NC INFORMATION TECHNOLOGY-SYSTEM DEVELOPMENT

(SAQA ID 48872- Level 5)

Programme Name

National Certificate Information Technology—System Development, NQF Level 5, SAQA ID 48872, 136 credits.

Programme Purpose

- 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 System Development areas covered, to request assessments and get recognition for prior learning.
- A qualifying learner will be able to communicate effectively with fellow it staff & users of IT, understanding the role of technology in a business context and to be able to address business problems with appropriate IT solutions.
- Learner will be able to apply the principles of creating computer software by carrying out, under limited supervision, a task of reasonable size to demonstrate an understanding of the knowledge, techniques & skills needed in one or more area of majoring/specialisation that the qualification offers.
- A qualifying learner at this level will be well-rounded IT professional, building on foundational technical skills acquired at NQF level 4, via the National Certificate in IT Technical Development or equivalent.
- This qualification is expanding the systems development foundation started at NQF level 4 into specialisation fields within systems development, in one or more of the following disciplines: Procedural Programming, Object Oriented Programming, Website Development, Multi Media and electronic Commerce.

Workplace Requirements

- Access to Web Development
- Access to System Development
- Access to Programme Languages
- Access to Server Environment

Programme Description

This qualification is to enhance readiness and provide entry into the areas of System Development at NQF level 5. It prepares learners for entry

Target group

- **Web Developers**
- **SQL Developers**
- **Programmers**

Entry Requirements

It is assumed that learners are competent in Communication and Mathematical Literacy at NQF level 3

- IT Diploma
- Systems Support qualification completed

Programme Outcomes

- Provide qualified learners with an undergraduate entry into the fields of Information Communication Technology (ICT) and Computer Science, specialising in the Systems Development area.
- Prepare qualified learners for initial employment in to the ICT and related industries. Qualified learners will have a solid understanding of computer industry concept and to be able to work in areas of System Development with intermediate technical complexity.
- Allow the credits achieved in National certificates relating to IT at NQF level 4 to be used as prior learning for this qualification, where applicable.
- Allow people with workplace experience in the System Development area 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 Learnership Schemes or Recognition of Prior Learning (RPL).
- Assist with professionalization across the IT Sector. It is intended to allow qualified learners to gain membership of registered professional bodies in the ICT Industry.

Structure of the programme

The learnership Information Technology – System Development consists of:

- Classroom based learning
- On-the-job learning
- Coaching/Mentoring
- Assessment

Duration of the Programme

- Programme: 1 year
- Training Days: 25 Days
- Assessment Days: 25 Days
- Workplace experience: 10 Months

Number of learners per class: Minimum 15

Type	Unit Standard	Unit standard Title	Level	Credits
Programme Roll-Out:				
Module 1 – Personal Development (5 days training and 5 days of assessment)				
Fundamentals	114076	Use computer technology to research a computer topic	4	3
Fundamentals	114051	Conduct a technical practitioners meeting	5	4
Fundamentals	114055	Demonstrate an awareness of ethics and professionalism for the computer industry in South Africa	5	3
Fundamentals	114059	Demonstrate an understanding of estimating a unit of work and the implications of late delivery	5	5
Fundamentals	114050	Explain the principle of business and the role of information technology	5	4
Fundamentals	116389	Write a technical report	4	4
Fundamentals	115431	Analyse feedback contexts and apply constructive	5	3
Fundamentals	13925	Present information in a public setting	5	5
Module 2 – Database Design, Implementation & Development(5 days training and 5 days of assessment)				
Core	114048	Create database access for a computer application using structured query language	5	9
Core	114049	Demonstrate an understanding a computer Database Management Systems	5	7
Core	115373	Demonstrate an understanding of sort and search techniques used in computer programming	5	6
Core	115367	Demonstrate logical problem solving and error detection techniques	5	8
Module 3 – Computer Programming Development and Problem Solving Volume (5 days training and 5 days assessment)				
Core	115365	Apply the principles of designing computer system inputs and outputs	5	7
Core	115362	Manage software development source files using appropriate tools	5	5
Core	115388	Produce documentation for a computer program to agreed standards	5	3
Core	115359	Demonstrate an understanding of the handling of error in a computer programming environment	4	2
Module 4 – Programming and the World Wide Web (5 days training and 5 days assessment)				
Elective	115374	Demonstrate an understanding of the use of web-sites in business	5	4
Elective	115378	Demonstrate an understanding of advanced object-oriented programming	6	14
Elective	115385	Demonstrate an understanding of tools and products available for web-site development	5	12
Core	115391	Demonstrate an understanding of the principles of the internet and the world-wide-web	4	3
Module 5 – Gathering Techniques for Computer system Development (5 days training and 5 days assessment)				
Core	115358	Apply information gathering techniques for computer system development	5	7
Core	115392	Apply principles of creating computer software by developing a complete programme to meet given business specification	5	12
Core	115384	Test a computer program against a given specification	5	6
Total Credits				**136**