

**ST. ANN'S COLLEGE OF ENGINEERING & TECHNOLOGY:: CHIRALA**  
**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**  
**LESSON PLAN**

**SUBJECT: OPERATING SYSTEMS**

**ACADEMIC YEAR: 2017-18**

**NAME: P.VENKATA NARAYANA**

**YEAR & SEM: III – I CSE 'C'**

**No. of Lectures per week : 4+1\* (Tutorial)**

S. No	Unit	Topics to be covered	No. of Periods Required
1	I	<b>Computer System and Operating System Overview:</b> Overview of computer operating systems, operating systems functions, protection and security, distributed systems, special purpose systems, operating systems structures and systems calls, operating systems generation.	10
2	II	<b>Process Management</b> – Process concept- process scheduling, operations, Inter process communication. Multi Thread programming models. Process scheduling criteria and algorithms, and their evaluation.	9
3	III	<b>Concurrency:</b> Process synchronization, the critical-section problem, Peterson's Solution, synchronization Hardware, semaphores, classic problems of synchronization, monitors, Synchronization examples	9
4	IV	<b>Memory Management :</b> Swapping, contiguous memory allocation, paging, structure of the page table , segmentation <b>Virtual Memory Management:</b> virtual memory, demand paging, page-Replacement, algorithms, Allocation of Frames, Thrashing	7
5	v	<b>Principles of deadlock</b> – system model, deadlock characterization, deadlock prevention, detection and avoidance, recovery form deadlock	6
6	VI	<b>File system Interface-</b> the concept of a file, Access Methods, Directory structure, File system mounting, file sharing, protection. <b>File System implementation-</b> File system structure, allocation methods, free-space management <b>Mass-storage structure</b> overview of Mass-storage structure, Disk structure, disk attachment, disk scheduling, swap-space management	9
<b>Total Number of Periods Required</b>			<b>50</b>

**TEXT BOOKS:**

1. Operating System Concepts- Abraham Silberchatz, Peter B. Galvin, Greg Gagne 7th Edition, John Wiley.
2. Operating Systems' – Internal and Design Principles Stallings, Sixth Edition–2005, Pearson education

**REFERENCE BOOKS:**

1. [http://nptel.iitm.ac.in/courses/Webcourse-contents/IISc-BANG/ Operating%20Systems/New\\_index1.html](http://nptel.iitm.ac.in/courses/Webcourse-contents/IISc-BANG/Operating%20Systems/New_index1.html)
2. Operating systems- A Concept based Approach-D.M.Dhamdhare, 2nd Edition, TMH
3. Operating System A Design Approach-Crowley, TMH.
4. Modern Operating Systems, Andrew S Tanenbaum 3rd edition PHI.

**FACULTY**

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