LAB COURSE PLAN

1. Course Title	Electronics For Mechanical Systems	**5. Semester**	III - "C" Sec
2. Course Code	ECB 2182	**6. Academic Year**	2017-2018
3. Course Faculty	S.SADHISH PRABHU	**7. Department**	Mechanical
4. Theory / Practical	Practical	**8. No. of Credits**	1

9. Course Learning Objective:

• To study the characteristics of various electronic and digital devices.

• To learn the usage of microprocessor for various operations.

10. Course pre-requisites:

Students should have knowledge on

- ✓ Basic of physics pertaining to electronics and semiconductors
- ✓ Basic knowledge of digital manipulations

11. Course material:

A complete Lab manual for the experiments will be provided.

12 . Schedule of teaching and learning

Cycle	Name of the Experiment	References
I Digital Experiments	Study of Logic Gates (Basic Gates)	Lab Manual
	Half Adder and Full Adder	Lab Manual
	Shift Register	Lab Manual
	Ripple counter	Lab Manual
Learning Activity : An application oriented mini project in Digital Electronics		**Internet**
II Programming using 8085 microprocessor	Bit addition, subtraction	Lab Manual
	Multiplication and division	Lab Manual
	Maximum and Minimum of block of data	Lab Manual
	Sorting and block transfer	Lab Manual
	Stepper Motor Interfacing	Lab Manual
	Traffic light controller	Lab Manual
III Analog Experiments	VI characteristics of PN Junction Diode	Lab Manual
	VI characteristics of Zener Diode	Lab Manual
	Characteristic of CE Transistor	Lab Manual
	Characteristics of JFET	Lab Manual

	Characteristics of Uni Junction Transistor	Lab Manual
Learning Activity : An application oriented mini project in analog Electronics		**Internet**
	Total hours required	**36**

13 Assessment scheme

Sl.no	Details	Marks
1	Continuous assessment of the experiments	40
2	Learning Activity	20
3	Semester End Examination	40
	Total	**100**

Detail Split up of assessment:

1. Continuous assessment of the experiments

Preparation	Execution	Viva Voce	Total
10	20	10	40

2. Learning Activity

Analog Electronics Mini Project	Digital Electronics Mini project	Total
10	10	20

3. End semester Examination

Circuit /Program	Execution	Viva – voce	Total
20	10	10	40

14. Course Outcomes:

Students will be able to

• Analyze the characteristics of various electronic devices and digital devices. • write simple assembly language program using 8085 microprocessors for various applications.

Date :
Course faculty:

Head of the Department