STUDY UNITS

The course is made up of seven modules organised into 19 study units as follows:

Module 1 Understanding the Computer

Unit 1 Basic Concepts
Unit 2 Historical Overview of the Computer
Unit 3 Classification of Computers

Module 2 Computer Hardware

Unit 1 Hardware Components (1)
Unit 2 Hardware Components (2) – Peripheral Devices
Unit 3 Auxiliary Equipment

Module 3 Computer Software

Unit 1 Computer Software (1)
Unit 2 Computer Software (2)

Module 4 Programming the Computer

Unit 1 Computer Languages
Unit 2 Basic Principles of Computer Programming
Unit 3 Flowcharts and Algorithms

Module 5 Computer Application Programming

Unit 1 Programming in Visual Basic (1)
Unit 2 Visual Basic Project Window
Unit 3 Creating Menu Applications
Unit 4 Analysing Visual Basic Data

Module 6 Areas of Application of Computers

Unit 1 Application of Computers in Education
Unit 2 Application of Computers in Business and Industry
Unit 3 Application of Computers in Government, Military,

etc

Module 7 Threats to the Computer

Unit 1 Computer Virus

Synopses of the Study Units

Module 1 Unit 1: This unit presents the definition of the computer, basic understanding of data processing, the concept of data and information, methods of data processing and the characteristics of a computer.

Module 1 Unit 2: It gives the brief history of the computer technology, evolution of computer and the generations of computers.

Module 1 Unit 3: You are introduced to the classification of computers. This involves classification based on size, type of signal and purpose. At the end of the unit you will be able to differentiate between one classes of computer from the others.

Module 2 Unit 1: In this unit you will be familiarised with hardware components of the computer. This will enable you to appreciate the importance of each component to the overall smooth operation of the computer.

Module 2 Unit 2: in this unit, you are introduced to the peripheral devices. Also, you will be able to get deeper understanding of the functions of the input and output units. The knowledge acquired in this unit will give you a guide on the type of input and output units suitable to a particular computing environment.

Module 2 Unit 3: The unit discusses the computer auxiliary equipment such as the air conditioner, voltage stabiliser and the Uninterruptible Power Supply System (UPS).

Module 3 Unit 1: This unit introduces the computer software in some detail. You will learn about the system software, language translators such as compliers and the utility software.

Module 3 Unit 2: This unit builds on the knowledge acquired in the previous unit by discussing various types of language translators, utility programs and application programs in greater detail.

Module 4 Unit 1: In this unit you will learn about computer programming languages such as low level language (machine language and assemblers) and the high level languages.
Module 4 Unit 2: You will be introduced to computer programming in this unit. Topics covered include the concept of problem solving with computers, principles of programming and stages of programming.

Module 4 Unit 3: This unit advances further on unit 10 by discussing the use of flowcharts and algorithms in computer programming. These two concepts are essential ingredients to the writing of well structured computer programs.

Module 5 Unit 1: This unit begins our discussions on programming the computer in Visual Basic. Units 12 through 15 are dedicated to this subject. The discussions are practical in nature. The materials presented in these four units are in the form of hands-on-practice. You will benefit more and, in fact, enjoy it better if you can try them using a personal computer. The steps involved are simple and explicit. By the time you run through the four units you should be able to write simple visual basic application programs. Specifically, unit 12 introduces the concept of working with graphical objects, general visual basic programming concepts, how to design a project from application wizard, and how to use the toolbox.

Module 5 Unit 2: In this unit you will learn about the visual basic project window. This will enable you to gain more mastery of the visual basic programming environment.

Module 5 Unit 3: In this unit you will learn how to create menu applications. The menu system is one of the high points of object oriented programming languages. It makes the application user-friendly and interactive. This unit, therefore, equips you with the principles and steps involved in creating visual basic applications with menu.

Module 5 Unit 4: This unit concludes the discussions on programming computers in visual basic. Specifically, this unit takes you through the analysis of visual basic data. If you have truly followed all the principles and steps discussed in the three previous units you should at this stage be able to plan, design, code and implement a simple but complete visual basic application.

Module 6 Unit 1: This unit begins the series of presentations on the areas of application of computers in society. The main aim is to identify some areas of application to society at large. It is also meant to enlighten you on the various job opportunities for computer literate persons in the society. Specifically, in this unit, you are presented with detailed discussion on the areas of application of computers in education.

Module 6 Unit 2: This unit takes further the discussion on the areas of application of computers by presenting in greater detail its application in business and industry. It discusses the application of computer in the development and operations of payroll, inventory control, auditing operations, personnel record keeping, preparation of customer utility bills and payment orders, management information systems, high quality production control, point of sale service, financial market and the publishing industry.

Module 6 Unit 3: This unit concludes the discussions on the areas of application of computers with particular reference to its application in science and engineering, health care, transport and communications, recreation, government and the military.

Module 7 Unit 1: This is the concluding unit of this course. It presents a discussion on computer virus as one of the major threats to the smooth operations of computers. Detailed discussions on computer virus, its mode of transmission, detection, prevention and cure, are presented.

Textbooks and References

More recent editions of these books are recommended for further reading:

Akinyokun, O.C. (1999*). Principles and Practice of Computing Technology*. Ibadan: International Publishers Limited.

Balogun, V.F., Daramola, O.A., Obe, O.O., Ojokoh, B.A., and Oluwadare S.A. (2006). *Introduction to Computing: A Practical Approach*. Akure: Tom-Ray Publications.

Chuley, J.C. (1987). *Introduction to Low Level Programming for Microprocessors*. Macmillan Education Ltd.

Francis Scheid (1983). *Schaum's Outline Series: Computers and Programming*. Singapore: McGraw-Hill Book Company.

Gray S. Popkin and Arthur H. Pike (1981). *Introduction to Data Processing with BASIC*,(2nd ed). Boston: Houghton Mifflin Company.

Oliver E.C. and Chapman R.J. (1986). *Data Processing* (7th ed). ELBS/DP Publications.

Richard H. Austin and Lillian Cassel (1986). *Computers in Focus*. Monterey, California: Books/Cole Publication Company.

Tunji and Dokun (1993). *Data Processing: Principles and Concepts*. Lagos: Informatics Books.

In addition to these books, you can browse on the Internet to get additional materials on the topics covered in this course.