HCS-C102	FUNDAMENTAL OF COMPUTER	L	T	P	C
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Prerequisite: NIL

Course Objectives:

1. Skill enhancement related to IT basics, computer applications, programming, interactive Medias, Internet basics etc.

2. Have a basic understanding of personal computers and their operations.

3. It builds the foundation of the computer application.

Course Outcomes:

CO1. Understand a computer system that has hardware and software components, which controls and makes them useful.

CO2. Comprehend the operating system as the interface to the computer system.

CO3. Understand the operating system as the interface to the computer system. Outline various application of IT Differentiate between assembly and high-level language

CO4. Identify various web browser, Use the Internet to send mail and surf the World Wide Web

CO5. Evaluate ethical concerns involved in the use of technology and also identify issues related to information security.

Fundamentals of Computer: Historical evolution of computers, Generations of computers, Classification of computers - based on size, processor, Usefulness of Computers. Applications of computers, Block Diagram along its components and characteristics, Interaction between the CPU.

Memory Input/output devices, function of CPU and major functional parts of CPU. Recognize the current family of CPUs used in Computers, Types of Memory- RAM ROM, Monitor, Mouse, Keyboard, Disk, joysticks, Storage Devices, floppy disk, CD, DVD, Pen drive, trackballs, Printers Types of printers, Scanner, Modem, Video, Sound cards, Speakers.

Data Representation: Definition of Information, difference between data and information, importance of Binary Number System, various number systems, Conversion from Decimal to Binary, Conversion from Binary to Decimal, binary number into hexadecimal number, hexadecimal number into binary number System, Memory Addressing and its Importance, ASCII and EBCDIC coding System.

Fundamentals of Internet: Concepts of computer Network, Client Server Model, Peer to Peer Model, Networking Devices: Switch, Router, Hub, Bridge, Gateway, LAN, MAN, WAN, Topology, Internet, Intranet, Extranet.

Data Communication: Communication Process, Data Transmission speed, Communication Types (modes), Data Transmission Medias, Modem and its working, characteristics, Types of Networks, LAN Topologies, Computer Protocols, Concepts relating to networking,

Business Data Processing: Introduction, data storage hierarchy, Method of organizing data, File Types, File Organization, File Utilities.

Security: Define basic security threats, define security best practices, explain confidentiality, integrity and availability (CIA), Describe authentication, authorization and accounting.

Recommended Books:

1. Computers Fundamentals, PK Sinha, BPB Publications, 6th Edition.

2. Introduction to Computers, Peter Norton, Tata McGraw-Hill, 6th Edition.

3. The UNIX Programming Environment, Kernighan, Pearson, 2nd Edition.

4. Digital Design, Morris Mano, PHI, 2nd Edition.

5. Data communication & Networking, A.B. Forouzan, Tata McGraw-Hill, 4th Edition.