



Occupational Certificate: **SOFTWARE ENGINEER**

NQF: 6

SAQA ID 119458

CREDIT: 240

Description

This qualification prepares students to work as software developers, responsible for requirements research, analysis, and evaluation of new or current software applications. Students design, build, test, deploy, debug, and maintain software applications. Typical learners include professionals with systems development experience, school dropouts, and qualified learners who have already been exposed to the field. The Occupational Certificate in Software Engineering graduates are well-prepared to enter the workforce in various industries such as technology, finance, and healthcare. The program includes courses on software engineering principles and best practices, such as software design patterns, object-oriented programming concepts, agile methodologies, and software quality assurance techniques. Practical hands-on experience is emphasized, with students working on real-world projects to apply their skills and build a portfolio of work.

Career Fields

With this qualification, successful learners could pursue a career as a:

- Junior Software Engineer
- Software Developer
- Junior Web Developer
- Junior Mobile App Developer
- Entry-level Software Tester
- Junior Systems Analyst
- Junior Quality Assurance Engineer
- Junior DevOps Engineer
- Technical Support Specialist (with a focus on software)
- Software Implementation Specialist

Programme Outline

Knowledge Modules

- Software Engineering
- Programming
- Database Design and Information Systems
- Fundamentals of Project Management in Relation to Software Engineering
- Digital and Business Mathematics

Practical Skill Modules

- Document System Design
- Design and Manipulate Databases
- Programme and Deploy Applications
- Test or Debug Source Code to Ensure Client's needs are met

Work Experience Modules

- Software Design
- Database Design and Manipulation
- Software Development
- Software Testing

Type of programme

The programme duration is to be determined in accordance with convenience and training format adopted by the client. Programmes can be offered in blended or online framework.

Admission Requirements

The minimum entry requirement for this qualification is:

- Any NQF Level 4 qualification

Integrated Assessment

During the roll out of the programme formative and summative assessments will be conducted. Learners are also required to complete a Final Integrated Summative Assessment (FISA).

Upon successful completion of the FISA, learners will be issued with a Statement of Results (SOR) from iFundi.

This SOR is the entry requirement for undertaking the External Integrated Summative Assessment (EISA).

EISA is a single, national assessment undertaken at accredited assessment centres. It is an integral and critical component of QCTO's quality assurance system, as it ensures that the assessment of occupational qualifications, part-qualifications and trades is standardised, consistent and credible. This leads to competent learners being awarded Occupational Certificates. Qualifying for External Assessment: To qualify for an external assessment, learners must provide proof of completion of all required knowledge and practical modules by means of statements of results and a record of completed work experience.

Articulation

This qualification provides opportunities for horizontal and vertical articulation options.

Horizontal Articulation:

- Diploma in Information Technology in Software Development
- Diploma in Information Technology in Web Development
- Diploma in Information Technology Management

Vertical Articulation:

- Bachelor of Information Technology in Business Systems

