Laxdu Singh Charitable Trust's (Regd.)
THAKUR COLLEGE OF ENGINEERING & TECHNOLOGY
(Approved by AICTE, Govt. of Maharashtra & Affiliated to University of Mumbai*)
(Accredited Programmes by National Board of Accreditation, New Delhi**)
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ISO 9001 : 2008 Certified
*Permanent Affiliated UG Programmes :• Computer Engineering • Electronics & Telecommunication Engineering • Information Technology (w.e.f.: A.Y. 2015-16 onwards)
**1st time Accredited UG Programmes :• Computer Engineering • Electronics & Telecommunication Engineering • Information Technology
**2nd time Accredited UG Programmes :• Computer Engineering • Electronics & Telecommunication Engineering • Information Technology • Electronics Engineering (3 years w.e.f.: 01-07-2016)

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

Semester Plan
(Practical / Tutorials / Assignment)

Semester: **V** Course: T**.E EXTC** Batches: **T.E A1/A2 A3/A4**

Subject: Microcontroller and Applications Class: **T.E EXTC- A** Batch size: 20 Students

Laboratory faculty in charge: **Ms. Rupali Mane** . Teaching Assistant: **Mr. Dinesh Kanswal**

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

Basic Experiments:

Sr. No.	**TITLES Experiments / Tutorials / Assignment (Planning with use of Technology)**	**Batches**	**Planned Date**	**Completion Date**	**Remarks**
1.	Write an assembly language program in 8051 to perform arithmetic operations a) Add two 8 bit numbers b) Subtract two 8 bit numbers	A1	24/07/17		
		A2	24/07/17		
		A3	25/07/17		
		A4	25/07/17		
2.	Write an assembly language program in 8051 to perform multiplication and division of two 8 bit numbers.	A1	31/07/17		
		A2	31/07/17		
		A3	1/08/17		
		A4	1/08/17		
3.	Write an assembly language program in 8051 to arrange numbers in ascending & descending order.	A1	7/08/17		
		A2	7/08/17		
		A3	8/08/17		
		A4	8/08/17		
4.	Write an assembly language program in 8051 to find smallest & largest numbers from an array of 5 numbers.	A1	14/08/17		
		A2	14/08/17		
		A3	5/09/17		
		A4	5/09/17		
5	Write an assembly language program to add two 64 bit nos. using ARM7 processor.	A1	11/09/17		
		A2	11/09/17		
		A3	19/09/17		
		A4	19/09/17		
6.	Write an assembly language program to find largest no. among the array of 10 nos. using ARM7 processor	A1	18/09/17		
		A2	18/09/17		
		A3	26/09/17		
		A4	26/09/17		

Issued By: MR	Approved By: Principal

Design Experiments:					
7.	Design a microcontroller based system to blink LED using ARM7 processor.	A1	11/09/17		
		A2	11/09/17		
		A3	19/09/17		
		A4	19/09/17		
8.	Design a microcontroller based system to generate a square wave of 2KHz using 8051 microcontroller	A1	4/09/17		
		A2	4/09/17		
		A3	12/09/17		
		A4	12/09/17		
9.	Design a microcontroller based system to rotate the stepper motor in clockwise and anticlockwise direction	A1	4/09/17		
		A2	4/09/17		
		A3	12/09/17		
		A4	12/09/17		
Group Learning Activity:					
10	Mini Project: Design a microcontroller based system to interface ARM7 with 7-Segment Displayand display 0 to 9 numbers	A1	25/09/17		
		A2	25/09/17		
		A3	3/10/17		
		A4	3/10/17		
11	Case Study : Recent trends in microcontrollers and embedded system	As per slot given	As per slot given		

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 :
Research 2. Core 3. Interdisciplinary 4. Application

Mini/ Major project : As per University Scheme

S.No	Project Title/Group Size	Class	Type / Project Hours	Modes of Learning	Reference
1.	Smart Ordering System for Restaurants	T.E EXTC	Applicatio n	Project Based Learning	

2.	Density based traffic light control			T.E EXTC	Application	Project Based Learning		
3.	RFID based library system with GSM module			T.E EXTC	Application	Project Based Learning		
	Planned	Completed		Planned	Completed		Planned	Completed
No. of Prac	Basic Exp: 06 Design Base Exp: 03 Group Learning: 2 Major Project: 00 Mini Project: 03		No. of Assignments	02		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-	**Sd-**	**Sd-**
(Mrs. Rupali Mane) (Mr. Nishant Kumar)	**(Dr. Vinitkumar Dongre)**	**(Dr. R. R. Sedamkar)**
Name & Signature of Faculty	Signature of HOD	Signature of Principal / Dean Academic
Date:20/07/2017	Date: 20/07/2017	Date: 20/07/2017