

**Govt. College, Aharwala (Bilaspur) -Yamuna Nagar  
Lesson Plan (2021-22) [Even Semester]**

<b>Name of Associate / Assistant Professor :</b>	DR. SUNIL TANEJA
<b>Department :</b>	COMPUTER SCIENCE
<b>Class &amp; Section:</b>	BCA-III (6th Semester)
<b>Subject Name and Code:</b>	BCA-362: Operating System-II
<b>Semester Duration:</b>	TDC-III: 1st April 2022 - 15th June 2022 (Week 1 to Week 10) TDC-I & II: 1st April 2022 - 15th July 2022 (Week 1 to Week 14)

**Topics - Week Wise**

**Week 1**

Process Synchronization: The Critical Section Problem – Single Process/Two Process Solutions; Semaphores – Types, Implementation, Deadlocks and Starvation; Classical Problems of Synchronization – The Bounded Buffer Problem

**Week 2**

The Readers and Writers Problem, The Dining-Philosophers Problem, Critical Regions, Monitors, Directory Structure: Single Level, Two Level, Tree Structures, Acyclic Graph, General Graph; Directory Implementation, Recovery

**Week 3**

Secondary Storage Structure: Disk Structure, Disk Scheduling: FCFS, SSTF, SCAN, C-SCAN, LOOK; Selection of Disk Scheduling Algorithm; Disk Management; Swap Space Management

**Week 4**

Network Operating Systems: Remote Login, Remote File Transfer;  
Distributed Operating System: Data Migration, Computation Migration, Process Migration

**Week 5**

Linux: Introduction, Features, Architecture, Distributions, Accessing Linux System, Login/Logout/Shutting Down, Comparison of Linux with other Operating Systems

**Week 6**

Commands in Linux: General-Purpose Commands, File Oriented Commands, Directory Oriented Commands, Communication Oriented Commands, Process Oriented Commands, Redirection of Input and Output

**Week 7**

Pipes, Linux File System: Types of Files in Linux, File Attributes, Structure of File System, inode, File Permission, File System Components, Standard File System, File System Types, Disk Related Commands, Processes in Linux: Introduction

**Week 8**

Job Control in Linux using at, batch, cron & time commands, The vi editor: Introduction, Modes of vi Editor, Command in vi Editor, Shell Programming: Introduction, Shell Variables, Shell Keywords

**Week 9**

Operators, Assigning Values to the Variables, I/O in Shell, Control Structures, Creating & Executing Shell Programs in Linux.

**Week 10**

Revision

Note:-

The teaching of topics to the students on the Week s mentioned above may not be exactly followed and may have little variations/fluctuations because of some unforeseen circumstances. For example: various Functions/Activities organized by the College (Musical Meet, Blood Donation, Important Days Celebrations, Co-Curricular/Extra-curricular Activities etc.), Response of Students in the Class, Request of Students for Repetition of some specific Topics, Practical Examinations, Unpredicted Leaves, Restricted Holidays etc.