



**2015 FACT SHEET FIELD OF STUDY:  
COMPUTER PROGRAMMING  
FACULTY OF INFORMATION TECHNOLOGY**

| PROGRAMME TITLE   | SAQA ID | NQF     | Credits |
|---|---------|---------|---------|
| FET CERTIFICATE: INFORMATION TECHNOLOGY: SYSTEMS DEVELOPMENT (Computer Programming) | 78965   | Level 4 | 165     |

### DESCRIPTION

The Further Education and Training Certificate in Information Technology: Systems Development level 4 is designed as an entry-level qualification in the software development field. This programme will equip learners with competency to develop and maintain software applications in most IT environments as a junior programmer.

Learners will also be equipped with interpersonal and business skills.

### CAREER FIELDS

Learners could pursue a career as a:

- Junior System Developer
- Junior Computer Programmer
- Junior System Analyst

### PROGRAMME OUTLINE

#### A) INTRODUCTION TO COMPUTER PROGRAMMING

- Describe problem analysis and program design techniques variables, constants, calculations
- Describe different data representations used in computer programmes
- Describe the basic principles of Computer Programming
- Describe the principles used in designing a computer programme
- Operate computer programming development tools
- Demonstrate an understanding of different data representations used in computer programmes
- Demonstrate an understanding of fundamental programming principles
- Demonstrate an understanding of high level programming language concepts

#### B) INTRODUCTION TO NETWORKING

- Describe data communication
- Demonstrate knowledge of main features of LANs
- Demonstrate knowledge of main features of WANs

#### C) CONCEPT OF COMPUTER ARCHITECTURE

- Explain computer architecture elements
- Explain the organisation of a computer
- Describe the design constraints in the design of instruction sets for computers

#### D) INTRODUCTION TO WEB DESIGN

- Plan the use of a multimedia/web-based authoring computer application with scripting
- Design a multimedia/web-based computer application
- Identify and save text, graphic elements and animation
- Create multimedia/web-based computer application scripts
- Assemble a multimedia/web-based application including scripts
- Explain the network issues related to Internet applications
- Demonstrate an understanding of different user interface methods used for Internet applications
- Explain version control and security issues related to Internet Applications

#### E) INTRODUCTION TO SYSTEM ANALYSIS

- Define and analyse the problem
- Evaluate solutions
- Implement the solution
- Describe information systems analysis
- Explain different systems analysis techniques used in the industry
- Contribute to team problem solving
- Contribute to group and/or team functions