

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

I

**Number of Credits:**

4 semester credits / 6 quarter units

**STATUS**

CORE

**THEMES**

Computer Systems

**ASSESSMENT**

Continuous Assessment 30%

Examination 70%

*Indicative Content*

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