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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Program: Bachelor of Science Honours (Information Technology) | | | | | | | Semester: I | | | |
| Course: Notion of Operating Systems | | | | | | | Code: | | | |
| Teaching Scheme | | | | | Evaluation Scheme | | | | | |
| Lecture | Practical | Tutorial | | Credits | Theory | | | | Practical | |
| Internal | External | | | Internal | External |
| 30 | Nil | Nil | | 02 | 20 | 30 | | | Nil | Nil |
|  | | | | | | | | | | |
| Internal Component | | | | | | | | | | |
| Class Test Duration Mins | | | Assignment& projects | | | | | Class Participation | | |
| 10 Marks 20 Mins | | | 10 Marks | | | | | Nil | | |
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| Learning Objectives   1. To learn the basic concepts of operating system 2. To learn the concept of process and threads 3. To learn the concept of inter-process communication in OS 4. Introduction to the basic commands in Linux | | | | | | | | | | |
| Learning Outcomes   1. Students will be able to understand the basic concepts of operating system 2. To understand the working of process and threads 3. To understand the working of Inter Process Communication in OS 4. Students will understand the Linux Command line environment | | | | | | | | | | |
| Pedagogy   * PPTs, Case studies, Group discussions, Classroom Activity, Videos, Research papers, News articles etc. | | | | | | | | | | |

**Module 1** (10)

Introduction:

What is an operating system? History of operating system, computer hardware, different operating systems with examples, operating system concepts, system calls, operating system structure.

**Module 2** (10)

**Processes and Threads:**

Processes, threads, inter-process communication, scheduling, IPC problems.

**Module 3** (10)

Introduction to Linux

Shell, Windows Power Shell, Basic Linux Commands, Working with Directories, Listing Files, File and Directory Permissions, Finding Files, Viewing and Editing Files, Searching in Files, Deleting, Copying, Moving, and Renaming Files, creating a Collection of Files, Compressing Files to Save Space, Processes and Job Control

References

1. Modern Operating System by Andrew S. Tanenbaum
2. Linux for Beginners by Jason Cannon