



National Certificate: Information Technology (Systems Development)

SAQA ID: 48872

Level: 05

Duration: 12 months



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ENTRY REQUIREMENTS

It is assumed that the learner must be competent in skills gained at the further education and training band, with Computer Studies as an advantage, but not a requirement.

A learning assumption of this qualification is foundational skills in communication and mathematical literacy as required by NQF level 4 qualifications.

Further learning assumed is the ability to use a personal computer competently.

The assumed learning can be acquired in the traditional way of formal study as well as in the workplace.

Acquiring the competencies in a workplace (either via formal skills programmes or normal on-the-job training) has the potential of addressing the problems of the past, where formal qualifications were only obtainable by way of formal study.

QUALIFICATION OBJECTIVE

The purpose of this qualification is to enhance readiness and provide entry into the areas of Systems Development at NQF level 5.

It prepares learners for entry into the workplace or as undergraduate study in the Systems Development areas covered, providing them with the necessary knowledge needed for further study in the fields of Information Technology and Computer Sciences at Higher Education level.

The qualification is addressing the need in the workplace for nationally recognised qualifications, based on unit standards that will allow people with workplace experience in the Systems Development areas covered, to request assessments and get recognition for prior learning.



QUALIFICATION OBJECTIVE

The qualification is designed to:

- Provide qualified learners with an undergraduate entry into the fields of Information Communication Technology (ICT) and Computer Sciences, specialising in the Systems Development area
- Prepare qualified learners for initial employment into the ICT and related industries. Qualified learners will have a solid understanding of computer industry concepts and to be able to work in areas of Systems Development with intermediate technical complexity.
- Allow the credits achieved in National Certificates relating to Information Technology at NQF level 4 to be used as prior learning for this qualification, where applicable.
- Allow people with workplace experience in the Systems Development areas covered, to request assessments and get recognition for prior learning.
- Allow the qualification to be acquired in the traditional way of formal study as well as in the workplace, through Learnerships Schemes or Recognition of Prior Learning (RPL).
- Assist with professionalization across the Information Technology Sector. It is intended to allow qualified learners to gain membership of registered professional bodies in the ICT industry.

QUALIFICATION OUTCOME

A learner will be able to:

- Communicate effectively with fellow IT staff & users of information systems
- Understand the role of technology in the business context.
- Demonstrate an understanding of problem solving techniques, and how to apply them in a systems development environment
- Demonstrate an understanding of Systems Development, with all its implications
- Relate business problems and information technology solutions
- Apply the principles of creating computer software

The following exit level outcomes will depend on the specialisation field(s) chosen:

- Carry out, under supervision, a task of reasonable size to demonstrate an understanding of the knowledge, techniques & skills needed in one or more area of majoring/specialisation

In addition to the above, unit standards will be utilised to provide depth of specification of the outcomes ranges and the assessment criteria and processes.



UNIT STANDARDS

UNITS STANDARD TITLE	CODE	CREDITS
CORE		
Demonstrate an understanding of the handling of error in a computer programming environment	1115359	2
Demonstrate an understanding of the principles of the internet and the world-wide-web	115391	3
Apply information gathering techniques for computer system development	115358	7
Apply principles of creating computer software by developing a complete programme to meet given business specifications	115392	12
Apply the principles of designing computer system inputs and outputs	115365	7
Create database access for a computer application using structured query language	114048	9
Demonstrate an understanding of Computer Database Management Systems	114049	7
Demonstrate an understanding of sort and search techniques used in computer programming	115373	6
Demonstrate logical problem solving and error detection techniques	115367	8
Manage software development source files using appropriate tools	115362	5
Produce documentation for a computer program to agreed standards	115388	3
Test a computer program against a given specification	115384	6

UNIT STANDARDS

UNITS STANDARD TITLE	CODE	CREDITS
	CORE	
Use computer technology to research a computer topic	114076	3
Write a technical report	116389	4
Analyse feedback contexts and apply constructive feedback techniques	115431	3
Conduct a technical practitioners meeting	114051	4
Demonstrate an awareness of ethics and professionalism for the computer industry in South Africa	114055	3
Demonstrate an understanding of estimating a unit of work and the implications of late delivery	114059	5
Explain the principles of business and the role of information technology	114050	4
Present information in a public setting	13925	5



UNIT STANDARDS

UNITS STANDARD TITLE	CODE	CREDITS
CORE		
Apply advanced HTML and associated techniques to build a web site for business applications	115368	12
Apply fundamental principles of Object Oriented Programming to solve a given problem	115363	10
Apply the principles of creating batch and interactive computer programs using a procedural programming language	115386	10
Create an application for a single-user personal computer using a fourth generation language	115390	10
Create animation for a multimedia/web-based computer application	115364	10
Create digitised sound for a multimedia/web-based computer application	115371	10
Create digitised still images for a multimedia/web-based computer application	115370	10
Create digitised video for a multimedia/web-based computer application	115375	10
Create graphic elements for a multimedia/web-based computer application	115366	10
Create object scripts for a multimedia/web-based computer application	115379	20
Demonstrate an understanding of the principles of designing and building an e-Commerce web site	115383	10
Demonstrate an understanding of the principles of implementing and managing a web server	115376	10
Demonstrate an understanding of the principles of implementing and managing an e-Commerce web site	115385	12

UNIT STANDARDS

UNITS STANDARD TITLE	CODE	CREDITS
ELECTIVE		
Demonstrate an understanding of the use of web-sites in business	115374	4
Demonstrate an understanding of the various types of e-commerce applications	115380	8
Demonstrate an understanding of tools and products available for web-site development	115372	3
Demonstrate fourth generation language computer programming skills	115360	7
Design and build a web-site using simple HTML	115369	5
Explain the IT components of an e-Commerce system	115377	4
Apply the principles of creating a computer program using a procedural programming language in a GUI environment	115387	14
Apply the principles of creating a computer program using an OOP language in a GUI environment	115381	12
Apply the principles of creating computer programs containing advanced algorithms using a procedural programming language	115382	12
Create digitised text for a multimedia/web-based computer application	115261	8
Demonstrate an understanding of advanced object-oriented programming	115378	14
Design a computer application for a single-user personal computer for programming with a 4GL	115389	12



FOR BOOKINGS

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