

Vocational Skill Development Course		
Course Title	Fundamental of Computers	
Course Outcomes:	On completion of the course the student will be able to:	
CO1:	Understand the fundamental concepts of computers.	
CO2:	Learn basic concepts of operating systems including basic commands of DOS, UNIX/LINUX	
CO3:	Understand office packages including Word, Excel and PowerPoint	
CO4:	Learn the fundamentals of networking	
CO5:	Understand basic network security issues.	
Credits:03	Total No. of Lectures-Tutorials-Practical (in hours per week)	L-T-P (3-0-0)
Marks	Internal Marks: 25	External Marks:75 Total 100
Unit	Topic	No. of Lectures
I	COMPUTER BASICS Definition and Types of Computers, Generations of Computer, Data and Information, Components of a Computer System, Central Processing Unit (CPU), Visual Display Unit, Other input/output Devices, Computer Memory, RAM, ROM, PROM, EPROM, EEPROM, Concepts of Hardware and Software, Applications of computers in different areas, Concept of Computing, Units of Memory, Number System.	08
II	OPERATING SYSTEM CONCEPTS System Software and Application software, Operating System, Types of Operating System, Functions of Operating System, Basic DOS commands: cd, dir, copy, del. edit, move, ren, append, attrib, diskcopy, mkdir, ping, exit Basics of Windows Operating System, Graphical User Interface, Basics of LINUX/UNIX, LINUX Commands: ls, cd, date, cal, grep, pwd, mv, cp, rm, mkdir, clear, reboot, exit.	08
III	OFFICE PACKAGES Word Processing Basics; Opening and Closing of documents; Text creation and Manipulation; Formatting of text; Table handling; Spell check, Language setting; Printing of word document, Basics of Spreadsheet; Manipulation of cells; Formulas and Functions; Editing of Spread Sheet, Printing of Spread Sheet, Basics of presentation software; Creating Presentation; Preparation and Presentation of Slides; Slide Show; Taking printouts of presentation.	12

IV	<p>DATA COMMUNICATION AND COMPUTER NETWORKS Digital and Analog Signal, Transmission Modes, Asynchronous & Synchronous Transmission, Basic of Computer networks, LAN,WAN, MAN; Communication media: Twisted Pairs, Coaxial cable, Microwave Transmission, Communication Satellites, Fiber Optics; MODEMs, Networking Topology: Bus, Ring, Star, Tree, Hybrid; Connecting devices: Hub, Switch, Router, Bridge, Gateway, Repeater.</p>	08
V	<p>INTERNET AND CYBER SECURITY Concept of Internet; Applications of Internet; connecting to internet; ISP;Basics of internet connectivity and related troubleshooting, World Wide Web; Web Browsers, Search Engines; Understanding URL; Domain name; IP Address, e-mail, Antivirus, Firewalls, Cyber Crimes, Digital Signature, Ethical Hacking.</p>	09

Suggested Readings:

- Sinha, P.K. “Computer Fundamentals”. New Delhi: BPB Publications..
- Abraham Silberschatz, Greg Gagne, and Peter B. Galvin(2018), “Operating System Concepts”, Tenth Edition, Wiley, 2018
- Mukhi, Vijay (2008).”Working with UNIX”. New Delhi: BPB Publications.
- B. A. Forouzan: “Data Communications and Networking”, Fourth edition, THM 2007.
- Matt Vic (2021),”Microsoft Office 365:A Complete Guide to Master Word, Excel and PowerPoint 365 for Beginners and Pro”
- Yuri Diogenes Erdal (2018), “Cyber Security: Attack and Defense Strategies”, Infrastructure security with Red Team and Blue Team tactics.

Suggested Continuous Evaluation Methods:

Continuous Internal Evaluation shall be based on allotted Assignment and Class Tests.

The marks shall

Internal Assessment	Marks
Class Interaction	05
Quiz/Assignments	05
Seminar/Presentation	05
UnitTest/ClassTest	10
Total	25