

Module Title: Computer Systems Architecture

Module Code: CMC1411

Module Value: 0.5

Duration: 30 weeks

Class-Contact Hours: Lecture 15 hours.

Tutorial/Laboratory 15 hours.

Assessment Scheme: Continuous Assessment 50%

Examination 50%

Module Rationale/Aims:

· to introduce at an elementary level, and from an architectural perspective, the essential components in a computer system.

Learning Objectives:

Students will be able to:

· identify and describe the functions of the typical hardware and software components of a computer system;

Syllabus Keywords:

computer system architecture, computer, architecture, hardware, software, digital circuit, devices, operating system, OS.

Recommended Textbooks/References:

Shelly, G. B, Cashman, T. J. and Waggoner G. A, Discovering Computers: A Link to the Future, World Wide Web Enhanced, 1 st Ed. of latest edition, International Thomson Publishing Co., 1999. Mano, M. Morris, Computer System Architecture, 3 rd Ed. or latest edition. Prentice-Hall International, 1993. Key Content Area:

Lecture Tut/Lab**1 Computer Systems Architecture**

a An Overview

2 Logic Systems and Digital Circuits

a Numbering Systems: Arithmetic and Complement Representations

b Boolean Algebra

c Introduction to digital circuits

3 Hardware Components of a Computer System

a Processor Unit

b Main Memory

c Input/Output Devices

d Secondary Storage

e Bus

f Current processor and device technologies

4 Software Components of a Computer System

a Classification of Software

b System Software

c Operating Systems