## QUALIFICATION SPECIFICATION

**SECTION A**

| QUALIFICATION DEVELOPER | GIPS | | | | |
|---|---|---|---|---|---|
| TITLE | Certificate III in Information Technology | | NCQF LEVEL | | 3 |
| FIELD | Information and Communications Technology | SUB-FIELD | | Information Technology | |
| New qualification | X | Review of existing qualification | | | |
| SUB-FRAMEWORK | General Education | | TVET | X | Higher Education | |
| QUALIFICATION TYPE | Certificate | X | Diploma | | Bachelor | |
| | Bachelor Honours | | Master | | Doctor | |
| CREDIT VALUE | 40 Credits | | | | |

## RATIONALE AND PURPOSE OF THE QUALIFICATION

**RATIONALE**

As stated in Vision 2036, "The ICT sector contributes significantly to the economy and it also a crucial enabler of efficient product and service delivery across all economic sectors", hence a strong need to produce computer scientists with a broad range of skills. This qualification is geared towards closing the skills gap in the Information Technology sector, specifically regarding graduates who are required to apply computer technologies in the business environment. Students are trained not only in the technical areas of specialization but also in personal development, communication skills and entrepreneurship.

Furthermore, the government of Botswana introduced the ICT policy, called Maitlamo which provides a roadmap about economic transformation using ICT. The policy is geared towards making Botswana to

become a sub-Saharan ICT hub, creating an enabling environment for the growth of an ICT industry in the country with the help of IT professionals.

Human Resource Development Council (HRDC) of Botswana has published the document, which provides a list of occupations that have been identified by the employers as being in high demand at a national level. Priority skills in each occupation have been identified and these include both the core skills and soft skills. 'Information and Communication Technology' has been identified as one of the occupations that are currently experiencing shortages in the labour market (short term) and occupations that show relatively strong employment growth (long term). (HRDC, 2016).

The Certificate in Information Technology (CIT) is an introductory program into the information technology discipline. It introduces the learner to the computer terminology as well as information systems concepts relating to the business environment. The qualification is designed to equip learners with modern skills and knowledge required in todays' market. Various technologies related to the business environment will be explored to align the learner to some of technological concepts such as computer applications, digital marketing, information systems, and information systems security. Furthermore, this qualification will allow the learner to recognize the importance and the role of information technology in relation to enhancing business operations and information flow. With this qualification, the learner will be able to fit well in the industry since that necessary skills and knowledge will be acquired.

Upon completion of the Certificate in Information Technology, you may further your studies in Diploma or Degree level or gain experience through careers such as customer support representative, client support officer, IT computer operator, Data clerk/capturer, Online office assistant. This qualification will play a major role in the economic transformation as it provides learners with the necessary skills and knowledge to venture into the IT and Business sector as Computer Operators or Small-Medium Scale Entrepreneurs (SMEs), thus boosting the economy through either direct employment or entrepreneurship.

A needs assessment survey research was carried out for Certificate in Information Technology training in Botswana. The objective of the survey was to acquire information on training needs, relevant to the needs of the stakeholders and sector organizations related to IT industry.

The researcher gathered the important information from companies who were interested in having their employees earn Certificate in Information Technology qualification. The survey showed a high positive

response of employees interested in studying the course

## PURPOSE

The purpose of this qualification is to train learners to become highly competitive in the job market and at the same time aligning them to the current technologies as well as the national need.The learners will have an informed understanding of the different areas of Information and Communications Technology (ICT).

A qualifying graduate will be able to:

- Use internet tools to search for information and communicate effectively with other internet users,
- Access, process and manage information, especially from electronic sources
- Competently apply the knowledge, techniques & skills of End User Computing applications in the workplace.
- Understand the impact and use Information Communication & Technology (ICT) in an organisation and society.
- Improve Communication by combining communication skills with End User Computing skills.
- Improve the application of mathematical literacy in the workplace, by better utilising applicable End User Computing Applications

## ENTRY REQUIREMENTS (including access and inclusion)

i.    Anyone aged 16 and above

ii.   Candidates should have attained NCQF Level 2, Certificate II or equivalent

iii.  Candidates may also be admitted into the qualification through Recognition of Prior Learning (RPL) if they have working experience in any industry with no formal qualification but with valid evidence (where applicable)

iv.   Mature entry candidates would also be considered

| QUALIFICATION SPECIFICATION SECTION B | |
|---|---|
| **GRADUATE PROFILE (LEARNING OUTCOMES)** | **ASSESSMENT CRITERIA** |
| **On successful completion of the Certificate in Computer Information Technology learners shall be able to:** | Through given assignments and tests learners should be able to: |
| 1.1 Demonstrate an understanding of computer system and its components | 1.1.0 Use computer components to build a computer system<br><br>1.1.1 Install computer system software and application software<br><br>1.1.2 Demonstrate window and menu commands and how they are used<br><br>1.1.3 Differentiate key issues of Fourth Industrial Revolution (4IR) |
| 1.2 Use advanced features and functions available in office applications | 1.2.0 Utilize Microsoft tools like cut and paste, copy, find and replace and mail merge to simplify repetitive tasks<br><br>1.2.1 Use excel to summarize data and present it in other formats like graphs, charts etc<br><br>1.2.2 Prepare reports and presentations using basic design principles<br><br>1.2.3 Use Microsoft access to design and create databases |
| 1.3 Use different web browsing tools and emailing | 1.3.0 Install different web browsing tools available |

