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**SOUTH AFRICAN QUALIFICATIONS AUTHORITY
REGISTERED QUALIFICATION:**

Occupational Certificate: Computer Technician

SAQA QUAL ID		QUALIFICATION TITLE		
101408		Occupational Certificate: Computer Technician		
ORIGINATOR				
Development Quality Partner - QCTO (Agri)				
PRIMARY OR DELEGATED QUALITY ASSURANCE FUNCTIONARY			NQF SUB-FRAMEWORK	
-			OQSF - Occupational Qualifications Sub-framework	
QUALIFICATION TYPE	FIELD		SUBFIELD	
Occupational Certificate	Field 10 - Physical, Mathematical, Computer and Life Sciences		Information Technology and Computer Sciences	
ABET BAND	MINIMUM CREDITS	PRE-2009 NQF LEVEL	NQF LEVEL	QUAL CLASS
Undefined	282	Not Applicable	NQF Level 05	Regular-ELOAC
REGISTRATION STATUS		SAQA DECISION NUMBER	REGISTRATION START DATE	REGISTRATION END DATE
Reregistered		EXCO 0425/24	2018-07-01	2025-12-30
LAST DATE FOR ENROLMENT		LAST DATE FOR ACHIEVEMENT		
2026-12-30		2029-12-30		

In all of the tables in this document, both the pre-2009 NQF Level and the NQF Level is shown. In the text (purpose statements, qualification rules, etc), any references to NQF Levels are to the pre-2009 levels unless specifically stated otherwise.

This qualification does not replace any other qualification and is not replaced by any other qualification.

PURPOSE AND RATIONALE OF THE QUALIFICATION

Purpose:

Upon completion of the qualification students will be expected to provide technical assistance to users, including diagnosing and resolving issues and problems with software, hardware, computer peripheral equipment, networks, databases, systems and the internet.

The qualification outcomes cover types of software, hardware, components, upgrading and troubleshooting a computer, formatting and partitioning hard drives, and network topologies. Green technology, maintaining records of daily problems and remedial actions, and prepare evaluations for systems performance.

A qualified learner will be able to:

- Identify the potential green technologies, processes and procedures to create a sustainable computer environment to reduce e-waste in an organisation.
- Set up desktop/laptop for a new user according to software compatibility by installing operating systems and peripheral equipment according to given specifications.
- Communicate effectively using appropriate methods to maintain effective customer relationships according to organisational standards.
- Analyse and resolve hardware/software problems such as operational discrepancies to optimise performance of the desktop/laptop systems.
- Apply knowledge of principles and practices in order to identify and solve problems arising in the course of their work.

Rationale:

This qualification is a response to Output 3.1.2 of the NSDS III target: Programmes offered to meet industry needs,

including those supporting apprenticeships and N-Courses, are reviewed, updated and made available to and accessed by employers.

With the increase in personal computers, home computers, and computers in schools and businesses, it is important that students are trained to be able to maintain and upgrade computers and their components.

The qualification will prepare students to become competent as a computer technician with an understanding of computer hardware and software troubleshooting. Students will also be competent and have hands-on computer repair skills.

Computer technicians provide assistance to computer users by answering questions, resolving technical problems and maintaining a company's network, software and computer equipment. They are also called desktop support technicians or computer support specialists.

Support can be provided in person, over the phone or online. They address issues ranging from network systems to individual desktop computers.

Computer technicians can work for computer software or hardware companies, assisting customers with products. More generally, computer technicians can work in a company's IT department, providing computer support to company employees. These technicians are responsible for maintaining the company's computer services (network and equipment). Their duties can include troubleshooting to detect and solve technical problems, installing or updating required hardware and software. They can also recommend computer products or equipment to improve company productivity.

The qualification presents an opportunity for students, upon completion, to start their own business to repair, upgrade, install, and maintain computer systems.

The qualification does not cover vendor specific programmes, but students will have basic knowledge and skills to work on different kinds of operations and application software.

Learners would have to keep abreast with current technological developments through affiliation with professional bodies or associations.

This is an entry-level qualification to provide the students with an opportunity to progress into the following career paths: Computer Database Assistant, Software Developer, Computer/Network Support Technician, System Administrator, Project Manager and others related occupations.

