GUJARAT TECHNOLOGICAL UNIVERSITY

Bachelor of Engineering (Part Time)
Subject Code: 2981901
Semester – VIII
Subject Name: Project

Type of course: Project work or Internship in industry

Prerequisite: DE-1, DE-II

Rationale:
To enhance the employability skills of the students, Industrial Training or Project work is very much essential. It provides practical experience in a field of Mechanical Engineering and help to reinforce theoretical and practical knowledge gained in different core and elective courses to solve real life challenges.

Teaching and Examination Scheme:

Teaching Scheme			Credits	Examination Marks				Total Marks
L	T	P	C	Theory Marks		Practical Marks		
				ESE (E)	PA (M)	ESE (V)	PA (I)	
0	0	28	14	0	0	100	100	200

The following guidelines are required to be followed for the Project work.

General Guidelines for Project

1. It can be either UDP (User defined project) or IDP (Industry defined project).
2. Survey and study published in reputed literature related to project work are required to include as reference material.
3. Patent search analysis is to be done by the students and PSAR (Patent Search Analysis Report) is to be submitted if it is suggested by the project mentor.
4. The group size of the project team shall not be preferably more than 4 students. In case it is required to have more students, it shall be approved by a department committee.
5. The project work shall be carried out under the guidance of a mentor(s) (internal faculty and industry person in case of IDP).
6. Students are required to design the system/ prepare algorithm/ propose methodology/ develop new product or process as a part of the project work and analyse/verify through available resources/references at industry level or institute level/university level.
7. Students may proposed new methodology or approaches for better results.
8. They should optimize/Validate the project work in terms of economic and feasibility in the benefit of society etc.
9. They should also compare the results of the project with other similar projects and justify.
10. The team shall be encouraged to publish project work, if possible.
11. Students must conclude the project work properly and suggest scope of future work.
12. A comprehensive report is required to be prepared and submit to the department at the end of the semester.
13. Intermediate and final presentation/demonstration in presence of the department committee must be arranged for review the progress of the work done. The internal evaluation/scrutiny shall be done at the start of the semester, at the mid of the semester (progress evaluation) and at the end of the semester (final presentation/demonstration). The distribution of internal marks shall be decided by the committee.
14. A presentation by the team shall be made at the beginning of the semester to the department committee formed by head of department. This presentation shall contain the detailed proposal of the project, which includes title of the project, well defined problem and a plan of activities with appropriate timelines. The role of the team members shall preferably be defined as far as possible in this proposal itself.
15. Considering the number of credits and the contact hours (practical hours), substantial amount of work is required to be carried out by students' team. It shall be monitored by the project mentor and the department committee. The evaluation shall be done accordingly with due consideration given to the quality and amount of work by internal and external examiners.

The guidelines about the nature of project work are as following:

1. The project work can be a Design and Development/ Methodology/ Algorithm/ Simulation or Manufacturing depending upon the area and the complexity of the work involved.
2. If it contains only simulation, it shall be comprehensive. The team is expected to know the various aspects of simulation techniques in detail. The team shall be able to explain the results obtained in detail with all the aspects and different cases. Moreover, the simulated results must be verified through results available in literature or performance of experimentation.
3. It can be a Case study, innovative Solution/Practices to real life problems, modeling and analysis, design, optimization, prototype, industry defined problem, development of new laboratory setup at the department etc.
4. If it is a case study, it shall be a real-life case and of high technical relevance and societal benefits.
5. If the project is about a modeling, the team is expected to know the proper mathematical formulation and justification of the modeling, its limitations and its possible applications. The comparison of performance of various models shall be covered as a part of the work. A detailed analysis of the results and its verification shall be done with the help of the model.
6. If the team and guide find it appropriate, the overall work can be combination of different types of work above mentioned.

Course Outcomes:

Sr. No.	CO statement	Marks % weightage
CO-1	Demonstrate a sound technical knowledge of their selected project topic	20%
CO-2	Undertake problem identification, formulation and solution	20%
CO-3	Design engineering solutions to complex problems utilising a systems approach and team work	30%
CO-4	Communicate with engineers and the community at large in written and oral forms	20%
CO-5	Demonstrate the knowledge and understanding of engineering and management principle and apply it to assigned project	10%

Reference:

- AICTE Model curriculum
- AICTE Internship Policy: https://www.aicte-india.org/sites/default/files/AICTE%20Internship%20Policy.pdf