

## **MODULE 154A-03-A**

## **PROGRAMMING**

**Nominal Duration:** 300 hours

**Module Description/Purpose:** The module aims at developing Knowledge and Skills in the analysis and development of programmes

**Objectives:** At the end of the module the student will be able to:

1. Use different types of computer programming language
2. Carry out computer problem analysis and develop programs
3. Implement Program Designs
4. Carry out Structured Programming

### **Unit 3.1 Applying principles of Programming**

- 3.1.1 Computer programming languages
- 3.1.2 Problem analysis and development of programs
- 3.1.3 Implementing a program design
- 3.1.4 Structured programming

### **Unit 3.2 Using Computer programming language**

- 3.2.1 Machine language
- 3.2.2 Assembly language
- 3.2.3 High level Language
- 3.2.4 Fourth generation language
- 3.2.5 Fifth generation language

### **Unit 3.3 Carrying out Problem Analysis and Development of Programs**

- 3.3.1 Discipline of problem solving
- 3.3.2 Program and data organisation
- 3.3.3 Input/output media

### **Unit 3.4 Implementing a Program Design**

- 3.4.1 Structured and modular programming
- 3.4.2 Program preparation and testing
- 3.4.3 Storage and organisation of data
- 3.4.4 Use of diagnostic aid of debugging

### **Unit 3.5 Carrying out Structured Programming**

- 3.5.1 Program layout
- 3.5.2 Arrays
- 3.5.3 Complex data structures