QUALIFICATION SPECIFICATION SECTION A						
QUALIFICATION DEVELOPER	Botho University					
TITLE	Certificate in Jewellery Design and Manufacture			**NCQF LEVEL**	5	
FIELD	Manufacturing, Engineering and Technology	**SUB-FIELD**	Jewellery Design and Manufacture			
New qualification	✓	Review of existing qualification				
SUB-FRAMEWORK	General Education		TVET	✓	Higher Education	
QUALIFICATION TYPE	Certificate	✓	Diploma		Bachelor	
	Bachelor Honours		Master		Doctor	
CREDIT VALUE					**120**	

RATIONALE AND PURPOSE OF THE QUALIFICATION

Rationale:

Botswana's Vision 2016 and 2036 strategies acknowledge the need to: develop and deploy a skilled workforce that is not only global, but also able to create high value products using natural and imported resources for the export markets. In order, to achieve this objective in Botswana there is a critical need to develop the human capital and make it more effective and relevant to the needs of the economy (The Botswana National Development 2011). Trained jewellery designers, that can create and manufacture internationally appealing and unique collections of fashion, craft and diamond jewellery offer Botswana the opportunity to diversify its economy. Jewellery was also identified as a key thematic area for the development of goods and services that comply with domestic and international standards, and sustainable employment after the diamonds run out (Government of Botswana, Economic Diversification Drive http://www.mti.gov.bw/webfm_send/231).

Jewellery Design and Manufacturing is critical in supporting government policy for economic diversification. It is also necessary in promoting access and equity in education and training. The Human Resource Development Council, (HRDC) (2016), identified Jewellery design including both core and soft skills, as one of the occupations that are currently experiencing shortages in the labor market (short term) and occupations that show relatively strong employment growth (long-term) in two sectors. First, in the

Manufacturing, sector, there is need for manufacturing technicians trained in Jewellery design and manufacturing. Second, in the Creative Industries, there is a need for trained Jewellery designers.
The government of Botswana also supports the development of a creative and dynamic craft industry predicated on upgrading the creative, business and logistical skills of artisans, with emphasis on culture and traditions of Botswana, as well as poverty alleviation (Government of Botswana, Economic Diversification Drive http://www.mti.gov.bw/webfm_send/231). Jewellery Design is a subfield of Manufacturing, Engineering and Technology (Field 10), as well as Culture, Art and Crafts (Field 3). The long-term sustainability of Jewellery design and manufacture will, however, depend on empowering local citizens as entrepreneurs and as producers of strong design brands goods and services (Government of Botswana, A Strategy for Economic Diversification and Sustainable Growth, (2009).

The Certificate in Jewellery Design and Manufacture was developed to feed into the growing employment and poverty alleviation opportunities with job ready graduates. To ensure the qualification is in line with the short and long-term objectives of the economic diversification of Botswana, the design of the qualification not, only included the technical skills in the workshop and designing modules, but also soft skills in the areas of life skills and business continuity. These modules combined will equip graduates with the necessary knowledge, understanding and competence to conduct the operations associated with the design and manufacture of jewellery.

A market need analysis was conducted with the objective of sampling the internal and external stakeholders' views and opinions regarding the market demand for this qualification. The main purpose of the survey was to identify market demand for the qualification; the preferred level at which the qualification can be offered; preferred mode of study; skills requirement for the qualification; market demand for graduates; sufficiency and relevance of the qualification. The majority of prospective students (67%) viewed this qualification, as an important source of developing skilled artisans for the local jewellery industry. The employers indicated that the demand was high (47.6%) and Medium (33.3%) and were also interested in partnering in organizing student visits and exposure to the industry.

Purpose of the Qualification

At the end of this qualification, candidates will be able to:

- Apply 2D and 3D design techniques using the relevant software.
- Select appropriate tool, materials and techniques to design and manufacture Jewellery.
- Identify the different metal and non-metal components that can be used in Jewellery Manufacturing.

- Adhere to health and safety issues within a Jewellery design and manufacturing environment.
- Develop the ability to generate and assess financing for new venture ideas.
- Apply theory, concepts and ideas presented in class to their own business ideas.
- Demonstrate an understanding of small business operational issues.
- Express themselves in spoken & written English.