LEARNING ASSUMED TO BE IN PLACE AND RECOGNITION OF PRIOR LEARNING

Recognition of Prior Learning (RPL):

RPL for access to the external integrated summative assessment: Accredited providers and approved workplaces must apply the internal assessment criteria specified in the related curriculum document to establish and confirm prior learning. Accredited providers and workplaces must confirm prior learning by issuing a statement of result or certifying a work experience record.

RPL for access to the qualification: Accredited providers and approved workplaces may recognise prior learning against the relevant access requirements.

Entry Requirements:

- An NQF Level 4 qualification.

RECOGNISE PREVIOUS LEARNING?

Y

QUALIFICATION RULES

This qualification is made up of the following compulsory Knowledge and Practical Skill Modules:

Knowledge Modules:

- 351201001-KM-01, Introduction to Data Communication and Networking, Level 5, 15 Credits.
- 351201001-KM-02, Basics of Computer Architecture: Hardware, Level 5, 30 Credits.
- 351201001-KM-03, Basics of Computer Architecture: Software, Level 5, 30 Credits.
- 351201001-KM-04, Basic Concepts of Sustainable Computer Environment and Green Technologies, Level 4, 10 Credits.
- 351201001-KM-05, Social Media and Digital Literacy, Level 4, 5 Credits.
- 351201001-KM-06, End User Computing, Level 3, 6 Credits.
- 351201001-KM-07, Business communication and customer services, Level 5, 8 Credits.
- 351201001-KM-08, Ready for work standards, Level 4, 5 Credits.

Total number of credits for Knowledge Modules: 109.

Practical Skill Modules:

- 351201001-PM-01, Troubleshoot computer and network faults, Level 5, 30 Credits.
- 351201001-PM-02, Maintain computer and network security Level 4, 8 Credits.
- 351201001-PM-03, Provide support to end Users, Level 5, 30 Credits.
- 351201001-PM-04, Install computer software and hardware, Level 4, 5 Credits.

Total number of credits for Practical Skill Modules: 73.

This qualification also requires the following Work Experience Modules:

- 351201001-WM-01, Respond to user inquiries regarding fault request, NQF Level 5, 30 Credits.
- 351201001-WM-02, Set up equipment for users, check operating system performance and ensure proper installation of cables and software, Level 5, 25 Credits.
- 351201001-WM-03, Processes of maintaining computer systems and peripherals, Level 5, 15 Credits.
- 351201001-WM-04, Identify the potential green technologies, processes and procedures for cost effective application and create a sustainable computer environment to reduce e-waste, Level 4, 10 Credits.
- 351201001-WM-05, Maintain records of daily data communication transactions, problems and remedial actions taken, or installation activities, Level 4, 20 Credits.

Total number of credits for Work Experience Modules: 100.

EXIT LEVEL OUTCOMES

- 1: Identify the potential green technologies, processes and procedures to create a sustainable computer environment to reduce e-waste in an organisation.
- 2: Set up a desktop/laptop for a new user according to software compatibility by installing operating systems and peripheral equipment according to given specifications.
- 3: Communicate effectively using appropriate methods to maintain effective customer relationships according to organisational standards.
- 4: Analyse and resolve hardware/software problems such as operational discrepancies to optimise performance of the desktop/laptop systems.
- 5: Apply knowledge of principles and practices in order to identify and solve problems arising in the course of their work.

ASSOCIATED ASSESSMENT CRITERIA

Associated Assessment Criteria for Exit Level Outcome 1:

- Identify the need to raise awareness for the potential usage of green technology in the IT department.
- Recommend potential e-waste recycling and green computing and environmentally responsible products within the organisation.

Associated Assessment Criteria for Exit Level Outcome 2:

- Connect peripheral components to desktop/laptop.
- Install an operating system and create the administrative user account.
- Connect the desktop/laptop to the organisation's domain network.
- Create a user account for the end user according to role specifications.
- Install applicable software according to specifications.
- Configure settings according to user account specifications.

Associated Assessment Criteria for Exit Level Outcome 3:

- Determine customer needs and respond professionally via e-mail or desktop support according to organisational requirements.
- Manage conflict by analysing the problem and applying problem-solving techniques.
- Make recommendations to improve customer service and relations in line with customer service standards.

