Lesson Plan & Work-done Diary for AY: 2025-26, Odd Semester

Course with Code: OPERATING SYSTEMS -BCS303							Semester & Section: 3rd	
Class No.	Date planned	Topics to be covered	**TLP Planned**	**Class No.**	**Date of Conduction (DD/MM)**	**Topics Covered**	**TLP Executed**	**Remarks if any deviation**
1		Module 1: Introduction to operating systems, System structures What operating systems do; Computer System organization;	PPT + Chalk & Board					
2		Computer System architecture Operating System structure; Operating System operations	PPT + Chalk & Board					
3		Process management; Memory management Storage management; Protection and Security	PPT + Chalk & Board					
4		Distributed system Special-purpose systems; Computing environments	PPT + Chalk & Board					
5		**Operating System Services:** User - Operating System interface	PPT + Chalk & Board					
6		System calls; Types of system calls; System programs; Operating system design and implementation	PPT + Chalk & Board					

7		Operating System structure; Virtual machines	PPT + Chalk & Board					
8		Operating System debugging, Operating System generation; System boot	PPT + Chalk & Board					
9		Module 2: Process Management: Process concept; Process scheduling	PPT+ chalk& Board					
10		Operations on processes; Inter process communication	PPT + Chalk & Board					
11		Multi-threaded Programming: Overview; Multithreading models	PPT + Chalk & Board					
12		Thread Libraries; Threading issues	PPT + Chalk & Board					
13		Process Scheduling: Basic concepts	PPT + Chalk & Board					
14		Scheduling Criteria; Scheduling Algorithms	PPT + Chalk & Board					

15		Thread scheduling	PPT + Chalk & Board					
16		Multiple-processor scheduling	PPT + Chalk & Board					
17		Module 3: Process Synchronization: Synchronization:	PPT + Chalk & Board					
18		The critical section problem; Peterson's solution	PPT + Chalk & Board					
19		Synchronization hardware ; Semaphores	PPT + Chalk & Board					
20		Classical problems of synchronization	PPT + Chalk & Board					

21		Deadlocks: System model; Deadlock characterization	PPT + Chalk & Board					
22		Methods for handling deadlocks; Deadlock prevention	PPT + Chalk & Board					
23		Deadlock avoidance	PPT + Chalk & Board					
24		Deadlock detection and recovery from deadlock	PPT + Chalk & Board					
25		Module 4: Memory Management: Memory management strategies	PPT + Chalk & Board					
26		Background; Swapping; Contiguous memory allocation	PPT + Chalk & Board					

27		Paging; Structure of page table	PPT + Chalk & Board					
28		Segmentation	PPT + Chalk & Board					
29		Virtual Memory Management: Background	PPT + Chalk & Board					
30		Demand paging; Copy-on-write	PPT + Chalk & Board					
31		Page replacement	PPT + Chalk & Board					
32		Allocation of frames; Thrashing	PPT + Chalk & Board					

33		Module 5: File System, Implementation of File System: File system: File concept	PPT + Chalk & Board					
34		Access methods; Directory and Disk structure; File system mounting, File system sharing	PPT + Chalk & Board					
35		Implementing File system: File system structure; File system implementation	PPT + Chalk & Board					
36		Directory implementation; Allocation methods; Free space management.	PPT + Chalk & Board					
37		Secondary Storage Structure, Protection: Mass storage structures	PPT + Chalk & Board					
38		Disk structure; Disk attachment; Disk scheduling; Disk management	PPT + Chalk & Board					

39		Protection: Goals of protection, Principles of protection	PPT + Chalk & Board					
40		Domain of protection, Access matrix.	PPT + Chalk & Board					
12		**Lab Internals -I**						
13		**Lab Internals -II**						

	Activity	Planned	Actual	Remarks
1	Theory Classes / Lab Session	11		
2	Assignments/ Quizzes/ Self-study	-		
3	Tutorials/ Extra classes	-		
4	Internal Assessments	2		
5	ICT based Teaching (% of usage in Curriculum)	100%		

Planning	**Execution**
Faculty Signature:	**Faculty Signature:**
HoD Signature:	**HoD Signature:**