

NATIONAL CERTIFICATE: INFORMATION TECHNOLOGY: SYSTEMS DEVELOPMENT NQF LEVEL 5 SAQA ID 48872 (131 CREDITS)



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.

This course maps the internationally recognized MTA and MCSD qualifications and will prepare you for your international examinations as well.

NB: All examinations are written at the HC Varsity Blouberg Campus in Cape Town.

CAREER OPPORTUNITIES

This is for IT Professionals intending on building a career in:

- Procedural Programming
- Object Oriented Programming
- Fourth Generation Language Programming
- Web site development
- Multimedia
- Electronic Commerce

INTERNATIONAL COMPARABILITY

This qualification and associated unit standards have been evaluated with, and are comparable to equivalent qualifications and standards on the following Qualifications Frameworks:

- New Zealand NQF
- Australian NQF
- British NVQs

Furthermore, input to the development of this qualification has been compared against international standards and qualifications, specifically those of New Zealand, Australia and the United Kingdom. International and South African support for the proposed conceptual framework and content is evidenced in the following:

- India's TATA InfoTech Qualification for Software Developers
- City and Guilds Certificate and Diploma for Software Developers and IT Technicians
- NCC Education's (UK based) International Certificate and Diploma in Computer Studies for IT Professionals
- Microsoft MCSD certification
- The wide and narrow consultative process, and formal research, reflected in the supporting design report that accompanies this qualification submission

ENTRANCE REQUIREMENTS

- Communication and Mathematics at NQF level 4
- It is recommended that individuals have successfully completed the Further Education and Training Certificate: Information Technology: Technical Support (NQF 4)
- A learner would need to have basic computer skills
- Grade 12 pass with the minimum requirements to be accepted for a Higher Certificate programme
- A laptop or computer is required

RECOGNITION OF PRIOR LEARNING

This qualification may be achieved through the Recognition of Prior Learning (RPL), which includes formal, informal and non-formal learning and work experience. Any learner wishing to be assessed to achieve credits in respect of any or all of the unit standards specified in this qualification may arrange to do so without having to attend further education and training. To achieve the qualification through Recognition of Prior Learning (RPL), the learner must submit him/herself to be assessed against the integrated assessment criteria of this qualification.

COURSE DURATION

Based on contact hours as determined by the accreditation body and based on HC Varsity course progression structure and schedule:

- Full Time - approximately 12 months
- Part Time - approximately 18 months
- Distance Learning - approximately 18 months

COURSE CONTENT

PERSONAL DEVELOPMENT	
The principles and role of information systems in business	Ethics and professionalism in the ICT sector in South Africa
Use computer technology to research a computer topic	Technical report writing
Writing business reports	Presenting research results
Building presentations Presentation process	Presentation mechanics Present information in a public setting
Handling questions	Project management essentials
Communicating in project teams	Projects and project teams
Fundamentals of conducting meetings	Conducting team meetings
Making the correct decision	Feedback techniques
DATABASE DESIGN, IMPLEMENTATION & DEVELOPMENT	
Create database access for a computer application	Demonstrate an understanding of computer database management systems
Sort and search techniques of computer programming	Introducing SQL
Database design	Database implementation
Implementing tables	Data retrieval
SQL programming	Data manipulation
Database optimization	Error detection & testing techniques
COMPUTER PROGRAMMING, DEVELOPMENT & PROBLEM SOLVING	
Manage software development source files using appropriate tools	Processing data
Introduction to Visual Basic.net	Creating a Windows-based application
Working with controls	Designing applications
Date time picker and print documents controls	Problem solving basics
Critical thinking and information analysis	Developing applications
Understanding variables and constants	Using variables and constants
Selection structures	Using simple selection structures
Sub and function procedures	String manipulations basics
Sequential access file basics	Random access file basics
Using random access files	
PROGRAMMING & THE WORLD WIDE WEB	
Introduction to Internet Explorer	Essential internet concepts
Variables in the web design environment	Planning the site
HTML basics	Adding text
Adding hyperlinks	Images and backgrounds
Tables	Introduction to style sheets
Creating forms	Using frames

An introduction to CGI and web servers	
GATHERING TECHNIQUES FOR COMPUTER SYSTEM DEVELOPMENT	
Communication styles and methods	Evaluating and deciding
Preparing to make decisions	Decision options
Knowledge transfer	Communication
Communication basics	Feedback
Managing incoming information	Managing outgoing information
First impressions and building rapport	Analyzing project scope and requirements
Analyzing business requirements	Assessing and analyzing architecture and performance requirements
Designing the application	

ASSESSMENTS

Learners are required to submit Formative and Summative Assessments by the deadlines provided in the HC Varsity course progression and structure schedule.

NB: All examinations for Full Time, Part Time and Distance Learning Students are written at the HC Varsity Blouberg Campus in Cape Town.

CERTIFICATION

Upon successful completion of all Formative and Summative Assessments and the Verification process of MICT SETA, you will be awarded the National Certificate: Information Technology: Systems Development NQF Level 5 (SAQA ID 48872) Qualification issues by the MICT SETA.

This course has also been aligned to International Certification Examinations of which students have the option of writing the following international exams:

- MTA – 98-361 Software Development Fundamentals
- MCSD – Web Applications which include:
 1. 70-480 Programming in HTML 5 with JavaScript and CSS3
 2. 70-486 Developing ASP.Net MVC 4 Web Applications
 3. 70-487 Developing Windows Azure and Web Services

FURTHER STUDIES

After successful completion of the course, there are several career paths that you may specialize in or continue studying towards international certification. Please contact HC Varsity for further information.