Associated Assessment Criteria for Exit Level Outcome 4:

Context scenarios are addressed as per the following:

Range:

- User requests or queries.
- Troubleshoot scenarios.
- Respond with possible solution (Range: includes but is not limited to: upgrading, downloading applicable software, formatting, installing or uninstalling software and hardware).
- Apply solution (Range: includes but is not limited to: upgrading, downloading applicable software, formatting, installing or uninstalling software and hardware, reboot computer).

Associated Assessment Criteria for Exit Level Outcome 5:

- Ethics related to copyright, unauthorised content is analysed in various scenarios.
- Time-management techniques are applied to the various tasks in the computer technical assistance and delays are managed accordingly.
- Principles of professional practice to work in the ICT industry are applied.
- Confidentiality of passwords and customer accounts are applied in processing of information.
- Daily records are kept of data communication transactions, problems, activities and remedial actions taken.

Integrated Assessment:

Integrated Formative Assessment:

The skills development provider will use the curriculum to guide them on the stipulated internal assessment criteria and weighting. They will also apply the scope of practical skills and applied knowledge as stipulated by the internal assessment criteria. This formative assessment leads to entrance into the integrated external summative assessment.

Integrated Summative Assessment:

An external integrated summative assessment, conducted through the relevant Quality Council for Trades and Occupations (QCTO) Assessment Quality Partner is required for the issuing of this qualification. The external integrated summative assessment will focus on the Exit Level Outcomes and Associated Assessment Criteria.

INTERNATIONAL COMPARABILITY

The following countries were used to compare occupational development processes of similar or related qualifications:

- England.
- Australia.
- India.

England:

City and Guilds offers the following qualification: Level 3 Advanced Diploma in ICT Systems Support (7266-27) that was developed to keep pace with the fast-changing information technology sector and is for candidates who:

- Do not have access to an N/SVQ.
- Want to install and support ICT systems.
- Want career progression within the Information and Communication Technology (ICT) industry.
- Wish to develop the skills learnt from NVQs and other qualifications.
- Require evidence towards the underpinning knowledge of the N/SVQ.
- Want to use the underpinning knowledge gained from this Vocationally Related Qualification to contribute to their Apprenticeship.

The qualification covers the following unit standards:

- Plan for the delivery of ICT support services and assist in the acquisition of ICT systems.
- Customer support provision.
- Install, configure and integrate networked hardware and software.
- Install, configure and upgrade ICT software.
- Testing ICT systems 3.
- ICT Systems and network management.
- ICT Repair centre procedure 3.
- Develop ICT technical documentation and procedures.
- Principles of planning telecommunications services.
- Maintain ICT equipment and systems.
- Implementing an ICT systems security policy.
- Design and maintain ICT networks software components.
- Implementing and Managing Microsoft Exchange Server.
- CISCO Fundamentals of wireless networking.
- CISCO CCENT.

Australia:

This Computer Technician- Certificate IV in Computer Systems - UEE40111, is part of the Australian Apprenticeship training packages.

Job Description:

Employees may select, install, commission, fault find and maintain data processing, communications and control aspects of systems used for monitoring and control of systems. These systems can be for access, surveillance, safety and effective operation of manufacturing, buildings, structures, premises and precincts.

Summary of Training:

- Assemble, set-up and test computing devices.
- Use engineering applications software on personal computers.
- Support computer hardware and software for engineering applications.
- Install and configure a client computer operating system and software.
- Set up and configure basic local area network (LAN).
- Participate in development and follow a personal competency development plan.
- Apply Occupational Health and Safety regulations, codes and practices in the workplace.
- Fabricate, assemble and dismantle utilities industry components.
- Solve problems in ELV single path circuits.
- Implement and monitor energy sector OHS policies and procedures.
- Compile and produce an energy sector detailed report.
- Document and apply measures to control OHS risks associated with electro-technology work.
- Implement and monitor energy sector environmental and sustainable policies and procedures.
- Design, install and configure an internetwork.
- Deliver a service to customers.
- Solve problems in dc circuits.
- Use drawings, diagrams, schedules, standards, codes and specifications.
- Prepare specifications for the supply of materials and equipment for electro-technology projects.
- Evaluate and modify object oriented code programs.
- Install and administer Unix based networked computers.
- Install and configure network systems for internetworking.
- Integrate multiple computer operating systems on a client server local area network.
- Supervise and coordinate energy sector work activities.
- Develop structured programs to control external devices.