ENTRY REQUIREMENTS (including access and inclusion)

Minimum entry requirement will be:

- NCQF level 4, Certificate IV (General Education or TVET) or equivalent
- Applicants that do not meet the above criteria but possess relevant industry experience will be considered through recognition of prior learning (RPL).

QUALIFICATION SPECIFICATION SECTION B	
GRADUATE PROFILE (LEARNING OUTCOMES) **Upon completion of this qualification, the learner will be able to:**	**ASSESSMENT CRITERIA**
Solve problems regarding the design and manufacture process of jewellery.	• Design and manufacture solutions • Create the design using the appropriate technology. • Produce a portfolio of evidence.
Draw and design jewellery using various design processes and techniques.	• Produce rendered 2D sketches using appropriate tools. • Demonstrate the ability to convert 2D to 3D modelling by appropriate software. • Create 3D jewellery designs for the local and international market using CAD software. • Explain copyrights and aligned laws in jewellery design. • Produce a portfolio of evidence.
Design a product using techniques which includes but not limited to wire drawing, marking, cutting, piercing, drilling, soldering, testing and simple stone setting and casting.	• Select an appropriate equipment, stationery and materials to design jewellery. • Produce a portfolio of evidence.
Manufacture a piece of Jewellery which includes but is not limited to ear tops, bangles, rings and pendants.	• Demonstrate how to make and use metal wires, metal sheets using appropriate tools and equipment. • Demonstrate how to cast a piece of Jewellery using different Casting Techniques, appropriate tools and equipment. • Explain the concepts of *Surface Treatments, Embossing, Engraving, piercing Doming, Stone Setting*.

	• Prepare hooks that can be used in different types of chains and bracelets. • Produce a portfolio of evidence.
Analyze small business operational issues.	• Investigate the issues raised during the operation of small business. • Prepare costing for materials. • Maintain the records. • Prepare reports.
Demonstrate an understanding of entrepreneurship within business and economic development.	• Discuss the role of Entrepreneurship in Economic Development & factors in starting and financing new ventures. • Develop a business and marketing plan
Communicate and relate to the customers.	• Show how to communicate effectively with customers. • Demonstrate how to use various applications like operating system, word, spread sheet, internet and email.

QUALIFICATION STRUCTURE

SECTION C

FUNDAMENTAL COMPONENT Subjects / Units / Modules /Courses	**Title**	**Level**	**Credits**
	Basic Professional Studies	5	20
	Entrepreneurship	5	20
CORE COMPONENT Subjects / Units / Modules /Courses	Introduction to Rhino	4	10
	Jewellery Manufacture I	4	10
	Introduction to 2D Jewellery Design	5	20
	Jewellery Manufacture II	5	20
	Advanced Jewellery Design	5	20
ELECTIVE COMPONENT Subjects / Units / Modules /Courses	N/A		

Rules of combinations, Credit distribution (where applicable):

- The credit combination for this qualification is from 40 fundamental components, 80 core components.
- This qualification will have at least 120 credits.

Credit Distribution:

Level and Credits	Compulsory	Elective
Level 4 Credits	20	0
Level 5 Credits	100	0
Minimum Credits Total	120	0

ASSESSMENT & MODERATION ARRANGEMENTS

This qualification is assessed and moderated as follows:

Integrated Assessment:

Because assessment practices must be open, transparent, fair, valid, reliable and ensure that no learner is disadvantaged in any way whatsoever, an integrated assessment approach is incorporated into the qualification. Both formative and summative assessment processes are monitored during the qualification and to determine competence at the end of the qualification.

Summative assessment:

Summative assessments will be done by means of a written and / or practical examination depending on the nature of module.

Formative assessment:

Learners are continuously assessed through, but not limited to, the following:

- Practical test
- Assignments
- Presentations
- Theory tests

Pass requirements:

A learner passes a module if he/she obtains a final mark of 50% or more in the module. The final mark is constituted of class participation (5%) the formative assessments (35%) and the summative assessment (60%). A learner qualifies for the **Certificate in Jewellery Design and Manufacture** NCQF level 5 when he/she passed all required modules individually. The final mark for the qualification is calculated by averaging the marks obtained in the various modules. The student should complete 120 credits to complete the qualification.

