**MAKERERE UNIVERSITY BUSINESS SCHOOL**

**FACULTY OF COMPUTING AND INFORMATICS**

**Department of Applied Computing & IT**

**Academic Year 2025/2026 - Semester I**

**Course Outline**

**Program: Bachelor of Business Computing**

**Year of study: One**

**Course Name: Information Technology Essentials**

**Course Code: BUC1115**

**Course Level: 1**

**Credit Units: 5**

**Credit Hours: 75**

**Facilitators:** Group A: **Mr. Benedict Ogot [0700163939], Mr. Samuel Eelu [0774934742]**

Group B: **Mr. Samuel Eelu, Mrs. Elizabeth Namutebi [0750199901]**

Group C: **Mr. Benedict Ogot**, **Mrs. Linda Lisa Kainomugisha [0772302261]**

 Jinja Campus: **Mr. Mwase Ali, Mr. Kalinaki Hussein, Mr.Twinamasiko Jerald**

**Course Description**

The course will introduce students to the major topics of Information Systems. The materials covers major concepts that drive computing and information technology today, like PC assembling, configuration and troubleshooting and PC Networks. The course is broken down into sections that cover a survey of above-mentioned areas of information systems.

**Course Objectives:**

The course intends to;

* Explain the hardware and software components of computer systems
* Demonstrate troubleshooting of computer failures
* Demonstrate configuration and management of user groups

**Learning Outcomes**

At the end of the course students will be able to:

* Identify hardware and software functionalities
* Demonstrate the ability to assemble, disassemble, configure, troubleshoot , and upgrade PC components
* Configure and manage users, groups and shared resources

**Course Content**

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Topics**  | **Lesson Details** | **Hours** |
| 1. | Introduction to computer fundamentals | * Analog and digital,
* Binary and Decimal number system
* ASCII
* Program Code
* User data
 | 8 |
| 2. | PC components, features and system design  | * Motherboards; form factor(AT,ATX/BTX,micro ATX/NLX)
* Input Devices; mouse, keyboard, multimedia
* Ports and cables; USB, parallel, serial, IEEE…)
* Buses; System bus, I/O busses(ISA,PCI,USB)
* Microprocessors;(AMD, Intel) CPU technologies
* Memory; Types-DRAM,SRAM,SDRAM
* Storage devices (configuration and installation of Hard disk, floppy & CD ROM)
* Display devices; projectors, CRT and LCD
* Install and configure personal computer components
* Identifying Personal Computer Components
* Assembling & disassembling of Computer systems
 | 8 |
| 3 | General PC Maintenance | * Power supply and PC protection
* Safety guidelines and procedures
* Preventive maintenance
* Maintaining Display Devices
* Maintaining Disk drives
* Diagnostic hardware and software
* Troubleshooting Computer Hardware (Memory, key board, mouse, video problems…)
* Troubleshooting POST
* Troubleshooting/repairing tools
* Upgrading and optimizing hardware
 | 8 |
| 4. | Operating systems | * Installation & configuration of operating systems, service packs and drivers
* Installation of Application software(Ms office,Antivirus …)
* File systems and data recovery
* Windows booting process
* Troubleshooting operating systems
* Troubleshooting techniques and tools
* Installation & upgrading of operating systems
* Post-setup configuration
* Configuring the Windows Registry
* Using the command Prompt
* Running CMOS setup
* Locating & Viewing boot files
 | 8 |
| 5. | Using the Command Prompt | * Command Prompt and Text Editors
* Navigating Directories and File Management
 | 8 |
| 6. | BIOS,CMOS and System Resources | * BIOS and CMOS
* BIOS/CMOS setup programs
* System Resources
 | 7 |
| 7. | Computer security | * Security Fundamentals
* Windows Security Overview
* Internet Security
* Malware
* Data security
* Setting Account and Password policies
* Anti-Virus Software
 | 7 |
| 8. | Networking Essentials | * Introduction to LAN, MAN, WAN
* Essential components of a network
* Network design
* Topologies and cabling
* Connectivity devices
* Installation & configuration of network devices
* Protocols
* Implementing a peer to peer Network
* Network maintenance and troubleshooting
* Making of network cables (crossed, straight...)
* Building a peer to peer Network
 | 8 |
| 9. | Printers and scanners | * Types of Printers
* Printer components
* Installation, configuration & sharing of printers & scanners
* Maintenance & Troubleshooting
* Installing & Configuring a printer
 | 7 |
| 10. | Portable computers  | * Types of portable computers
* System components
* Maintenance and troubleshooting
* Maintenance of Laptops
 | 6 |
|  | **Total Hours** |  | **75** |

**Mode of Delivery**

* Lectures
* Group and class discussions
* Practical demonstrations

**Mode of Assessment**

* Course work 30%
* End of semester examination 70%

**Reading list**

* Frick, E. (2020). *Information Technology Essentials Vol1: Basic Foundations for Information Technology Professionals, Independently Published*
* Bazibu, M., Baguma, I., Anjoga, H. (2008), Unmasking ICT, 1st Edition
* Laudon K.C. & Laudon, J.P., (2006); Management Information System, Managing the Digital Firm, McGraw Hill, 6th Edition
* Gallaugher, J. (2017). Information Systems: A Manager’s Guide to Harnessing Technology. Flat world
* Nixon,  “Learning  PHP,  MySQL,  JavaScript,  CSS  &  HTML5”  Third  Edition,  O’REILLY, 2014. Click Here.[learning php, mysql&amp; javascript\_ with jquery, css&amp; html5 (4th ed.) [nixon 2014-12-14]](https://sureshvcetit.files.wordpress.com/2019/01/learning-php-mysql-javascript_-with-jquery-css-html5-4th-ed.-nixon-2014-12-14.pdf)