India:

Technical Support Executive-Non Voice, NVEQF/NVQF Level 5:

Technical Support Executive-Non Voice in the IT-ITeS Industry is also known as Customer Service Associate, Customer Service Representative, Customer Care Executive, Customer Service Advisor, Helpdesk Coordinator, Customer Support

Representative, Support Engineer, Support Consultant.

Brief Job Description: Individuals in this job are responsible for resolving queries and customer cases over web-chat or email.

Applicable National Occupational Standards (NOS):

Compulsory:

- SSC/ N 7201 (Deal remotely with basic IT service requests/incidents- non voice).
- SSC/ N 9001 (Manage your work to meet requirements).
- SSC/ N 9002 (Work effectively with colleagues).
- SSC/ N 9003 (Maintain a healthy, safe and secure working environment).
- SSC/ N 9004 (Provide data/information in standard formats).
- SSC/ N 9005 (Develop your knowledge, skills and competence).

Technical Support Executive-Voice, NVEQF/NVQF Level 5:

Technical Support Executive-Non Voice in the IT-ITeS Industry is also known as Customer Service Associate, Customer Service Representative, Customer Care Executive, Customer Service Advisor, Helpdesk Coordinator, Customer Support Representative, Support Engineer, Support Consultant.

Brief Job Description:

Individuals in this job are responsible for managing and resolving client queries / issues primarily through telephonic calls.

Applicable National Occupational Standards (NOS):

Compulsory:

- SSC/ N 7301 (Deal remotely with basic IT service requests/incidents-voice).
- SSC/ N 9001 (Manage your work to meet requirements).
- SSC/ N 9002 (Work effectively with colleagues).
- SSC/ N 9003 (Maintain a healthy, safe and secure working environment).
- SSC/ N 9004 (Provide data/information in standard formats).
- SSC/ N 9005 (Develop your knowledge, skills and competence).

Conclusion:

The South African occupational qualification provides technical assistance to users, including diagnosing and resolving issues and problems with software, hardware, computer peripheral equipment, networks, databases, systems and the internet. Computer technicians provide assistance to computer users by answering questions, resolving technical problems and maintaining a company's network, software and computer equipment. They are also called desktop support technicians or computer support specialists. Support can be provided in person, over the phone or online. They address issues ranging from network systems to individual desktop computers. India differentiates between Voice and Non-voice but the outcomes are similar to the above cited international qualifications.

However, the Australian qualification focuses mostly on electro-technology work and the energy sector but the skills acquired by the students are similar. The difference lies in that South African qualification steers away from any product specific hardware or software.

The South African Qualification compares well with the above qualifications even though the levels differ.

ARTICULATION OPTIONS

This qualification has both horizontal and vertical systemic articulation possibilities.

Horizontally:

- Higher Certificate in Computer Technical Support, Level 05 (SAQA ID: 96732).
- Higher Certificate in Information and Communication Technology, Level 05 (SAQA ID: 96440).
- Higher Certificate in Information Technology, Level 05 (SAQA ID: 98911).
- Higher Certificate in Information Technology in User Support Services, Level 05 (SAQA ID: 81866).

Vertically:

- Advanced Certificate in Information Technology, Level 06 (SAQA ID: 82906).

MODERATION OPTIONS

N/A

CRITERIA FOR THE REGISTRATION OF ASSESSORS

N/A

NOTES

Qualifying for external assessment:

In order to qualify for the external summative assessment learners must provide proof of all required modules by means of statements of results and work experience.

None.

Additional legal or physical entry requirements:

None.

Criteria for the accreditation of providers:

Accreditation of providers will be done against the criteria as reflected in the relevant curriculum on the QCTO website. The curriculum title and code is: 351201001: Occupational Certificate: ICT Communications Assistant (Computer Technician)

This qualification encompasses the following trades as recorded on the NLRD:

None.

Part Qualifications:

None

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION:

NONE

PROVIDERS CURRENTLY ACCREDITED TO OFFER THIS QUALIFICATION:

This information shows the current accreditations (i.e. those not past their accreditation end dates), and is the most complete record available to SAQA as of today. Some Primary or Delegated Quality Assurance Functionaries have a lag in their recording systems for provider accreditation, in turn leading to a lag in notifying SAQA of all the providers that they have accredited to offer qualifications and unit standards, as well as any extensions to accreditation end dates. The relevant Primary or Delegated Quality Assurance Functionary should be notified if a record appears to be missing from here.

NONE

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