Course Title	Operating Systems		
Course Code	IT22033	**Theory hours**	30
No. of Credits	3	**Practical hours**	45
Pre-requisites Course Codes	none	**Tutorial hours**	none
Course Type	*core*		

Learning outcomes

1. Understand the need of an operating system for a computing device
2. Understand the basic operation of an operating system
3. Compare different scheduling and synchronization algorithms
4. Explain how memory is managed during execution of a program
5. Explain storage requirements for a process

Course contents	**Aligned Learning Outcomes**
1. Introduction to operating systems, simple batch system, time sharing systems, distributed systems, real time systems	1
2. System components, operating system services, system calls, system programs, process concept	2
3. Process scheduling, operations on processes, scheduling algorithms, process synchronization	3
4. Memory management, virtual memory	4
5. File concept, access methods, directory structure, I/O system, secondary storage structure, security	5

Methods of teaching and learning: Lectures, quizzes, practical sessions on implementing Linux & Windows threads, Linux Shell Scripts ***(Lab sheet is attached in Annex 5 - Page 183)***

Assessment Method	**Weight**
Continuous assessments	40%
End semester examination	60%

Recommended Readings

- Abraham S and , Peter B G(2011). *Operating System Concepts*. John Wiley & sons.
- M. Tanenbaum, A, S (2009). *Modern Operating Systems*. New Jersey: Pearson Education Inc.