

ICT114 Computer Architecture

Level: 1

Credit Units: 5 Credit Units

Language: ENGLISH

Presentation Pattern: EVERY REGULAR SEMESTER

Synopsis:

ICT114 Computer Architecture introduces the main components of a computer system and the technology used in these components. It illustrates how the processor interacts with various components of the computer system to transfer and process data. Students learn simple assembly language programming to understand how the processor works with the data and its registers. Students learn how the hardware components of a computer system depend on the necessary software to support major functions that include processing, storage and communication. The primary storage of a computer system keeps the instructions and data needed by the processor to read and write for executing programs, while the secondary storage keeps data for programs that are currently not executing. Input/Output devices enable a computer system to communicate with human users or other computer systems.

Topics:

- Computer technology
- Hardware (systems architecture)
- Software (programming languages)
- Data representation
- Data processing
- Processor technology and architecture
- Processor performance
- Primary storage technology
- Secondary storage technology
- System integration
- System performance
- Input/Output technology

Textbooks:

Systems Architecture Stephen D. Burd Cengage
ISBN-13: 9789814844499

ICT114 Study Guide
ISBN-13: SG-1694

Learning Outcome:

- List the various components of a computer system
- Discuss the use of different technologies in the various peripheral devices
- Explain how data is represented, structured and stored
- Demonstrate how instructions of a program are executed
- Describe the processor technology used in personal computing devices, smart devices and servers
- Create simple assembly language programs to process and store data
- Recognize the features of various types of computer systems

Assessment Strategies - Regular Semester (Evening Class):

Components	Description	Weightage Allocation (%)
Overall Continuous Assessment	PRE-CLASS QUIZ 1	2
	PRE-CLASS QUIZ 2	2
	PRE-CLASS QUIZ 3	2
	QUIZ 1	6
	TUTOR-MARKED ASSIGNMENT 1	18
Overall Examinable Components	Written Exam	70
Total		100

*The information listed is subject to review and change.