

# Bhoj Reddy Engineering College for Women: Hyderabad

## Department of Information Technology

Lesson plan of faculty member for the academic year 2017–18

Class: III B Tech

Branch-Section: ECE-C

Semester: I

Subject: Computer Organization and Operating Systems

Lectures per week: 4+1 (Tutorial)

Lecture Number	Topics to be covered	Date (s)
<b>UNIT – I: Basic Structure of Computers</b>		
1	Evolving role of software, Changing Nature of Software	12 July 2017
2	Computer Types, Functional Unit, Basic Operational Concepts	13 July 2017
3	Bus Structures, Software, Performance	15 July 2017
4	Tutorial (G3): Functional units	12 July 2017
5	Multiprocessors & Multi Computers	19 July 2017
6	Data Representation	20 July 2017
7	Fixed Point	22 July 2017
8	Tutorial (G2, G3): representation of data	18, 19 July 2017
9	Floating-Point Representation	24 July 2017
10	Register Transfer Language ,Bus and memory transfers	26 July 2017
11	Arithmetic Micro Operations, Logic Micro Operations, Shift Micro Operations	27 July 2017
12	Arithmetic Logic Shift Unit, Instruction Codes	29 July 2017
13	Tutorial (G1, G2, G3): instruction codes	24, 25, 26 July 2017
14	Computer Instruction Cycle	31 July 2017
15	Computer Registers	2 August 2017
16	Memory - Reference Instructions, Input - Output and Interrupt,	3 August 2017
17	STACK Organization, Instruction Formats	5 August 2017
18	Tutorial (G1, G2, G3): Data Manipulation	31 July 2017, 1, 2 August 2017
19	Addressing Modes, DATA Transfer and Manipulation	7 August 2017
20	Program Control, Reduced Instruction Set Computer.	9 August 2017
<b>UNIT-II : Micro Programmed Control</b>		
21	Control Memory, Access Sequencing	10 August 2017
22	Micro Program Examples	12 August 2017
23	Tutorial (G1, G2, G3): stack organization	7, 8, 9 August 2017
24	Design of Control Unit	16 August 2017
25	Hard-wired & Micro Programmed Control	17 August 2017
26	Memory System: RAM & ROM Memories	19 August 2017
27	Tutorial (G1, G3): hard wired control	14, 16 August 2017
28	Cache Memories Performance Considerations	21 August 2017
29	Virtual, Secondary Storage	23 August 2017
30	Introduction to RAID	24 August 2017
<b>UNIT-III: Input – Output Organization</b>		
31	Peripheral Devices	26 August 2017
32	Tutorial (G1, G2, G3): input output interface	21, 22, 23 August 2017
33	Input-Output Interface	28 August 2017
34	Asynchronous Data Transfer Modes, Priority Interrupts	30 August 2017
35	Direct Memory Access	31 August 2017
36	Tutorial ( G1, G2, G3):	28, 29, 30 August 2017
37	Direct Memory Access	4 September 2017
38	Input- Output Processor	9 September 2017
39	Tutorial (G1, G2):	4, 5 September 2017
40	Serial Communication	11 September 2017
41	Tutorial (G1, G2): direct memory access	13 September 2017
42	Peripheral Components	14 September 2017

43	Interconnect PCI Bus	16 September 2017
44	Tutorial (G1, G2, G3) :	11, 12, 13 September 2017
45	Standard Protocols	18 September 2017
46	RS232, USB, IEEE1394	21 September 2017
<b>UNIT-IV: Operating System Overview</b>		
47	Overview of Computer Operating Systems	23 September 2017
48	Tutorial (G1, G2): OS concepts	18, 19 September 2017
49	OS Functions, Protection and Security	4 October 2017
50	Distributed systems, Special Purpose Systems,	5 October 2017
51	OS structures and OS Services	7 October 2017
52	Tutorial (G2, G3): OS Services	3, 4 October 2017
53	System Calls, System Programs, OS Generations	9 October 2017
54	Tutorial (G1, G2, G3): protection and security	11 October 2017
55	Memory Management: Swapping	12 October 2017
56	Contiguous Memory Allocation, Paging, Page Table	14 October 2017
57	Tutorial (G1, G2, G3): swapping	9, 10, 11 October 2017
58	Segmentation, Virtual Memory	16 October 2017
59	Demand Paging	19 October 2017
60	Page Replacement Algorithms	21 October 2017
61	Tutorial (G2, G3): Page Replacement Algorithms	16, 17 October 2017
62	Allocation of Frames	23 October 2017
63	Thrashing Case Study	25 October 2017
64	Deadlock: System Model	26 October 2017
65	Deadlock Characterization, Deadlock Prevention	28 October 2017
66	Tutorial (G1, G2, G3): segmentation	23, 24, 25 October 2017
67	Detection and Avoidance, Recovery from Deadlock	30 October 2017
<b>UNIT-V: File System Interface</b>		
68	Concept of File, Access Methods	1 November 2017
69	Directory Structure, FS Mounting, File system structure	2 November 2017
70	Tutorial (G1, G2, G3): File Sharing, Protection	30, 31 Oct 2017, 1 Nov 2017
71	File and Directory implementation	6 November 2017
72	Tutorial (G1, G2): Allocation methods, Free space management	6, 7 November 2017

**Text books:**

1. Computer Organization – Carl Hamacher, Zvonks Vranesic, Saleazky, 5<sup>th</sup> Edition, McGraw Hill.
2. Computer System Architecture – M Moris mano, 3<sup>rd</sup> Edition, Pearson
3. Operating System Concepts – Abraham Silberchatz, Peter B. Galvin, Greg Gagne, 8<sup>th</sup> Edition, John Wiley.

Name and signature of the faculty: V Swarna Kamalam ----

Name and signature of Head of the Department: Mrs N Shribala ----