

**Bhoj Reddy Engineering College for Women: Hyderabad**

**Department of Electronics and Communication Engineering**

Lesson Plan of faculty members for the academic year 2015 – 2016

Name of the faculty member and Department : B.Kiranmai, ECE

Subject: Microprocessors and Microcontrollers

Class: III B.Tech.

Branch & Section: ECE-A

Semester: II

No. of lectures per week: 4+1 (Tutorial)

Lecture Number	Date	Topic to be covered
	<b>UNIT I</b>	<b>8086 ARCHITECTURE</b>
1	7/12/15	Introduction
2	9/12/15	Introduction to 8086 Microprocessor
3	11/12/15	8086 Functional diagram, Register Organization
4	12/12/15	Memory Segmentation
5	9/12/15,10/12/15,11/12/15	Tutorial(G2,G1,G3)Address line calculation
6	14/12/15	Programming Model
7	16/12/15	Memory addresses
8	18/12/15	Architecture of 8086
9	19/12/15	Physical Memory organization
10	16/12/15,17/12/15,18/2/15	Tutorial(G2,G1,G3) Architecture of 8086
11	21/12/15	Interrupts of 8086
12	23/12/15	Signal description of 8086, Common function signals.
13	23/12/15,-----,-----	Tutorial(G2,G1,G3) Architecture of 8086
14	28/12/15	Minimum mode signals & Timing diagrams
15	30/12/15	Maximum mode signals & Timing diagrams
16	30/12/15,31/12/15,1/1/16	Tutorial(G2,G1,G3) programs using Instruction set
	<b>UNIT II</b>	<b>INSTRUCTION SET &amp; ASSEMBLY LANGUAGE PROGRAMMING OF 8086</b>
17	2/1/16	Instruction Formats
18	4/1/16	Instruction set
19	6/1/16	Instruction set
20	8/1/16	Instruction set
21	9/1/16	Assembler directives
22	6/1/16,7/1/16,8/1/16	Tutorial(G2,G1,G3) programs using Instruction set
23	11/1/16	Procedures and macros

24	13/1/16	Simple Programs
25	13/1/16,14/1/16,-----	Tutorial(G2,G1,G3) simple programs
	<b>UNIT III</b>	<b>I/O INTERFACE, INTERFACING WITH ADVANCED DEVICES &amp; COMMUNICATION INTERFACE</b>
26	16/1/16	8255 Block diagram
27	18/1/16	Various modes of operation and interfacing to 8086
28	20/1/16	Interfacing keyboard
29	22/1/16	Interfacing Display
30	23/1/16	Interfacing Stepper motor
31	20/1/16,21/1/16,22/1/16	Tutorial(G2,G1,G3) Interfacing program
32	25/1/16	Interfacing D/A Converter
33	27/1/16	Interfacing A/D converter
34	29/1/16	Memory Interfacing to 8086
35	30/1/16	Memory Interfacing to 8086
36	27/1/16,28/1/16,29/1/16	Tutorial(G2,G1,G3) Memory Interfacing
37	22/2/16	Interrupt structure of 8086
38	24/2/16	Vector interrupt table
39	26/2/16	Interrupt service routine
40	27/2/16	Interrupt types
41	24/2/16,25/2/16,26/2/16	Tutorial(G2,G1,G3) Memory Interfacing
42	29/2/16	Serial communication standards
43	2/3/16	Serial data Transfer schemes
44	4/3/16	8251 architecture
45	5/3/16	8251 interfacing
46	2/3/16,3/3/16,4/3/16	Tutorial(G2,G1,G3)ADC and DAC
	<b>UNIT IV</b>	<b>INTRODUCTION TO MICROCONTROLLERS</b>
47	9/3/16	Overview of 8051 Microcontroller
48	11/3/16	8051 Architecture
49	12/3/16	8051 Architecture
50	9/3/16,10/3/16,11/3/16	Tutorial(G2,G1,G3) 8251 architecture
51	14/3/16	I/O ports

52	16/3/16	I/O ports
53	18/3/16	Memory Organization
54	19/3/16	Addressing Modes
55	16/3/16,17/3/16,18/3/16	Tutorial(G2,G1,G3)8051pin configuration
56	21/3/16	Instruction set
57	25/3/16	Instruction set
58	26/3/16	Simple programs
59	24/3/16,25/3/16,26/3/16	Tutorial(G2,G1,G3) simple programs
60	<b>UNIT V</b>	<b>8051 REAL TIME CONTROL</b>
61	28/3/16	Programming Timer Interrupts
62	30/3/16	Programming hardware Interrupts
63	1/4/16	Programming Serial Communication Interrupts
64	2/4/16	Programming 8051 Timer and counters
65	30/3/16,31/3/16,1/4/16	Tutorial(G2,G1,G3)programming
66	4/4/16	Serial Communication programs
67	6/4/16	Serial Communication programs
68	9/4/16	Revision
69	6/4/16,7/4/16,-----	Tutorial(G2,G1,G3) Serial Communication programs
70	11/4/16	Revision
71	13/4/16	Revision
72	16/4/16	Revision
73	13/4/16,-----,-----	Tutorial(G2,G1,G3) Revision

#### TEXT BOOK:

1. D.V. Hall, Microprocessor and Interfacing ,TMGH 2<sup>nd</sup> edition 2006 (Unit 1 to 3)
2. Kenneth J. Ayala. The 8051 microcontroller, 3<sup>rd</sup> edition Cengage learning ,2010 (Unit 4 & 5)

#### REFERENCES:

1. Advanced Microprocessor and Peripherals-A.K. ray and Bhurchandani TMH 2<sup>nd</sup> edition(Unit 1 to 5)
2. The 8051 Microcontroller , Architecture and Programming and Application –K Uma Rao Andhe Pallavi Pearson 2009(Unit 6, 7)

3. Microcomputer System 8086/8088 family Architecture Programming and Design –By Liu and GA Gibson, PHI 2<sup>nd</sup> Ed(Unit 1 to 5)
4. Microcontroller and Application Ajay V . Deshmukh TMGH, 2005(Unit 6 to 8)

Name of the faculty:

Signature of the faculty with date

HoD Signature: