

### Course 203: Operating System - I

<b>Course Code</b>	203
<b>Course Title</b>	Operating System - I
<b>Credit</b>	4
<b>Nature of Subject:</b>	Theory Only
<b>Teaching per Week</b>	4 Hrs
<b>Minimum weeks per Semester</b>	15 (Including Class work, examination, preparation etc.)
<b>Review / Revision</b>	June 2020
<b>Purpose of Course</b>	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.
<b>Course Objective</b>	The objective of this course is: <ol style="list-style-type: none"><li>1. To make students understand functionality provided by an Operating System.</li><li>2. To make students aware with basic concepts of Windows O. S. Management.</li><li>3. To teach device management to the Students.</li></ol>
<b>Pre-requisite</b>	Basic Knowledge of Programming.
<b>Course Out come</b>	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.

<p><b>Course Content</b></p>	<p><b>Unit 1. Operating System Concepts</b></p> <ol style="list-style-type: none"> <li>1.1.Evolution of Operating System &amp; History</li> <li>1.2.Need of an Operating System</li> <li>1.3.Single User &amp; Multi User Operating System</li> <li>1.4.Elements of an Operating System</li> <li>1.5.Operating System as a Resource Manager</li> </ol> <p><b>Unit 2. Introduction to File System and File Management</b></p> <ol style="list-style-type: none"> <li>2.1.File Concept</li> <li>2.2.Operations on File</li> <li>2.3.File Access Methods (Sequential Access and Direct Access)</li> <li>2.4. Directory Systems File Management Functions.</li> <li>2.5. File System and Directory Structure organization.</li> <li>2.6. File Protection.</li> </ol> <p><b>Unit 3. Introduction of Linux</b></p> <ol style="list-style-type: none"> <li>3.1.Introduction of Linux versions</li> <li>3.2.Components of Linux</li> <li>3.3.Comparison of Windows and Linux</li> </ol> <p><b>Unit 4. Linux Administration</b></p> <ol style="list-style-type: none"> <li>4.1.Installing Linux</li> <li>4.2.Installation of Open Source Software</li> <li>4.3.Maintaining User Accounts</li> <li>4.4.System Config Services (Package)</li> </ol> <p><b>Unit 5. Device Management</b></p> <ol style="list-style-type: none"> <li>5.1.Device Management Function</li> <li>5.2.Device Characteristics</li> <li>5.3.Disk space Management</li> <li>5.4.Allocation and Disk Scheduling Methods</li> </ol>
<p><b>Reference Books</b></p>	<ol style="list-style-type: none"> <li>1. Operating System Concepts: – James Peterson: – McGraw Hill</li> <li>2. Operating System: – Stallings - PHI</li> <li>3. Operating System Principles: – Silberschatz, Galvin, Gagne - Willey, India</li> <li>4. Operating Systems – A. S. Godbole – Tata McGraw Hill</li> <li>5. Linux – The Complete Reference – Richard Petersen – Tata McGraw Hill</li> </ol>
<p><b>Teaching Methodology</b></p>	<p>Class Work, Discussion, Self-Study, Seminars and/or Assignments</p>
<p><b>Evaluation Method</b></p>	<p>30% Internal assessment. 70% External assessment.</p>