



# C. U. SHAH UNIVERSITY

**FACULTY OF:** Computer Science  
**DEPARTMENT OF:** M.Sc(CA & IT)  
**SEMESTER :** II  
**CODE:** 4CS02OPS1  
**NAME:** Operating System

Sr . No	Subject Code	Subject Name	Teaching Hours/Week				Credits	Evaluation Scheme/Semester						Total Marks
			T	T	P	TOTAL		Theory			Practical			
			H	U	R			Sessional Exam	University Exam	Sessional Exam	University Exam			
								Marks	Hrs	Marks	Marks	Hrs	Total Marks	
1	4CS02OPS1	Operating System	4	0	0	4	4	30	1.5	70	50	1.5	50	150

**Objectives:-**

- Help students become familiar with the fundamental concepts of operating system.
- Help students become competent in recognizing operating systems features and issues.
- Provide students with sufficient understanding of operating system design and how it impacts application systems design and performance.

Sr.No	Course Contents	Total Hrs.
1	<b>Computer and Operating System Overview.</b> Computer system organization and Architecture, Evolution of operating system, Operating system structure and operations overview of Process, Memory, I/O , Storage	10
2	<b>Processes</b> Process states, PCB(Process Control Block), Operation on process, Process Scheduling, IPC (Inter Process Communication),Examples of IPC System Thread Overview, Multithreading model	12
3	<b>File Management</b> Overview, Access Methods, Directory structure, File System Mounting File Sharing, Protection	10
4	<b>Basic Unix Command</b>	10

**Learning Outcomes:**

- He/She should be able to understand the concepts of Operating System.
- He/She should be aware of operating system failure of know error.
- He/She should be able to solve problems of application errors due to Operation of function and define base



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architecture in terms of OS fundamentals.

### **Teaching & Learning Methodology:**

- The module will be delivered via lectures (by teaching aids i.e. Projectors PPT and PDF's) and assignments.

Students are also expected to undertake self-study during this course.

### **Books Recommended:**

1. Operating System Principles, **A. Silberschats, Peter Galvin, Greg Gagne**, WILEY-India 7th Edition.
2. Operating Systems, **William Stallings**, Pearson 6th Edition.
3. Operating Systems, **Achyut Godbole**, Tata McGraw- Hill.
4. Unix Systems Programming : Communication, Concurrency and Threads, **Kay Robbins**, 2-Edition, Pearson Education
5. Unix concepts and applications, **Sumitabha Das**, TMH Publications.
6. Unix programming, **Stevens**, Pearson Education.