OCCUPATIONAL CERTIFICATE

Software Developer

SAQA ID	NQF LEVEL	CREDITS	QUALITY PARTNER
118707	5	220	MICT SETA

OVERVIEW

The purpose of this qualification is to prepare a learner to operate as a Software Developer.

A Software Developer analyses a set of requirements, translates these into a working software solution using a programming language. They test, implement and maintain software applications to meet client specifications as well as functional and technical requirements.

WHAT YOU WILL BE ABLE TO DO

A qualified learner will be able to:

- Interrogate the specification and problem and interpret it into code and articulate in writing.
- Build a logical flow using the framework and methodologies at their disposal to propose possible solutions to business challenges.
- Programme effectively using a suitable programming language to develop and test new solutions and update existing solutions.

MODULES

Knowledge Modules

- Computers and Computing Systems
- Desktop and Professional Software to Communicate and Visualise Information
- Automated Web Scraping as a Data Source
- Logical Thinking and Basic Calculations
- Computing Theory
- Software Development with HTML5, Opensource Frameworks and Libraries
- UML as Standard Modelling Language for Software and Systems Development
- Obtaining, Querying, Manipulating and Presenting Data with and without MVC
- Software Development Life Cycle, Programming Languages, Algorithms and Security
- Introduction to Governance, Legislation and Ethics
- 4IR and Future Skills

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- Design Thinking Principles for Innovation

Practical Skill Modules

- Use Software to Communicate and Visualise Information
- Use and Manage Spreadsheets and Workbooks
- Use Desktop Applications to Analyse, Visualise and Report on Data
- Use a Visual Analytics Platform and Visualisation Tools to Analyse, Visualise and report on Data
- Query and Massage Data
- Apply Logical Thinking and Maths
- Apply Code to use a Software Toolkit/Platform in the Field of Study or Employment
- Develop Software using HTML5, Opensource Frameworks and Libraries
- Design and Build Web Applications, Desktop Graphical User Interfaces or Mobile Apps
- Use a Cloud Automation Platform to Create Solutions
- Develop Software using Python
- Apply the Development Cycle when Developing Software
- Participate in a Design Thinking for Innovation Workshop
- Function Ethically and Effectively in a Team

Work Experience Modules

- Technical Requirement Analysis and Refinement
- Modelling Processes
- Programming for Software Solution Development
- Capstone project

CAREER OPPORTUNITIES

Software developers can find employment as applications developers, ICT programmers, front-end developers, back-end developers, or full-stack developers.

ENTRY REQUIREMENTS

NQF Level 4 qualification.

ASSESSMENT

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.

ACCREDITATION

Type	Accreditation number	Valid until
QCTO SDP	07-QCTO/SDP210826114843	13 Aug 2031
Assessment centre	09-QCTO/AC-TTC170926214051	17 Sept 2031
QCTO SDP	09-QCTO/SDP230924102649	22 Sept 2029

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Run this qualification as a learnership

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