

COURSE TITLE	MINI PROJECT
COURSE CODE	01EE2702
COURSE CREDITS	4

Objective:

- 1 This course aims to develop capability to identify a problem, carry out literature survey, define the problem statement and develop the simulation/prototype of the work.

Course Outcomes: After completion of this course, student will be able to:

- 1 Identify a real-world problem, formulate a clear problem statement, and propose a viable solution methodology.
- 2 Critically evaluate the existing literature.
- 3 Develop the solution of the identified problem and assess the performance of the solution.
- 4 Write a technical report documenting the entire project according to a specified format.

Pre-requisite of course:NA

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
0	0	8	0	0	0	50	50

Contents : Unit	Topics	Contact Hours
1	Project/Problem Identification Describe and clearly outline the challenges, goals, and extent of the project to ensure a comprehensive grasp of the issue that requires attention	8
2	Literature Review Students will perform an in-depth examination of current academic literature and relevant publications pertaining to their state-of-the-art subject, This process aims to acquire insights, pinpoint areas lacking in knowledge, and establish a basis for their own investigation	12
3	Project Design and Prototype Development Formulate and devise a plan including strategies, methodologies, and necessary resources to direct the implementation and execution of the project, Develop an initial and practical prototype or example of a product or simulation of system, or solution to assess and affirm its design, functionality, and user experience prior to full-scale production or implementation	24

Contents : Unit	Topics	Contact Hours
4	Presentation and Report Writing synthesize and present information, findings, and analysis in a structured and cohesive manner to effectively communicate results, recommendations, and insights to a specific audience.	12
Total Hours		56

Textbook :

- 1 Project Management: Text and Practice, K.R. Sharma, Atlantic Publishers and Distributors, 2022

References:

- 1 The Process of Research Writing, The Process of Research Writing, Steven D. Krause, Eastern Michigan University, 2007

Suggested Theory Distribution:

The suggested theory distribution as per Bloom's taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery					
Remember / Knowledge	Understand	Apply	Analyze	Evaluate	Higher order Thinking / Creative
0.00	10.00	35.00	15.00	15.00	25.00

Instructional Method:

- 1 Projects can either be UDP (User Defined Project) or IDP (Industry Defined Project).
- 2 The nature of the project work may include but is not limited to: Simulation of circuits/systems or hardware-based solutions, Case studies addressing real-world problems, Innovative solutions to industry challenges, Modeling, analysis, and optimization studies, Development of new laboratory setups, Prototyping and hardware development.
- 3 Committee Oversight: A department-level committee will oversee the quality and quantity of each team's work. At the beginning of the semester, teams must present a detailed project proposal to the committee. This proposal should include the project title, well-defined problem statement, and a timeline of activities.
- 4 Team Size: Project teams should ideally consist of no more than four students. Any deviation from this team size must be approved by the committee.
- 5 Faculty Guidance: Project work must be conducted under the guidance of a faculty member.
- 6 Final Report Submission: A comprehensive final report must be prepared and submitted to the department at the end of the semester.
- 7 External Evaluation: External evaluation will consider adherence to the above guidelines, among other factors.

Supplementary Resources:

- 1 <https://science-fair.org/students-parents/winning-engineering-projects/>
- 2 <https://www.geeksforgeeks.org/7-tips-for-building-final-year-projects-for-engineering-students/>