



C.U.SHAH UNIVERSITY

FACULTY OF: - Technology & Engineering
DEPARTMENT OF: -Electrical Engineering
BRANCH: Electrical & Electronics Engineering
SEMESTER: - IV
COURSE:- B.Tech
CODE: - 4TE04ESP1
NAME – Simulation Practice

Teaching & Evaluation Scheme

| Subject Code | Name of the Subject | Teaching Scheme (Hours) | | | | Credits | Evaluation Scheme | | | | | | | |
|--------------|---------------------|-------------------------|----|----|-------|---------|-------------------|-----|-----------------|-----|-------------------|----|------------|-------|
| | | Th | Tu | Pr | Total | | Theory | | | | Practical (Marks) | | | Total |
| | | | | | | | Sessional Exam | | University Exam | | Internal | | University | |
| | | | | | | | Marks | Hrs | Marks | Hrs | Pr/Viva | TW | Pr | |
| 4TE04ESP1 | Simulation Practice | 0 | 0 | 2 | 2 | 1 | -- | -- | -- | -- | 50 | 50 | --- | 100 |

Objectives

- To study various electronics circuits software namely MATLAB, LabView etc.
- To study design and implementation of analog and digital circuits using different software related to electrical & electronics along with PCB design techniques.

Prerequisites

- Basics of Electrical and Electronics Circuits and Components design in Software Practice.

Course Outlines

| Sr. No. | Course Contents | Hours |
|---------|-------------------------------------------------------------------------------------------------------------------|-------|
| 1 | Introduction of Electrical and Electronics Software : Introduction of Psim, Multisim, MATLAB, Lab view. | 06 |
| 2 | Psim: Introduction of PSim Simulator and Applications | 03 |
| 3 | MATLAB: Introduction of MATLAB, Coding simulation and Applications | 06 |
| 4 | Multi sim & Lab view: Introduction of Multi sim & Lab view and Applications. | 06 |
| 5 | PCB Design: Introduction of PCB Design software and Applications. | 05 |

Learning Outcomes

- The students would be able to design and implement various Circuits of electrical and electronics using various simulator software and design PCB layout.

Books Recommended

1. MATLAB: An Introduction with Applications, Almos Gilat, Wiley India Ltd., 2004.
2. Model Reduction for Circuit Simulation, Benner, Peter, Hinze, Michael, ter Maten, E. Jan W. (Eds.), ISBN 978-94-007-0089-5
3. Electronic Circuit & System Simulation Methods (SRE), Lawrence Pillage McGraw-Hill Professional; 1 edition (October 1, 1998)