**EMT1102 Information and Communications Technology**

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| --- | --- | --- | --- | --- | --- | --- | --- |
| Period per  Week | | | Contact Hour per Semester | Weighted  Total Mark | Weighted  Exam Mark | Weighted Continuous Assessment Mark | Credit  Units |
| LH | PH | TH | CH | WTM | WEM | WCM | CU |
| 30 | 60 | 00 | 60 | 100 | 60 | 40 | 4 |

**Rationale**

This course draws upon evolution of Information Communication Technologies as a precursor to applications of computers in day-to-day life. This is critical for any student going into the field of computer engineering.

**Objectives**

 To provide an overview of the evolution of the computer

 To appreciate the societal importance and the trend towards the convergence of computing and communication technology

 To introduce students to components of computer hardware and software

 To expose the student to basic computer applications

**Course Content**

***1. Introduction and Overview***

 Definition of Information and Communication Technology

 History and Evolution of Computing and Information Communication

Technolog**y**

 The changing role of Information and Communication Technology in society

 Current domains of application of Information Communication Technology: Mobile Communication, Broadcasting, Internet, Enterprise applications, Office automation, Specialised Applications (Engineering, Entertainment, Simulation etc.)

***2. The Computer***

 Definition of a computer, Types of computers, Elements of Computer

Information Systems (CIS)

 Introduction to components of the computer: the user, hardware and the software

***3. Personal Computer Hardware***

 Motherboard, Child-boards, and Circuitry

 Central Processing Unit: Control Unit, Registers and the Arithmetic Logic

Unit

 Storage: Memory and Auxiliary Storage

 Buses: Types, USB and its advantages

 Chassis

 Peripherals: Input and Output devices

 Expansion cards

 Power Supply and the Un-interruptible Power Supply (UPS)

 Connectors

***4. Firmware***

 Definition

 Types of firmware: BIOS and others

***5. Software***

 Definition

 Evolution

 System software(operating systems, device drivers, utilities and file management)

 Application software (definition and categorization)

 Software development tools

 Licensing (Proprietary, Shareware, freeware, General Public License (GPL))

***6. Office Automation***

 Definitions

 Benefits of office automation

 Overview of office automation tools (Personal Information Management, Office Suites)

***7. Word Processing***

 Definition and Evolution

 Types of Word Processors

 Features of a word processor

 Word processing exercise

***8. Spreadsheets***

 Definition and Evolution

 Limitations of spreadsheets

 Features of a spreadsheet

 Types of spreadsheet applications

 Spreadsheet exercises

***9. Presentations***

 Definition

 Preparation

 Features of presentation packages

 Presentation exercise

***10. Email and Browsing the Internet***

 Definition of the Internet

 Uses of the Internet

 Netiquette

 Internet Browsers

 Search engines and Web directories

 Email (Definition, Composing, Sending, Archiving, etc.)

 Email clients

 Information Literacy and lifelong learning (Definition and Implications of

Internet Resources)

 Makerere Information Communication Technology Services

**Learning Outcomes**

On completion of this course the student should be able to:

 Discuss the evolution of the computing and information communication technology

 Identify the types of computers

 Identify the hardware components of the computer

 Execute basic office automation tasks including word processing, working with spreadsheets and preparing computer-aided presentations

 Browse the internet and use email

**Recommended and Reference Books**

Due to the volatile nature of the pertinent content, the student should be guided by the substantive instructor to access the reference materials.