

MODULE**COMPUTER ARCHITECTURE****CODE:****BSCH-1-1-08****STAGE**

I

Number of Credits:

4 semester credits / 6 quarter units

STATUS

CORE

THEMES

Computer Systems

ASSESSMENTContinuous Assessment 30%
Examination 70%**Indicative Content**

Topic	Description
Peripheral Devices and Connectors	I/O devices: Keyboards, mouse, touch pads, scanners, digital cameras, printers, monitors; Standard connectors: RJ, DB, Centronics, PS/2, DIN, mini DIN, mini jacks;
Mass Storage Devices	Magnetic: Disk drives and file systems, tape drives; Optical: CD, CD-RW, DVD;
Memory	ROM & RAM: dynamic, static and synchronous; Memory packaging;
Interfaces	Internal: ISA, EISA, PCI & AGP; External: Serial, parallel, USB, Firewire, IrDA and Bluetooth;
Internal Hardware Architecture	VLSI Microprocessor : ALU, Control Unit and Registers; Fetch and Execute Cycle including interrupts; CISC & RISC architectures; Control, address and data buses; Bootstrapping, BIOS & CMOS settings;
Processors & Processor Developments	Pentium to modern day Intel processor; Motherboard and chipset architecture; Pipelining and parallel processing; New instruction sets;
Computer Arithmetic	Binary, Octal and Hexadecimal number bases; Data Representation: integer, character & floating point;
Digital Electronics	Logic Gates & Truth Tables; Boolean Logic & Karnaugh Maps; Basic Logic circuits using NAND gates only; Half & Full adder circuits;
Introduction to computer languages	History of system software and programming languages; Language translators; Introduction to assembly language programming;