

College of IT and Management Education

Lesson Plan

Subject : Operating Systems (MCC-302)
Branch : MCA
Semester : 3rd Semester MCA(July-Dec,2016)
Name of the Faculty : Susanta Kumar Behera
Total Credit Point: 4

Total Number of Classes: 40

Sl. No.	TOPIC PLANNED	SESSION
MODULE-I		17 Hours
1	Evolution of Operating System	1
2	Types of Operating System	1
3	Structure of OS	1
4	Process concept, Process State Transition	1
5	Thread Vs Process, States of Thread	1
6	Scheduling Parameters and types	1
7	FCFS, Priority Based Non-Preemptive Algorithm	1
8	SRTN, Priority Based Preemptive	1
9	Round Robin Algorithm	1
10	Inter process Communication Modes	1
11	Critical Section Problem and its Solution	1
12	Dekkers Algorithm, Peterson Algorithm	1
13	Hardware Solution to Critical Section Problem	1
14	Semaphore operation, Types	1
15	Classic IPC Problem: Producer consumer	1
16	Dining Philosopher Problem, Reader Writer Problem	1
17	Monitor	1
MODULE-II		16
18	Deadlock Necessary Conditions, Resource Allocation Graph, Wait for Graph	1
19	Prevention of Deadlock: Havenders Linear Ordering Principle	1
20	Deadlock Detection Algorithm	1
21	Safe State, Safety Algorithm	1
22	Banker's Algorithm	1
23	Loading and Linking	1
24	Contiguous Allocation: Fixed and Variable Scheme	1
25	Non-Contiguous Allocation Scheme: Paging	1
26	Page Map Table Structure	1

27	Segmentation	1
28	Segmentation With Paging	1
29	Virtual Memory Concepts: Demand Paging	1
30	Page Fault ,Servicing of page fault	1
31	Page Replacement Algorithm: FIFO, Belady's Algorithm	1
32	Optimal, LRU,LFU,MFU	1
33	Thrashing and Working Set Model	1
MODULE-III		7
34	File Types, Operations	1
35	File System Implementation	1
36	Disk Scheduling: FCFS,SSTF,SCAN,C-SCAN,LOOK,C-LOOK	1
37	Directory Structure and operations	1
38	Disk Space Allocation method	1
39	Windows XP Case Study	1
40	LINUX Case Study	1

Text books:

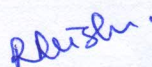
1. Abraham Silberschatz, Peter Baer Galvin, Greg Gagne, "Operating System Concepts", Eighth Edition, 2009, Wiley India Pvt. Ltd., New Delhi.
Reading Chapters: 1-15 & 19-22 (excluding chapters: 16, 17, 18, and 23).
2. Harvey M. Deitel, Paul J. Deitel, David R. Choffnes, "Operating Systems", Third Edition, 2004, Pearson Education Inc., New Delhi.

Reference Books:


1. Andrew S. Tanenbaum, "Modern Operating Systems", Third Edition, 2008, PHI Learning Pvt. Ltd., / Pearson Education Inc., New Delhi.
2. Ramez Elmasri, A. G. Carrick, David Levine, "Operating Systems: A Spiral Approach", First Edition, 2009, McGraw-Hill Education (India), New Delhi.
3. Ann McIver Hoes and Ida M. Flynn, "Understanding Operating Systems", Fifth Edition, 2009, CENGAGE Learning India Pvt. Ltd., New Delhi.
4. Gary Nutt, "Operating Systems", 3rd Edition, 2004, Pearson Education Inc., New Delhi.
5. William Stallings, "Operating Systems: Internals and Design Principles", Sixth Edition, 2009, PHI Learning Pvt. Ltd., / Pearson Education



Faculty



Course Coordinator



Principal