Title:	PC Maintenance and Troubleshooting
Duration:	30 hours
Course Credits:	2
Eligibility Criteria:	12th Pass with Basic Computer Knowledge
Type of Course:	Computer Science Discipline
Mode of Lectures:	Blended
Medium of Instruction:	English
Pre-requisite:	● Basic knowledge of Computer. ● Basic Knowledge of Hardware and Software.
Evaluation Method:	Blended
Course Outcome	● Increase knowledge about How Computer works. ● Identify and describe functions of common hardware parts that make up a computer. ● Assemble Desktop Computer. ● Install and configure Window Operating System. ● Install useful application software. ● Troubleshoot hardware and software issue. ● Install Printer, Scanner and troubleshoot their fault.
Course Objective	Aims to provide knowledge of personal computer hardware and Operating System. Successful completion of this course will enable learners to install a computer system unit and operating system and conduct troubleshooting. The unit provides the essential knowledge of computer hardware, the software needed to make a hardware work, the components of the hardware and the technologies and principles that support the components. In addition to this knowledge, learners will be able to assemble computer hardware to build a full set PC, understand how to install the operating system and how to conduct troubleshooting in faulty hardware.
Course Content:	**1. Assembling Dissembling Hardware Component** 1.1 Identify various hardware component. 1.2 Identify front and rear panel port and connector. 1.3 Understand Motherboard and various component on it. 1.4 SMPS & Its connection with motherboard. 1.5 Dissembling PC component. 1.6 Assembling component and build a PC. 1.7 Troubleshooting common hardware problems. **2. Virtual Machine** 2.1 Introduction to Virtual Machine

	2.2 Installation of VMWare.
	2.3 Create and Configure Virtual Machine
	3. Operating System Installation
	3.1 Introduction about OS.
	3.2 BIOS Overview.
	3.3 Booting Process.
	3.4 UEFI Vs Legacy Boo.
	3.5 Various software for Make Bootable USB.
	3.6 Make Bootable USB (Single and Dual boot).
	3.7 Difference between Installation and Upgrading Windows 10.
	3.8 Install Windows 10.
	3.9 Install Ubuntu.
	3.10 Create Dual boot System.
	4. Windows Utilities
	4.1 Hard disk Partitioning.
	4.2 Third Party tools for Hard Disk Partitioning.
	4.3 Disk Cleanup and Disk Defragmentation.
	4.4 Create Windows System Image.
	4.5 Create Restore Point.
	4.6 Installation of third party Antivirus.
	5. Printers & Scanner
	5.1 Types of Printer.
	5.2 Printer Installation and configuration.
	5.3 Scanner Installation and configuration.
	5.4 Troubleshooting common Printer and Scanner problem.
	6. Troubleshooting Windows.
Reference Books:	1. 1. R. Taxali, "Computer Course", McGraw- Hill, 2010.
	2. Prof. S.P.S. Saini, "Troubleshooting and Maintenance of Computers", Vayu Educationof India, 2009.
	3. B Govindarajalu, IBM PC and Clones – "Hardware, Troubleshooting and Maintenance", Second Edition, Tata McGraw – Hill, 1991.
	4. Dan Gookin – "Troubleshooting & Maintaining Your PC All-In-One for Dummies"
	5. Ron White – "How Computers Work"
	6. Alex Frith – "Look Inside How Computers Work"