

PROJECT I

ENGE 415

Credits: 2

Year: IV

Part: I

Course Objectives:

The objective of the project work is to enable students to integrate and apply the knowledge and skills acquired throughout the Geomatics Engineering program to solve real-world problems. Under the guidance of faculty supervisor(s), students work in groups to plan, execute, and evaluate a project addressing practical challenges related to society and the environment, and present their findings in a comprehensive project report.

General Procedures:

Under the direction of the project supervisor, each group of 2–4 students will select a topic related to Geomatics Engineering, including surveying, GIS, remote sensing, photogrammetry, geospatial data science, cartography, land administration, navigation systems, web GIS application or other relevant applications. 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 project involving collection of field data, plotting, analysis and design.
2. A research-based project involving systematic literature review, data collection, analysis, and synthesis of existing knowledge to address a specific geospatial problem.
3. 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 Type Project

- 1.1 Background
- 1.2 Project description
- 1.3 Study area
- 1.4 Literature review/guidelines
- 1.5 Methodology
- 1.6 Field data collection and plotting

2 Dissertation Type Project

- 2.1 Background
- 2.2 Need of the research
- 2.3 Objectives and scope of the work
- 2.4 Literature review
- 2.5 Study area
- 2.6 Methodology
- 2.7 Data collection and compilation

3 Experimental Type Project

- 3.1 Background
- 3.2 Need of the research
- 3.3 Objectives and scope of the work
- 3.4 Literature Review
- 3.5 Experimental setup
- 3.6 Methodology
- 3.7 Data collection and compilation

Activities and Timeline

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 4 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.