Moderation:

Both internal and external moderation will be done in-line with the Moderation policy of the Institution. Assessments and moderations shall be done by registered and accredited assessors and moderators.

RECOGNITION OF PRIOR LEARNING (if applicable)

Recognition of Prior Learning will apply for award of this qualification in accordance with national and ETP-based policies and guidelines. 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.

PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

Learning Pathway:

Vertical: Completion of a Certificate V meets the requirement for admission to a Diploma (NCQF level 6) or a Bachelor's degree (NCQF level 7).

Those who have achieved the qualification can progress as mentioned below:

- Diploma (NCQF level 6) in Jewellery Design.
- Diploma (NCQF level 6) in Goldsmith.
- Diploma (NCQF level 6) in CAD.
- Diploma (NCQF level 6) in Jewellery Production Management.
- Diploma (NCQF level 6) in Jewellery Manufacturing.

Horizontal:

- Certificate in Jewellery Manufacturing.
- Certificate in Beading.
- Certificate in Gemology.
- Certificate in Diamond Grading.

Employment Pathway:

- Self-employed jewellery artisan.
- Jewellery designer (Lab assistant).
- Bench Jeweler based in a manufacturing environment.
- Bench Jeweler based in a repairing/servicing environment.
- CAD and casting (Lab assistant).

QUALIFICATION AWARD AND CERTIFICATION

The learner will be awarded '**Certificate level 5 in Jewellery Design and Manufacture'** after attaining 120 credits as specified in the rules of combination and credit distribution. This qualification does not have exit awards. Therefore, if the candidate does not need the prescribed minimum standards of the qualification the learner will exit with a transcript.

REGIONAL AND INTERNATIONAL COMPARABILITY

This qualification was compared with various institutions running similar qualifications. The following institutions and their qualifications were taken for the comparisons:

Regional: SGB Mining and Minerals, South Africa/ Certificate in Jewellery Designing

Regional: College of Cape Town, South Africa/ National Certificate: Jewellery Manufacture

International: Central Technical Institute Clonmel Ireland/ Certificate in Silversmithing and Jewellery Design

College/University	Qualification	Field	General Entry Level	Duration
SGB Mining	Certificate in Jewellery Design Level 4	Manufacturing, Engineering and Technology	NQF Level 3.	6 months
College of Cape Town	National Certificate in Jewellery Manufacture Level 4	Manufacturing, Engineering and Technology	NQF Level 3	1 year
Central Technical Institute Clonmel	Certificate in Silversmithing and Jewellery Design Level 6	Manufacturing, Engineering and Technology	QQI Level 5 Award, or an equivalent qualification in art. Adult students over the age of 21 or persons displaying a specific skill set and/or life experience are welcome to apply	1 year

Summary of Benchmarking

SGB Mining

The following modules are available in both qualifications: Draw and design jewellery using various design processes and techniques. The proposed qualification offers more modules on Entrepreneurship, Basic Professional Practice, Basic and Advanced Jewellery Manufacture. SGB mining provides modules in Mathematics and Gemology which are not included in this qualification. The proposed qualification has a module, Basic Professional Studies, which focuses most on Communication skills.

College of Cape Town

Jewellery manufacture, Jewellery Designing are similar modules in both the qualifications. College of Cape Town provides modules in Jewellery Theory which was not included in this qualification. The duration of the qualification is similar to College of Cape Town. The proposed qualification has an additional module, Basic Professional Studies, which focuses on basic skills needed for the learners.

Central Technical Institute Clonmel (CTIC)

Both the qualifications have similar exit level outcomes though the module names are different. The module design skill in CTIC is similar to 'Introduction to 2D Jewellery Design' in the proposed qualification. The module Basic Professional Skills in the proposed qualification covers the modules like Communication, customer service and leadership in CTIC's qualification. In Addition to that this qualification has Entrepreneurship module. The duration of the qualification is similar to Central Technical Institute Clonmel. These Institutions follow different credit system and currently this qualification follows the NCQ Framework to allocate the number of credits for each year (minimum 120 credits) and the total number of credits for the qualification is (120 credits).

REVIEW PERIOD

The qualification will be reviewed in 5 Years after its registered.