Course Code	Course Name	Credits
MEP701	**Major Project 1**	**03**

Objectives: The course aims:	
The Project work facilitates the students to develop and prove Technical, Professional and Ethical skills and knowledge gained during graduation program by applying them from problem identification, analyzing the problem and designing solutions.	
Outcomes:	
1	Students will be able to develop the understanding of the problem domain through extensive review of literature.
2	Students will be able to identify and analyze the problem in detail to define its scope with problem specific data.
3	Students will be able to identify various techniques to be implemented for the selected problem and related technical skills through feasibility analysis.
4	Students will be able to design solutions for real-time problems that will positively impact society and environment..
5	Students will be able to develop clarity of presentation based on communication, teamwork and leadership skills.
6	Students will be able to inculcate professional and ethical behavior..

Guidelines:

1. **Project Topic Selection and Allocation:**

- Project topic selection Process to be defined and followed:
  - Project orientation can be given at the end of sixth semester.
  - Students should be informed about the domain and domain experts whose guidance can be taken before selecting projects.
  - Student's should be recommended to refer papers from reputed conferences/ journals like IEEE, Elsevier, ACM etc. which are not more than 3 years old for review of literature.
  - Students can certainly take ideas from anywhere, but be sure that they should evolve them in the unique way to suit their project requirements. Students can be informed to refer Digital India portal, SIH portal or any other hackathon portal for problem selection.
- Topics can be finalized with respect to following criterion:
  - **Topic Selection**: The topics selected should be novel in nature (Product based, Application based or Research based) or should work towards removing the lacuna in currently existing systems.

- **Technology Used:** Use of latest technology or modern tools can be encouraged**.**
- Students should not repeat work done previously (work done in the last three years).

- Project work must be carried out by the group of at least 2 students and maximum 4.
- The project work can be undertaken in a research institute or organization/Industry/any business establishment. (out-house projects)
- The project proposal presentations can be scheduled according to the domains and should be judged by faculty who are expert in the domain.
- Head of department and senior staffalong with project coordinators will take decision regarding final selection of projects.
- Guide allocation should be done and studentshave to submit weekly progress report to the internal guide.
- Internal guide has to keep track of the progress of the project and also has to maintain attendance report. This progress report can be used for awarding term work marks.
- In case of industry/ out-house projects, visit by internal guide will be preferred and external members can be called during the presentation at various levels

2. **Project Report Format:**
At the end of semester, each group need to prepare a project report as per the guidelines issued by the University of Mumbai.

A project report should preferably contain at least following details:

- Abstract
- Introduction
- Literature Survey
- Survey of Existing systems
- Limitations of Existing systems or research gaps
- Motivation (Challenges that are encouraging to choose the problem)
- Problem Statement and Proposed Solution
- Scope of the system
- Proposed System
  - General Workflow/Block diagram
- Analysis and Modeling (only applicable diagrams)
- Design
  - Architectural View
  - Algorithms/ Methodology
- Experimental Set up
  - Details of Database or details about input to systemsor selected data
  - Performance Evaluation Parameters (for Validation)
  - Software and Hardware Set up
- Implementation Plan for Next Semester
  - Timeline Chart for Term1 and Term-II (Project Management tools can be used.)
- Summary
- References

Desirable

- Students can be asked to undergo some Certification course (for the technical skill set that will be useful and applicable for projects.)

3.Term Work:

Distribution of marks for term work shall be done based on following:

a. Weekly Log Report
b. Project Work Contribution
c. Project Report (Spiral Bound) (both side print)
d. Term End Presentation (Internal)

The final certification and acceptance of TW ensures the satisfactory performance on the above aspects.

4. **Term work evaluation:**

Term work evaluation for Project 1 should be conducted by Internal examiner on continuous basis throughout the semester.

Suggested quality evaluation parameters are as follows:

1. Quality of problem selected
2. Clarity of problem definition and feasibility of problem solution
3. Relevance to the specialization / industrial trends
4. Originality
5. Clarity of objective and scope
6. Quality of analysis and design
7. Quality of written and oral presentation
8. Individual as well as team work