

TCET/FRM/IP-02/10

Revision: B

**Semester Plan
(Practical / Tutorials / Assignment)**

 Semester: **III**

 Course: **IT**

 Batches: **S.E**

 Subject: **Digital design Lab**

 Class: **SE – IT**

 Batch size: **20** Students

Laboratory faculty in charge: Mr. Zahir Aalam and Ms. Swati Abhang

 Lab. Assistant /Attendant:
(Lab Attendant)

 Note: **Experiment planned as per University Curriculum**

Basic Experiments:

Sr. No.	TITLES Experiments / Tutorials / Assignment (Planning with use of Technology)	Planned Date	Completion Date	Remarks
1	Verify the truth table of logic gates (basic and universal gates)			
2	Realization of Boolean algebra using gates			
3	Verify the operation of 4- bit magnitude comparator			

Design/ Development Experiments:

4	Design of Full Adder and Full Subtractor			
5	Implementation of Multiplexer and De-Multiplexer using Gates			
6	Implementation of Encoder and Decoder using Gates			

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7	To verify and observe the operation of SR and JK flip-flops				
8	To design and verify Left and Right shift registers				
9	Implementation of Logic Gates using VHDL				
Group Learning Activity:					
10	Case Study on: Case study on Evaluating and observing Boolean expression using PALs and PLAs				
11	Project: 1. To design automated system for washing machine 2. To design control system for lift				
Mini /Minor Projects Objective: To get hands on experience to execute projects with respect to student choice in the following areas. (30 Hrs / Semester / Student). (Total 120 Hrs) The areas are: 1. Research 2. Core 3. Multidisciplinary 4. Application					
S.No	Project Title/Group Size	Class	Group Size/ Project Hours	Project Type	Reference
1	Simple Logic Gate Processor	SE	4-5	Mini	http://circuiteasy.com/logic-gates/
2	Learn to Make NAND Gate	SE	4-5	Mini	http://circuiteasy.com/nand-gate
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	Planned	Completed		Planned	Completed		Planned	Completed
No. of Prac	Basic Exp: 03 Design Base Exp: 06 Group Learnin g: 02 Mini Project: 2 Case study: 1		No. of Assign ments	03		No. of Tutorial		
DOSLNE:				DOSLE (engaged in some other dates):				

Group activities are required to be added with the practical related to course to enhance the learning activity of the student in the course. Group activity includes: Group presentation, new experiment design, mini projects etc.

Note:

1. The practical plan date and completion date shall be in compliance. For any non-compliance reason(s) required to be stated in remark column.
2. Learning objective and outcome shall be clearly stated with each of experiments/ tutorials/ assignments and are required to be mapped at the end of the semester.
3. Entry for DOSLE (engaged on some other date) shall be done with proper mapping to DOSLNE.

Sd/-

(Mr. Zahir Aalam)
(Ms. Swati Abhang)

Name & Signature of Faculty

Sd/-

Signature of HOD

Sd/-

Signature of Principal / Dean Academic

Date:

Date:

Date:

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