# PROJECT II

**ENME 461**

**Credit: 4** **Year : IV** **Part : II**

**Course Objectives:**

Project II is the implementation phase of the engineering study initiated in Project I. The primary objective is to execute the developed methodology to solve the mechanical engineering problem. Students will focus on data collection, system modeling, fabrication and testing, analysis and the preparation of technical recommendations based on the methodology and design completed in Project I.

**General Procedures:**

a. **Implementation and Execution (1-8 weeks):** Groups proceed with the engineering methodology validated in Project I. This may involve field data collection, detailed software simulation, mathematical optimization or the fabrication of a physical prototype.

b. **Data Analysis and Validation (9-12 weeks):** Collected data, simulation results and experimental test results are analyzed using appropriate statistical or engineering tools to derive meaningful conclusions regarding the system's performance. Students must validate their findings against existing industrial standards, theoretical benchmarks or data from literature to ensure the accuracy and reliability by validating data, results or system. This stage ensures that both the general and specific objectives are fully addressed.

c. **Final Documentation (13-14 weeks):** A comprehensive technical report is compiled, documenting the entire project lifecycle from problem identification to final results and recommendations.

d. **Final Defense:** The project concludes with a final presentation and viva-voce before an external examiner and the departmental committee in the presence of assigned project supervisor. The exact date for the defense is determined by the project committee and typically occurs one or two weeks before the end of the semester.

Throughout the course, the faculty will serve as a supervisor, providing continuous feedback and conducting regular reviews to ensure that technical viability and professional documentation standards are maintained.

**Evaluation Scheme:**

| Evaluation methods | Descriptions | Marks |
|---|---|---|
| Supervisor's Assessment | Evaluation of the detailed literature review, problem Based on regular progress, technical contribution and the quality of the student's work log throughout the implementation phase. | 50 |
| Technical Report Evaluation | Assessment of the final report by the project committee, focusing on technical depth, methodology execution and professional documentation standards. | 50 |
| Final Presentation and Viva (Final Year Project Defense) | A formal defense conducted in the presence of an external examiner. Includes a demonstration of results, software/hardware models and oral examination. Fifty percent of the marks are awarded based on the external examiner's evaluation. | 50 |
| **Total** | | **150** |