| | |
|---|---|
| applications to search and communicate effectively | 1.3.1 Use different emailing applications to communicate effectively<br><br>1.3.2 Utilize effective social media and digital marketing tactics |
| 1.4 Describe computer networking technologies and the required infrastructure. | 1.4.0 Discuss network design and various network topologies<br><br>1.4.1 Identify the basic protocols involved in wired/wireless communication process.<br><br>1.4.2 Explain the OSI reference model. |
| 1.5 Explain different types of information systems and their roles in an organisation | 1.5.0 Identify various information systems used in various business environments.<br><br>1.5.1 Discuss the current trends related to information systems and their potential to fulfil business needs<br><br>1.5.2 Indicate the issues associated with managing business information systems |
| 1.6 Apply different strategies to address information security issues in an organisation | 1.6.0 Use different techniques to assess the possibilities of threats<br><br>1.6.1 Apply different strategies to eliminate threats |

| QUALIFICATION STRUCTURE SECTION C | | | |
|---|---|---|---|
| **FUNDAMENTAL COMPONENT**<br>Subjects / Units / Modules /Courses | **TITLE** | **LEVEL** | **CREDITS** |
| | INTRODUCTION TO COMPUTERS | 3 | 6 |
| | INTRODUCTION TO OFFICE APPLICATIONS | 3 | 6 |
| **CORE COMPONENT**<br>Subjects / Units / Modules | COMMUNICATION SKILLS | 3 | 6 |

| /Courses | | **3** | **6** |
| | INTERNET AND EMAIL | | |
| | FUNDAMENTALS OF NETWORKING | **3** | **6** |
| | BUSINESS INFORMATION SYSTEMS | **3** | **6** |
| | INFORMATION SECURITY ISSUES | **3** | **4** |
| **ELECTIVE COMPONENT** Subjects / Units /Modules /Courses | N/A | | |
| | **N/A** | | |

**Rules of combinations, Credit distribution** (where applicable):

**The qualification consists of (Level 3 modules: 40 Credits):**

Candidates are required to achieve a total of 40 credits for the qualification inclusive of 8 credits for Fundamental modules and 32 credits for Core modules.

**Modules at NCQF Level 3:**

| INTRODUCTION TO COMPUTERS | **6** |
| INTRODUCTION TO OFFICE APPLICATIONS | **6** |
| COMMUNICATION SKILLS | **6** |
| INTERNET AND EMAIL | **6** |
| FUNDAMENTALS OF NETWORKING | **6** |
| BUSINESS INFORMATION SYSTEMS | **6** |
| INFORMATION SECURITY ISSUES | **4** |

## ASSESSMENTS AND MODERATION ARRANGEMENTS

**Integrated Assessment:**

Assessment is conducted in accordance to the institution's Assessment Policy. The assessment will consist of summative assessment and formative assessment.

**Formative assessment**

The outcomes of each module in the qualification are assessed through continuous assessments. Formative assessment will contribute a total of 70%. Students will be provided one (1) assignment and one (1) internal test for each module covering all the outcomes. 35% of the assessment mark from 1 assignment and 35% of the assessment mark from the internal test will contribute to the final Mark. The assessment will be based on the assessment criteria of the module and students will be expected to demonstrate that they met the module's learning outcomes.

**Summative assessment**

Final examination will be conducted on completion of the modules. All the outcomes of the module will be assessed in the final examination. Final examination will contribute 30% to the final mark. The assessment will be based on the learning outcomes and assessment criteria of the module.

**Moderation**

Moderation takes place in accordance with the institutional Moderation Policy. This Policy provides for a moderation process that verifies that assessments are fair, reliable, valid, practicable and transparent and also evaluates assessor performance.

Moderation must include both internal and external moderation of assessments. Moderation should also encompass achievement of the competence described both in individual unit standards, exit level outcomes as well as the integrated competence described in this qualification.

**Internal moderation requirements**

Anyone assessing a learner or moderating the assessment of a learner against this Qualification and Unit Standards must be registered as an assessor/moderator with the BQA.

The Examination is set by a team of Examiners who are the Lecturers of the Institution from all branches. The set questions are emailed to the Head Office through the Heads of Departments. They sit down with the module leaders to select the questions which are suitable for the examination according to blooms

taxonomy. They would check for the quality of the questions and the pitching of the question, whether they were set using the learning outcomes to ensure all elements regarding the knowledge, skills and competencies are examined.

