



Indraprastha College for Women University of Delhi

Course Name:	Generic Elective (G.E.)
Paper Title:	Operating Systems
Unique Paper Code:	2344000005
Semester:	V
Faculty(s):	Dr. Manoj Kumar (lecture 1) Ms. Priyanka Gupta (lecture 2)
Year:	2026

Work Plan			
Unit No.	Learning Objective	Lecture No.	Topics to be Covered
I	Introduction	1	Introduction to Operating Systems.
		2	operating system Structure.
		3	Operating System Operations
		4	Process Management, Memory Management
		5	Storage Management
		6	Storage Management Examples
II	Operating system Structures	7	Operating system Services
		8	System Calls
		9	Types of System Calls

		10	System programs
		11	Operating System Structure in detail
III and V	Process Management Process Synchronization & Deadlocks File System	12	Process Concept
		13	Process scheduling
		14	Multi-Threading and its benefits
		15	Basic Concepts of Process Scheduling
		16	Scheduling Criteria

		17	Scheduling Algorithms-FCFS
		18	SJF
		19	Priority Scheduling
		20	Round Robin
		21	Process Synchronization Background
		22	The Critical Section Problem
		23	Peterson's Solution
		24	Introduction to Deadlocks, Conditions of Deadlock
		25	Resource Graph & Methods of Handling Deadlocks
		26	Examples & Numericals

		27	Disk Scheduling concept and numerical
		28	Test
		29	Revision with PYQ
		30	Revision with PYQ

Syllabus		
Unit		Contact Hours
I	Introduction	6
II	Operating System Structures	6
III	Process Management	15

IV	Memory Management	12
V	File System	12

	Total	45
Text Books/Suggested Readings:		
S. No.	Name of Authors/Books/Publishers	Year of Publication/ Reprint
1.	Galvin, S. P. B., Gagne, G., Operating System Concepts, 9th edition, John Wiley Publications,	2016
2.	Das, S., Unix: Concepts and Applications, 4th Edition, TMH	2009
3.	Dhamdhere, D. M., Operating Systems: A Concept-based Approach, 2nd edition, Tata McGraw-Hill Education	2017
4.	Kernighan, B. W., Pike, R., The Unix Programming Environment, Englewood Cliffs, NJ: Prentice-Hall	1984

	Paper Components		
Credits	Lecture (L)	Tutorial (T)	Practical (P)
4	3	0	1
Assessment Scheme			
S.No.	Component	Marking Scheme	Total Marks
1	Internal Assessment • Assignment/Quiz/Project/ Presentation • Class Test • Attendance		30
		12	
		12	
		6	

2.	Continuous Assessment (Tutorial)		NA
		• Activity 1	
		NA	
		• Activity 2	
3.	Practical	• Attendance	40
		NA	
		• Continuous Assessment	
		10	
	• End Term Written/Practical Exam	20	
		10	
4.	End Semester Examination		90