Course: 103 : Introduction to Computers

Course Code	103
Course Title	Introduction to Computers
Credit	4
Teaching per Week	4 Hrs
Minimum weeks per Semester	15 (Including Class work, examination, preparation etc.)
Review / Revision	June 2014
Purpose of Course	A computer is a device that can receive, process and store data. They are used as tools in every part of society together with the Internet. Computers nowadays are complex; there are a lot of different components inside them, and they all serve different purposes. They all need to work together for the computer to work; knowing how a computer works makes it easier to use a computer by being able to understand how a computer will respond.
Course Objective	Objective is to provide knowledge of functional units, number System, devices and memory & its storage.
Pre-requisite	Fundamental Knowledge of Computers
Course Out come	After studying this subject, students will get knowledge of functional units, number System, devices and memory & its storage.
Course Content	**Unit 1. Introduction** 1.1. History of Development 1.2. Generation of Computers 1.3. Types of Computers-Microcomputers, Minicomputers, Mainframes, Super Computers 1.4. Hardware, Software & Firmware **Unit 2. Basic Computer Architecture** 2.1. Block Diagram & Functional Units 2.2. Various hardware components: Mother board, Processor, Memory, ports 2.3. Phases of Machine cycle 2.3.1. Fetch Cycle 2.3.2. Execution Cycle 2.4. BIOS, POST **Unit 3. Number Systems** 3.1. Various number systems (Binary, Octal, Hexadecimal, Decimal) 3.2. Conversion among various number systems 3.3. Binary addition & subtraction 3.4. Hexadecimal addition & subtraction 3.5. Parity Scheme 3.6. ASCII Character Code **Unit 4. Memory** 4.1. Memory organization 4.2. Addressing Modes 4.3. Memory types: RAM, ROM, FLASH, PROM, EPROM, EEPROM

	4.4. Concepts of virtual memory, Cache memory **Unit 5. Storage Devices** 5.1. Floppy Disks: structure, reading/writing, formatting 5.2. Hard disk and its architecture 5.3. CD-ROM, DVD ROM 5.4. Back up Devices **Unit 6. I/O Devices** 6.1. Printers: Line printer, DOT matrix, Laser, Inkjet 6.2. Plotters: Scanners, OCR, OMR 6.3. Keyboard, Mouse 6.4. Other Devices: Joysticks, Touch pads, pens etc. 6.5. Monitors (CRT Flat Screen LCD)
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)
Teaching Methodology	Class Work, Discussion, Self Study, Seminars and/or Assignments
Evaluation Method	30% Internal assessment. 70% External assessment.