

Details of Course:**Course Title: Skill Enhancement Course 1**

Course Title	Course Structure			Pre-Requisite
Computer Workshop 1	L	T	P	Nil
	0	0	4	

Course Objective:

Students of Software Engineering are to work with various hardware and software not only in academia but also in the company. Thus, students should get familiar with various hardware, software, operating systems, and networking. This course will provide students a much-needed knowledge of computer hardware and networking, enabling them to identify and rectify onboard computer hardware, software, and network-related problems. With the help of this course, the student will be able to understand the hardware specifications that are required to run an operating system and various application programs.

Course Outcome (CO):

After completing their training in Computer Workshop, students will be able to

CO1. Describe the procedure for installation of software on different systems and identify the various components of hardware systems.

CO2. Identify and demonstrate components of computer and operating system and their troubleshooting.

CO3. Describe the basics of Internet and web design

CO4. Perform the process of software installation

S.No.	Content	Contact Hours
Unit 1	<p>Assembly/Disassembly of Computers: Hardware peripherals like RAM, ROM, input devices, output devices, processors, etc. Processors and processor core counts and frequency etc. motherboards, internal and external connectors. Types of data cables. LAN, Audio, and Video. The physical set-up of Printers- Scanner set-up, Webcam, Bluetooth device, Memory card reader, etc. Working of SMPS. Connection of different types of devices to the ports (CPU), Single board computer: Raspberry Pi.</p> <p>Assembly/Dis-assembly of Laptop: Mounting of processor. Fixing of the motherboard in the tower case. Connection to the power supply. Installation of drivers. Connection of cables. Mount the memory modules. Install the internal cards. Connection of the external devices and power.</p>	2
Unit 2	Computer Network Setup: Networking	4

	<p>components, devices, and tools; Preparing the network cables, network setup, configuration and management commands, Installation and configuration of network interface card and identification of MAC address. Sharing of resources</p> <p>Software Installations: Installation of Windows Operating System, Types of software and their installations, some useful software (MS office, Adobe Acrobat, Google Chrome, VLC Media Player, LibreOffice, Win Rar)</p>	
Unit 3	<p>PC Maintenance: POST (Power on Self-Test), identifying problems by Beep codes errors, checking power supply using Multi-meter, Replacement of components etc.</p> <p>Introduction to MS office: Introduction to MS office - MS Word, MS PPT, MS Excel, Working with MS Word. MS Excel - Introduction to MS Excel, Basic computations, and calculations. Creation of slides including hyperlink, video, audio, and textual content.</p>	4
Unit 4	<p>Tools for Online Teaching and Meetings: Setting & troubleshooting of online meetings and video conferencing like google meet, zoom, Microsoft teams, Webex etc; use of google classroom and google forms for teaching, feedback, and evaluation.</p> <p>Internet and Basic Webpage Design: Searching the Internet, checking the speed of Internet connection, usage of E-Commerce, Creating webpage using HTML, CSS with static text, images, tables, audio, video etc and dynamic contents, animation usage and tools for webpages</p>	4
Unit 5	AI & ML Applications: Case studies using module (Blackbox based) integration for AI & ML and its applications	2
	Total	16