**AEN1202 INTRODUCTION TO COMPUTER APPLICATIONS
Course Code:**

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**Course Type**: **CORE (B.Sc. Agric. I, B.Sc. FST I, B.Sc. LUM I, B.Sc. Hort. I, B.AGM I, B.ARI I)**

**1. COURSE DESCRIPTION**

**Course Credits (CU)**: **2 CU i.e. 30 Contact Hours per semester**

**Course Duration**: **15 weeks (30 hours) i.e. 10 LH, 40 TH**

This is a hands-on course that introduces students to computer technologies and applications and equips them with basic skills to use up to date computer software for word processing, communication, e learning, presentation, information processing and other functions.

**OBJECTIVES OF THE COURSE**The overall objective of this course is to enable students develop an understanding of the principles and theory behind computer technologies and applications, to develop skills in using the computer to collect, analyse and edit data and to manipulate, process, present and communicate information to different sectors to the agricultural/ rural society.

Specifically through this course the student will be able to:

* Create, edit and format word processing files for the purpose of producing assignment, research reports, letters and email messages.
* Know some basic computer trouble shooting tips
* Use the Internet to browse for information and download files and programs.
* Use email software to send and receive messages and attachments.
* Perform file management of a variety of files and back these files up on both magnetic and optical removable media.
* Use spreadsheet software to manage financial and research data, and perform a basic statistical analysis of research data.
* Use spreadsheet software to create and modify graphical charts.
* Create PowerPoint presentations that are composed of both text and graphical information.
* Create and manage a flat file database with the Access software.

**MAIN READING LIST FOR THE COURSE**

* 1. Bucki A. Lisa (2005). *Learning computer applications projects and exercises*. Prentice hall
	2. Katsaropoulos, C. & Skintik, C. (2001). *Learning to create a web page with Microsoft XP.* Prentice hall
	3. Shelly B. Gary and Vermaat E. Misty. (2001). *Discovering computers*. Thompson course technology.
	4. Patterson A. David and Hennessy L. John (2004). *Computer organization and Design: The Hardware/ Software Interface.* Morgan Kaufmann.

**TOOLS AND EQUIPMENTS NEEDED**

These include the following

* Laptop/ computer for lecturer
* Computers for students
* Small tool box
* Power point projector
* Printer to print out handouts

