

Bhoj Reddy Engineering College for Women: Hyderabad

Department of Information Technology

Lesson plan of faculty member for the academic year 2018–19

Class: II B Tech

Branch-Section: IT-A

Semester: II

Subject: Operating Systems

Lectures per week: 4

Lecture Number	Topics to be covered	Date (s)
UNIT – I: Operating System Introduction		
1	Operating System Introduction	27 December 2018
2	Operating Systems Objectives and functions	28 December 2018
3	Computer System Architecture, OS Structure	29 December 2018
4	OS Operations, user view, system view	02 January 2019
5	Process management, memory management	03 January 2019
6	Storage Management, Protection and Security	04 January 2019
7	Computing Environments	05 January 2019
8	Operating System services, user OS Interface	09 January 2019
9	System Calls, Types of System Calls	10 January 2019
10	System Programs	11 January 2019
11	Opening System Design and Implementation	12 January 2019
12	OS Structure, Virtual machines	16 January 2019
UNIT-II: Process and CPU Scheduling		
13	Process concepts	17 January 2019
14	The Process, Process State	18 January 2019
15	Process Control Block, Threads	19 January 2019
16	Process Scheduling - Scheduling Queues	23 January 2019
17	Schedulers, Context Switch	24 January 2019
18	Preemptive Scheduling, Dispatcher	25 January 2019
19	Scheduling Criteria, Scheduling algorithms	30 January 2019
20	Multiple-Processor Scheduling	31 January 2019
21	Real-Time Scheduling, Thread scheduling	01 February 2019
22	Case studies: Linux	02 February 2019
23	Case studies: Windows	06 February 2019
24	Process Coordination - Process Synchronization,	07 February 2019
25	The Critical Section Problem, Peterson's solution	08 February 2019
26	Synchronization Hardware, Semaphores	09 February 2019
27	Classic Problems of Synchronization, Monitors	13 February 2019
UNIT-III: Memory Management and Virtual Memory		
28	Logical & physical Address Space	14 February 2019
29	Swapping, Contiguous Allocation, Paging	15 February 2019
30	Structure of Page Table, Segmentation	16 February 2019
31	Segmentation with Paging	21 February 2019
32	Virtual Memory, Demand Paging	22 February 2019
33	Performance of Demanding Paging	23 February 2019
34	Page Replacement, Page Replacement Algorithms	28 February 2019
35	Allocation of Frames, Thrashing	01 March 2019
UNIT-IV: File System Interface		
36	The Concept of a File, Access methods	02 March 2019
37	Directory Structure, File System Mounting	06 March 2019
38	File Sharing, Protection	07 March 2019
39	File System Structure	08 March 2019
40	File System Implementation	09 March 2019
41	Allocation methods, Free-space Management	13 March 2019
42	Directory Implementation, Efficiency and Performance	14 March 2019
43	Mass Storage Structure - Overview of Mass Storage Structure	15 March 2019

44	Mass Storage Structure - Overview of Mass Storage Structure	16 March 2019
45	Disk Structure,	20 March 2019
46	Disk Scheduling	22 March 2019
47	Disk Attachment,	23 March 2019
48	Disk Management	27 March 2019
49	Swap space Management	28 March 2019
UNIT-V: Deadlocks and Protection		
50	System Model, Deadlock Characterization	29 March 2019
51	Methods for Handling Deadlocks, Deadlock Prevention	30 March 2019
52	Deadlock Avoidance, Deadlock Detection	03 April 2019
53	Recovery from Deadlock	04 April 2019
54	System Protection, Goals of Protection	10 April 2019
55	Principles of Protection, Domain of Protection	11 April 2019
56	Access Matrix, Implementation of Access Matrix	12 April 2019
57	Access Control	13 April 2019
58	Capability-Based Systems,	17 April 2019
59	Language-Based Protection	18 April 2019
60	Revocation of Access Rights	20 April 2019

Text books:

1. Operating System Principles, Abraham Silberschatz, Peter Baer Galvin, Greg Gagne, 8th Edition, Wiley Student Edition.
2. Operating Systems - Internals and Design Principles, W. Stallings, 6th Edition, Pearson.

Name and signature of the faculty: Santosh T

Name and signature of Head of the Department: Vinod M