CMP1103 INFORMATION & COMMUNICATION TECHNOLOGY

Hours per Semester				Weighted Total Mark	Weighted Exam Mark	Weighted Continuous Assessment Mark	Credit Units
LH	PH	TH	CH	WTM	WEM	WCM	CU
45	30	00	60	100	60	40	4

Brief Course Description

The purpose of the course is to help students to understand the basics of computer software and hardware systems. In addition the course gives basics of programming languages and enables the students to use the applications software. To introduce the use of software applications in problems solving and information storage and retrieval as well as the principles of well-structured programming using C.

Course Objectives

By the end of the course students should be able to:

- Have an overview of and know computer architecture, computer systems and applications and systems software.
- Familiar with the characteristics and purpose of all the major subunits in a computer system
- Understand the sequence of internal events as a computer executes an instruction.
- Understand the conventions of representing data and instructions within a computer's memory.
- Use Windows and QuickBasic effectively.

Detailed Course Content:

Introduction to hardware and software: **[5 Hours]**
Computer organization: systems approach to computer architectures;
Programming languages and operating systems: Low-level and high-level programming languages; Operating systems: Command-line and Graphical User Interfaces; DOS, UNIX, LINUX, WINDOWS, MACINTOSH, etc.
Software packages and Utilities;
Computer applications: office, industry, scientific research, etc.
Number systems: binary, decimal, octal, and hexadecimal; **[8 Hours]**
Introduction to computer communications and networks: the physical infrastructure and the logical infrastructure; network topologies and devices;
The Internet: **[7 Hours]**
Requirements for internet connection; internet protocols: http, html; urls;
Internet search engines: Google, Alta-vista, Meta-search engines, etc.
Programming mechanics: **[25 Hours]**
flow-chart and algorithm development; assemblers, interpreters and compilers; Programming language fundamentals: keywords, conditional flow control, iteration, function invocation, recursion, typing, scope, and memory management; Introduction to programming using C and/or MATLAB;

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

Method of Teaching /Delivery
The course will be taught by using lectures, tutorials and assignments.

Mode of Assessment
Assignments, tests and final examination. Their relative contributions to the final grade are :

Requirement	**Percentage contribution**
Course work (Assignments, tests)	40%
Final examination	60%
Total	**100%**

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.

Possible Lecturers:
Dr. D. Okello
Mr. S. Mwanje
Mr. A. Tumwesigye
Mr. P. I. Musasizi