Course Code: 103
Course Title: Introduction to Computers

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Course Title	Introduction to Computers
Credits	4
Course Category	Minor Course
Level of Course	100-199 (Foundation / Introductory)
Teaching per Week	4 Hrs.
Minimum weeks per Semester	15 (Including class work, examination, preparation etc.)
Review / Revision	2022-2023
Implementation Year:	A.Y. 2023-2024
Purpose of Course	- Concepts and types of computer and various hardware technologies relevant to computer as well as some important peripherals will be covered. - Introduction of computer internal memories, number systems and conversions from decimal to binary. - Exposure of various input and output devices as well as concepts of Internet and relevant gadgets and their application
Course Objective	To provide knowledge of functional units, number System, Devices and memory & its storage.
Pre-requisite	-
Course Outcomes	**CO1:** Students will be able to develop interest in using computers for professional work. **CO2:** Students will be able to learn functional units of computers, how they process information with other computing systems and devices. **CO3:** Students will be able to understand basic computer hardware components. **CO4:** Students will be able to express the major concepts of Application software and System Software. **CO5:** Student will be able to learn how the computer represents and stores information using binary number system, and will be able to convert between binary and decimal number system. **CO6:** Students will be able to understand the functions of input output devices, know the different types of I/O Devices, and assess new technology used for I/O devices. **CO7:** Students will be able to understand types of internet services, internet connections, and also able to learn the concept of cloud applications, essential web browser technologies.

Mapping between Course Outcomes(CO) with Program Outcomes(PSO)		PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
	CO1	■	■						
	CO2	■	■		■	■			
	CO3					■	■	■	
	CO4			■	■		■		
	CO5		■		■				
	CO6						■	■	■
	CO7				■	■		■	■

Course Outcome	On completion of this course, students will get knowledge about functional units, number System, devices and memory and storage.
Course Content	**UNIT-1: Introduction** 1.1 Introduction of Computer 1.2 Applications of Computer 1.3 Types of Computers – Super Computers, Mainframes, Mini Computers, Micro computers(Desktop, Laptop, Notebook, Tablet, Smart Phones) 1.4 Block Diagram and functional units of computer **UNIT-2: Basic Computer Architecture** 2.1 Concepts of Address Bus and Data Bus 2.2 Concept of virtual memory and cache memory 2.3. Hardware Components 2.3.1. Motherboard 2.3.2. Types of Processor (CPU and GPU) 2.3.3. Understanding processor speed 2.3.4. Memory – RAM(SRAM,DRAM, SDRAM), ROM, EPROM, EEPROM 2.3.5. Storage Devices – Hard Disk, CD, DVD, USB flash memory 2.4. Introduction to Software 2.4.1. Purpose and significance of Operating System 2.4.2. Concept of System Software and Application Software **UNIT-3: Number System** 3.1. Introduction of Decimal, Binary, Octal and Hexadecimal number Systems. 3.2 Conversion of Decimal to Binary and Binary to Decimal 3.3 Binary addition & subtraction 3.4 ASCII and ANSI character code **Unit – 4: Input & Output Devices** 4.1. Introduction of Input Devices 4.1.1. Pointing Devices – Mouse, Trackball, Joystick, Touch Screen, Light Pen 4.1.2. Keyboard 4.1.3. RFID concepts and application in FastTag 4.2. Introduction and purpose of Scanning Devices 4.2.1. Optical Scanner 4.2.2. Bar Code Reader 4.2.3. Web Camera 4.3. Introduction and comparisons of Output Devices 4.3.1. Monitors – LED, LCD,TFT, OLED, TouchScreen Monitor 4.3.2. Printers – Dot Matrix Printer, Laser Printer, Inkjet Printer **Unit - 5: Concepts of Internet** 5.1. Concepts of Internet and WWW 5.1.1 Types of Internet Services 5.1.2 Hardware – Modem, Router, Blue tooth, Fire-Stick 5.1.3 Internet connections using Hotspot, WiFi, cable 5.2 Introduction of Cloud 5.2.1 Concepts of cloud 5.2.2 Purpose and application of Cloud (Example of GoogleDoc) 5.2.3 Concepts of Online Data Backup 5.3 Introduction of Web Browser and relevant terminologies : 5.3.1 URL, Address bar, Domain, Links, Navigation Buttons 5.3.2 Tabbed browsing, Bookmarks, History
Reference Books	1. How computer work: Ron White – Tech media 2. Introduction to computers: 4th Edition – Peter Norton 3. Fundamentals of Computers: V. Rajaraman 4. Computer Fundamentals: Pradeep K. Sinha & Priti Sinha (BPB) 5. Introduction to Networking RechardMcMohan Tata McGraw Hill Publication 6. HTML Black Book – Steven Holzner – Dreamtech Press

	7. Computer Network Fundamentals and application – R S Rajesh Vikas Publication 8. HTML for the World Wide Web, Fifth Edition, with XHTML and CSS- Peachpit Press
Teaching Methodology	Class Work, Discussion, Self-Study, Seminars and/or Assignments
Evaluation Method	50% Internal assessment. 50% External assessment.