

Module Title:	Operating Systems
Module ID:	CAP 332
Prerequisite:	CAP 212, CAP 223
Level:	5
Credit Hours:	3 (3+0+1)

Module Description:

Introduction; Operating System services; CPU Scheduling; Disk Scheduling; Memory Management; Process synchronization.

Module Aims:

- To study the operations performed by Operating System as a resource manager.
- To learn the evolution of Operating systems.
- To study computer security issues and Operating System tools.

Learning Outcomes:

- Discuss issues and problems involved in the design and implementation of operating systems.
- Identify the abstract services common to all operating systems
- Define the basic operations system components and understand how the entire system fits together
- Develop hands-on experiences with the practical side of operating systems by programming and simulating different aspects.
- Describe OS support for processes and threads

- Describe CPU Scheduling, synchronization, and deadlock.
- Explain OS support for virtual memory, disk scheduling, I/O, and file systems.
- Identify security and protection issues in computer systems

List of Topics	No. of Weeks	Contact Hours
Introduction	1	3
Operating-System Structures	2	6
Processes	2	6
Threads	1	3
CPU Scheduling	2	6
Process Synchronization	2	6
Deadlocks	1	3
Main Memory	2	6
Files	1	3
I/O Systems	1	3

Textbook:

Operating System Concepts, Silberschatz, Galvin, and Gagne, 8th edition, Wiley