THE LEARNING DEVELOPMENT GROUP

Information Technology

NC: ICT Software Testing

MICTSETA Certification
APST- FTI Certification

SAQA ID: 83026

NQF Level: 5

Credits: 134

Introduction

The highly innovative and comprehensive Applied Programme in Software Testing (APST) is designed to accommodate the changes in the Quality Assurance and Testing landscape and to align with trends in digital transformation and cyber security.

The aim of the qualification is to equip delegates with hands-on career relevant skills from a Business, Software Development and Quality Assurance perspective so they become cross-skilled Solutions Consultants or Testers of the Future.

The qualification is aligned to the International Software Testing Qualifications Board (ISTQB) content as well as to the International set of standards for software testing: ISO/IEC/IEEE 29119

Target **Audience**

This programme is directed at current or aspiring Software Test Engineers across organisations.

Specifically, it is aimed at Testers and Test Managers, Test Analysts, Engineers, Leads and User Acceptance Testers.

It is also suitable for Business Analysts, Project Managers, Developers and any IT professional wanting to evolve into and work in a testing environment.

Learning **Outcomes**

By the end of the qualification, you will have essential Software Testing knowledge and skills in:

- Software Development Lifecycle (SDLC) methodologies.
- Understanding and interpreting requirements.
- Developing basic software programmes and architecting working databases.
- Creating test cases with automation in mind and executing testing against software applications.
- Generating quality documents aligned to ISO/IEEE/IEC 29119 standards.
- Executing test cases and simultaneously tracking task progress and conducting defect management.
- The production implementation process.
- Test management and Software Testing performance and automation tools.
- Adding value to your delivery team and understanding the different roles and responsibilities of IT Testing team members.
- Analytical thinking and problem-solving.

Course **Delivery** & **Assessment**

We use in-classroom, virtual classroom and blended interactive facilitated training to embed theory and skills. You will also receive course notes and templates to help you work faster and smarter.

You will need to:

- Attend all lectures and sessions.
- Demonstrate theoretical and practical understanding of content.
- Participate in and contribute to group discussions, practical exercises, case studies and workshops.
- Practise interpersonal communication and share ideas and experiences with the peer group.
- Complete individual self-study activities such as reading, weekly homework and monthly assignments.
- Submit formative and summative assessments as part of the Portfolio of Evidence (PoE).

To receive your National Certificate: ICT Software Testing, you will need to compile, submit and be found competent on a Portfolio of Evidence (PoE).

Entry **Requirements**

- At least one year's software testing experience in a functioning and busy testing team, or
- To have attended a testing short course equivalent to or similar to FTI's Fundamentals of Software Quality Assurance.
- Be computer literate and tech-savvy and passionate about the field and willing to learn.

Additional **Requirements**

- Access to a PC, relevant software and the internet for course assignments.

Course **Content**

NC: ICT Software Testing
Accreditation Body: MICTSETA

SAQA ID: 83026 | Learning Programme ID: APST
NQF Level: 5 | Credits : 134
ISTQB & ISO aligned

Module 1: Application Development Lifecycle
- Introduction to ICT Software Testing
- Future of IT & QA
- Application Development Lifecycle Management
- Fundamentals of Architecture
- Fundamentals of Networks

Module 2:Fundamentals of Business Requirements
- The problem solving process
- Information gathering
- Requirement elicitation
- The business case process
- Requirement specifications

Module 3: Fundamentals of Development
- Fundamentals of the Java platform and the Java programming language
- Problem Analysis and Design using Object – Oriented paradigm
- Implementing objects, classes and methods in Java Programme
- Program decision constructs: decisions, conditions and loops
- Arrays
- User Interface Design
- Database Management Systems (DBMS)

Module 4: Testing within ADLM
- Introduction to Testing
- Testing Levels and Types
- Testing Skills and Roles & Responsibilities

Module 5: Testing Lifecycle
- Fundamental Test Process
- Testing Analysis and Review
- Test Design Techniques
- Test Implementation
- Test Execution & Control

Module 6: Test Management
- Introduction to Test Management
- Test Planning & Estimation
- Test Progress, Monitoring and Control
- Configuration Management
- Risk & Testing
- Test Reporting
- Implementation & Maintenance

Module 7: Test Automation
- Introduction to Test Automation
- Test Automation Planning & Strategy
- Test Automation Framework
- Test Automation Metrics & Reporting
- Test Automation Tools

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