

GUJARAT TECHNOLOGICAL UNIVERSITY
POWER ELECTRONICS ENGINEERING
B. E. SEMESTER: VII

Subject Name: **Project-I**

Subject Code: **170001**

Teaching Scheme				Evaluation Scheme			
Theory	Tutorial	Practical	Total	University Exam (E)		Mid Sem Exam (Theory) (M)	Practical (Internal)
				Theory	Practical		
0	0	4	4	0	100	0	50

This is a laboratory oriented subject focusing on enhancing practical, design, presentation and project management skills required for Power Electronics. This is based on the topics/subjects already covered in previous semesters and subjects of current semester.

Objectives:

1. Developing capacity in students to use the theory learnt to put in to practice.
2. Developing understanding of inter subject relationship among various subjects in students.
3. Developing capacity to find logical solution and implement the same practically for some commonly used processing requirements of many electronics products.
4. Developing capacity in students to find and solve common faults arising in various electronic circuits and software development.
5. Minimize mistakes commonly made by the students during laboratory work.
6. Developing technical report writing & technical presentation skills in students.
7. Developing attitude for team work in students.

Guidelines for work to be carried out during the semester:

The students should decide the project title for 8th semester major project and carry out base work for the same as stated below:

1. Students should be divided into groups of 3-4 students each.
2. Each group will select a title for the final semester major project work.
3. Each group will understand the conceptual fundamentals behind the tentative major project work to be carried out in semester 8 and prepare specifications for the same.
4. They will prepare the block diagram. They will also identify inputs, outputs and their characteristics for each block. Further, they will prepare the design of each block and verify the same through appropriate simulation software.
5. They will prepare implementation and testing plans for the hardware and/or software for the proposed design.
6. List out and develop proficiency in using different Testing & Measurement equipment.

7. Study datasheets of different components that may be required for the proposed project.
8. Students should prepare a report of around 30-40 pages covering all the above points with reference to the project work taken up by the group.

Guidelines for Presentations and Assessment:

A report (around 30 to 40 pages) should be prepared by the students indicating work carried out and results obtained. The work done should be demonstrated to teachers and other students practically and through presentation slides as stated below:

- Presentations should be given by each group during the semester as per schedule decided by the concerned faculty (Ideally two presentations should be scheduled in the 4th and 10th week of the term).
- The first presentation should cover the names of group members, the decided project title along with brief description, theoretical study work related to the project, block diagrams of the project and i/p-o/p signals & characteristics of each block.
- The second presentation should include the simulation work and design details of the different blocks.
- The report of the work carried out during the semester should be submitted before the viva-voce examination.
- Appropriate weightage should be given to the presentations, report and viva-voce along with the semester work for assessing the performance of the student in the subject.