TCET/FRM/IP-02/10	Revision: B

Semester Plan
(Practical / Tutorials / Assignment)

Semester: V   Course: TE IT   Batches: A2, A3

Subject: Microcontroller & Embedded System   Class: TEIT   Batch size: 20 students

Laboratory faculty in charge: Mr. Vijaykumar Yele   Lab. Assistant /Attendant: Vaibhav Chavan
(Lab Attendant 313)

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	WAP to Perform Various arithmetic operation using 8051	A2:		
		A3:		
2	Develop to find out no. of odd number present in block of data using 8051	A2:		
		A3:		
3	WAP to exchange block of data using 8051.	A2:		
		A3:		
4	Implement to find out smallest number from block of data using 8051	A2:		
		A3:		
5	WAP to arrange numbers in descending order using 8051	A2:		
		A3:		
6	WAP to perform various arithmetic operation using ARM7	A2:		
		A3:		

Design/ Development Experiments:

Sr. No.	TITLES	Planned Date	Completion Date	Remarks
7	Design interfacing of RAM,ROM with 8051 microcontroller	A2:		
		A3:		
8	Design a real time based application based on embedded system.	A2:		
		A3:		

Group Learning Activity:

Sr. No.	TITLES	Planned Date	Completion Date	Remarks
9	Case study on Digital Clock / Automated meter reading system	A2:		
		A3:		
10	Case study on different categories of operating system namely RTOS, embedded OS, handheld OS etc.	A2:		
		A3:		

Issued By: MR	Approved By: Principal

Bridge courses Objective: Bridging of gaps with respect to prerequisites and industry skills or to carryout research in that particular field**. (24 Hrs / Semester / student)**

S.No.	Bridge courses/Technology	Duration (Week/hrs)	Modes of Learning	Recommended Sources
1.	**Prerequisite course:** Computer Architecture and Organization	12 Weeks / 2 Hrs	Self Learning/ Revision	https://onlinecourses.nptel.ac.in/noc17_cs19
2	**Advanced course:** Introduction to Internet of Things	12 Weeks / 2 Hrs	Self-Learning/ Revision	https://onlinecourses.nptel.ac.in/noc17_cs22

1. **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**

Major project: As per University Scheme

Sr. No	Project Title/Group Size	Class	Group Size	Project Type	Reference
1	Smart Class system using Raspberry Pi	TE	3-4	Minor	Technology Based Learning
2	Smart Home system	TE	3 – 4	Minor	
3	Smart ware House	TE	3 – 4	Minor	

	Planned	Completed		Planned	Completed		Planned	Completed
No. of Prac	**Basic Exp:** 06 **Design Base Exp**: 02 **Group Learning:** 02 **Bridge Course:** 02		No. of Assignments	03		No. of Tutorial	00	

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/-

(Ms. Nishtha Mathur)

Name & Signature of Faculty	Signature of HOD	Signature of Principal / Dean Academic
Date:	Date:	Date:

Issued By: MR	Approved By: Principal