Course 203: Operating System - I

Course Code	203
Course Title	Operating System - I
Credit	4
Nature of Subject:	Theory Only
Teaching per Week	4 Hrs
Minimum weeks per Semester	15 (Including Class work, examination, preparation etc.)
Review / Revision	June 2020
Purpose of Course	An Operating System (OS) is a software that manages computer hardware and software resources and provides common services for computer programs. The operating system is an essential component of the system software in a computer system. Application programs usually require an operating system to function.
Course Objective	The objective of this course is: 1. To make students understand functionality provided by an Operating System. 2. To make students aware with basic concepts of Windows O. S. Management. 3. To teach device management to the Students.
Pre-requisite	Basic Knowledge of Programming.
Course Out come	After studying this course, students will be able to understand what the role of an OS is; how process management, memory management, and file management is performed by the OS. The students will be able to develop applications that coordinate with the respective OS in a much better way, which is so essential.

Course Content	**Unit 1. Operating System Concepts** 1.1.Evolution of Operating System & History 1.2.Need of an Operating System 1.3.Single User & Multi User Operating System 1.4.Elements of an Operating System 1.5.Operating System as a Resource Manager **Unit 2. Introduction to File System and File Management** 2.1.File Concept 2.2.Operations on File 2.3.File Access Methods (Sequential Access and Direct Access) 2.4. Directory Systems File Management Functions. 2.5. File System and Directory Structure organization. 2.6. File Protection. **Unit 3. Introduction of Linux** 3.1.Introduction of Linux versions 3.2.Components of Linux 3.3.Comparison of Windows and Linux **Unit 4. Linux Administration** 4.1.Installing Linux 4.2.Installation of Open Source Software 4.3.Maintaining User Accounts 4.4.System Config Services (Package) **Unit 5. Device Management** 5.1.Device Management Function 5.2.Device Characteristics 5.3.Disk space Management 5.4.Allocation and Disk Scheduling Methods
Reference Books	1. Operating System Concepts: – James Peterson: – McGraw Hill 2. Operating System: – Stallings - PHI 3. Operating System Principles: – Silberschatz, Galvin, Gagne - Willey, India 4. Operating Systems – A. S. Godbole – Tata McGraw Hill 5. Linux – The Complete Reference – Richard Petersen – Tata McGraw Hill
Teaching Methodology	Class Work, Discussion, Self-Study, Seminars and/or Assignments
Evaluation Method	30% Internal assessment. 70% External assessment.