

Subject Code : 2CS1010307	Subject Title: OPERATING SYSTEM
Pre-requisite :	-

Course Objective:

The course aims to provide basic knowledge of Operating System. This course intends to teach various features that will help the students to use and learn the working of Unix Operating System.

Teaching Scheme (Hours per week)				Evaluation Scheme(Marks)								
Lecture	Tutorial	Practical	Credit	Theory				Practical				Total
				University Assessment		Continuous Assessment		University Assessment		Continuous Assessment		
				Min. Marks	Max. Marks	Min. Marks	Max. Marks	Min. Marks	Max. Marks	Min. Marks	Max. Marks	
3	1	-	4	28	70	12	30	-	-	-	-	100

Subject Contents				
Sr. No.	Topics	Total Hours	Weight (%)	
1	Operating System Overview: Introduction to Operating System, Functions of Operating System, Types of Operating system, User interface(CUI,GUI), Operating System Services, Multi-Tasking, Multi Programming, Multiprocessing. Additional Concept: Buffering, Spooling.	10	20	
2	Process Management: Process, Process States ,Process Control Block (PCB), Scheduling :Types of Schedulers. Measuring Performance of Computer System: Throughput, Turnaround time, Response time, Waiting Time, CPU burst. Scheduling Algorithms –FCFS, SJF, Priority & Round Robin (RR) Scheduling. Mutual exclusion	10	20	
3	Deadlocks- Definition of Deadlock, Introduction of Deadlock, Methods to handling Deadlock, Deadlock Prevention, Characterization of deadlock, Dealing with Deadlock	10	20	
4	Memory Management : Static Memory Allocation, Dynamic Memory Allocation, Segmentation, Virtual Memory – Paging, Demand Paging , Page Replacement, Fragmentation & Defragmentation, Cache memory.	9	20	
5	Files: File Naming , File Structure , File Types, File Access Methods, File Attributes, File Operation Directories : Definition of Directory , Directory Structure	9	20	

Course Outcomes:

At the end of this course, the student would be able

- To understand fundamental knowledge of Operating System.
- To learn various UNIX commands and write shell programming.

List of References:

- Silberschatz & Galvin: Operating System Concept, Wiley, Sixth Edition
- Milan Malenkov's: Operating Systems, Tata McGraw – Hill, Second Edition.
- William Stallings: Operating Systems, PHI, Fourth Edition

E-Resources / Web Links:

- <https://www.tjhsst.edu/~dhyatt/superap/unixcmd.html>
- <https://www.tjhsst.edu/~dhyatt/superap/unixcmd.html>