their work progress, group presentation of work done and viva.

4. **Final Presentation and Report Submission**
   The final presentation will be held by the last week of the term. To ensure quality, a draft report must be submitted to the supervisor for review before the final submission. The final report, formatted as per departmental guidelines, should be submitted after correction, if any. The presentation and report will be evaluated by the supervisor, accounting for 30 marks. The full marks for Project I is allocated equal to 50.