## COURSE CONTENT AND METHOD OF INSTRUCTION

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| TOPIC | CONTENT | METHOD OF INSTRUCTION |
| Introduction to Computers | * Definition of computer
* Characteristics of computer
* Generation of computers
* Classification of computers
* Major parts of computer
* Storage devices
* Computer Application packages
* Computer virus
* Disk operating system (DOS)
* Directories and sub-directories
 | * 2 hrs of interactive lecture led by the instructor allowing students to contribute through questions and lecture notes. In the lecture, the students will get to discuss the following: What a computer is, characteristics of computer, generation and classification of computers, major parts of computer, storage devices, computer application packages, what a computer virus is, disk operating system and what directories and sub directories are.
* 1hr of practical led by the instructor to give students an opportunity to disassemble a computer and observe its different components
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| Introduction to Windows  | * Getting started with windows
* Windows basics
* Program manager
* Starting an application
* Reducing an application window to an icon
* Windows explorer
* Renaming a file/ folder
* Creating a directory/ folder
 | * To provide a handout to students giving them details about the windows operating system
* 1 hour lecture led by the instructor to explore the principles upon which windows XP is designed and the specific components involved in the system
* 3 hours practical led by the instructor to enable students understand how to: create a document using word pad, organize the contents of the hard drive using the windows explorer, communicate instantly with others using windows messenger, create an efficient work environment by using the Control Panel and Accessibility programs, clean up the system by using My Computer and the Recycle Bin
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| Overview on the Internet and the internet explorer  | * Using different Search strategies and techniques to find information
* Search engines and directories for finding needed information
* Information gateways and virtual libraries
* Finding specific types of information
* Using email
 | * 1 hour lecture led by the instructor on strategies and techniques used to search for information on the internet. This will include but not limited to the words to be used to describe a topic, how to limit a search and what sources to use for searching, search syntax, search math and Boolean logic.
* 1 hour lecture led by the instructor on search engines and directories, information gateways and virtual libraries and finding specific types of information. Through this lecture, the student will be taught the different kinds of search engines and directories, the different sites where to obtain particular information, the different databases that can aid different research, how to find other specific information like people etc. The students will also be taught how to use email. That is how to record, store and find email addresses on the address book, how to use folders for storing email messages, how to filter incoming mail into designated boxes and how to handle chain letters and virus warnings
* 3 hours of practical led by the instructor to enable students practice the use of search strategies and techniques, search engines and directories and email.
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| Introduction to MS word processing software  | * Screen layout
* Creating and opening documents
* Typing and inserting text
* Formatting paragraphs
* Styles
* Lists
* Tables
* Spelling and grammar
* Page formatting
* Table of contents
 | * 2 hours lecture led by the instructor to enable students learn the different operations involved in successfully using MS word. This will include screen layout, creating and opening documents, typing and inserting text, formatting paragraphs, working with styles, lists and tables, spelling and grammar, page formatting and table of contents.
* Practical led by the instructor to give students an opportunity to practice the different operations they have been taught on MS word. The practical time will be divided as follows:
* 3 hours to teach students how to use the different menus on the screen, create and open documents and typing and inserting text.
* 3 hours to enable students practice formatting of paragraphs, and how to use styles, lists and tables.
* 3 hours to enable students to practice how to use spelling and grammar checks, how to format pages, how to insert table of contents and how to use MS equation to write mathematical or scientific equations, use keyboard shortcuts in word.
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| Introduction to spread sheet analysis | * Spreadsheet basics
* Modifying a worksheet
* Formulas and functions
* Charts
* Page properties and printing
 | * 2 hours lecture led by the instructor to enable students learn about spreadsheet basics, how to modify a worksheet, how to use formulas and functions, to create charts, how to alter page properties and how to print excel worksheets.
* 9 hours of practical led by the instructor where students will be able to practice what they have been taught on spreadsheets. The practical time is divided as follows:
* 3 hours in which the students will basics on spreadsheets and how to modify worksheets.
* 3 hours in which students will be taught how to deal with formulas and functions such as sum, average, max, min, count, counta, if etc.
* 3 hours in which the students will learn how to draw graphs and charts, how to adjust page properties and print worksheets.
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| Introduction to MS power point presentation | * Getting started with Power point
* Screen layout
* Working with slides
* Adding content
* Working with text
* Colour schemes
* Graphics
 | * 1 hour lecture lead by the instructor to teach students the fundamentals of PowerPoint presentation. In addition, the students will be taught how to create slides, add graphic and other special effects to the slides, organize the content and slides in the presentation, run a presentation, and print a presentation. Students will also be taught other features like creating and customizing of charts and tables and applying animation scheme.
* 6 hours of practical led by the instructor where students will be able to practice what they have been taught on MS PowerPoint.
* The first two hours of the practical students will be taught how to start up MS PowerPoint, create a presentation, open an existing presentation.
* In the next two hours the students will practice on different power point views, how to manipulate slides, animation of slides and slide transitions.
* In the last two hours, the students will practice on how to view slide shows, navigate while in slide shows, backup presentation for use on another computer, share a presentation with other users, and use of colour schemes and graphics in MS PowerPoint as well as have a summary on what they learnt about PowerPoint in the earlier two lectures
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| Introduction to Database | * Plan and design Access database
* Create table using database wizard
* Modify table by adding new data categories
* Using forms to add data to database tables
* Create and run a query
* Create and print reports
* Create data access page
 | * 1 hour lecture led by the instructor to teach students the concepts and process involved in creation and design of databases and tables in MS Access. In addition the students will be taught to efficiently relate, manage, and customize database tables to ensure maximum database efficiency
* Three hours of practical where students will practice the following operations: Planning and design of access database, Starting up MS Access, Creating new and opening existing databases, creating databases with and without a wizard,
* Two hours of practical where students will practice the following operations: Creating tables from scratch in the design view, Use the primary keys, how to enter and manipulate data in tables and how to switch between different views of tables.
* Two hours of practical where students will practice the following operations: How to link multiple tables together, how to create forms.
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**Method of Evaluation**:
Students’ final course grade will be based upon the accumulated point scores from the following course components:

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| **Course Component** | **Maximum Score** |
| Course works and Tests | 40 |
| Final Exam | 60 |
| Total Score | 100% |