After, the internal verification process, set questions are uploaded to the Academic Manager who would take the printed question papers to the External moderators for further quality check.

**External moderation requirements**

External moderators are engaged by the institution as consultants for two purposes, that is pre-moderation and post –moderation of papers.

External Moderators are experts in the field and are subject specialists whom, after receiving the question papers ensure quality and standard of the paper is maintained. They check the consistence of the paper, how questions were articulated starting from lower level to higher level question using the learning outcomes. They may accept or reject the paper if not set according to Blooms taxonomy of cognitive domain. External moderators check the pitching of the question papers. After, the external moderation exercise has taken place the papers are taken to the Institution for corrections and printing for safe storage before the final date of examination.

**Moderation of answer scripts**

External moderators have mammoth task to ensure that the answer-scripts are moderated as they constitute or determine the fate of the student. Moderators check and verify whether the examiner was not too lenient, generous on marks or hash and mean on marks. They ensure that there is:

- Consistence: the Script versus the marking key.
- Consistence across all scripts.
- Correct mark Count per question.
- Correct Mark Total Count per Script.
- Correct mark Computation (formulae on Mark Sheets).
- Correct transfer of marks to Mark Sheet.
- Percentage pass rate calculated.

Moderators give comments, observations and recommendations that would influence the decision of the

Senate.

## RECOGNITION OF PRIOR LEARNING (if applicable)

RPL is conducted in accordance with the institutional Recognition of Prior Learning Policy. This Policy provides processes and procedures by which RPL is conducted.

The assessment processes involved with RPL are the same as those followed for awarding credits in an academic setting. An RPL candidate seeking credits for previously acquired skills and knowledge must still comply with all the requirements as stated in learning modules and learning programmes and qualifications. The difference is the route to the assessment. RPL assessment takes a holistic view of the process of assessment where the context of the learning as well as the context of the person who is being assessed is considered.

Students who do not meet the minimum admission requirements, could, under certain conditions, apply for admission based on recognition of prior learning (RPL).

Candidates may apply for recognition of prior learning whether such learning has been gained through formal study, through workplace learning, or through any other formal or informal means. Any candidate applying for recognition of prior learning (RPL) will be expected to provide evidence of such learning that must be relevant, sufficient, valid, verifiable, and authentic. In addition, the candidate may be interviewed by a member of staff or have to take a formal test, which may include a live demonstration of skills and competencies, to assess competence

## PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

**Horizontal Articulation (related qualifications of similar level that graduates may consider)**

- Certificate III in Information Communication Technology
- Certificate III in Computer studies
- Certificate III in Computer operations

**Vertical Articulation (Qualifications to which the holder may progress to)**

Certificate IV in Computer Information Technology

Certificate IV in Information Communication Technology

Certificate IV in Computer operations

**Career opportunities**

There are bright career prospects for IT beginners in recent decades. Certificate in Computer Information Technology graduates can find job opportunities in a variety of environments in academia, research, industry, government, private, business organizations and even start their own businesses as entrepreneurs.

Certificate in Computer Information Technology graduates can work as:

- IT computer operator
- Data clerk/capturer
- Online office assistant
- Client support officer

## QUALIFICATION AWARD AND CERTIFICATION

Only after passing all modules in the qualification and obtaining 40 credits, the student can successfully be awarded the Qualification Certificate in Information Technology. Therefore, there is only a single exit award, which is awarded after 6 months.  If the learner fails to acquire 40 credits, s/he does not get a transcript until s/he acquires the required 40 credits

## REGIONAL AND INTERNATIONAL COMPARABILITY

This certificate is designed as an introductory program for those who want to explore a range of information technology subject areas before deciding on an area of specialization. It introduces systems thinking principles, computers, information systems, and their use in business decision making.

Although the qualifications benchmarked with generally follow similar structures and standards, there are differences. The major variation is in duration and number of modules. All regional institutions qualification share some common modules, which provides learners overview of information systems, and then focus their studies in areas such as computer applications, digital marketing, and business information systems technologies. The international Institution has duration of one year. Employment pathways are similar for all the institutions. Progression pathways are the same with the holders of the certificate in computer

information technology being able to pursue higher qualifications in similar fields.

Our qualification compares favourably with the other qualifications regionally and internationally in terms of purpose, content covered. All the qualifications have the same career paths. In addition, the Certificate in Computer Information Technology is at NCQF level III which is within the range of the qualifications considered.

**REVIEW PERIOD**

This Qualification will be reviewed after every 5 years.

**Other information –** please add any supplementary information to help the application for this qualification for NCQF Registration.

**For Official Use Only:**

| CODE (ID) | | | |
|---|---|---|---|
| **REGISTRATION STATUS** | **BQA DECISION NO.** | **REGISTRATION START DATE** | **REGISTRATION END DATE** |
| | | | |
| **LAST DATE FOR ENROLMENT** | | **LAST DATE FOR ACHIEVEMENT** | |
| | | | |