SECTION A:	***QUALIFICATION DETAILS***
QUALIFICATION DEVELOPER (S)	Department of Teacher Training and Technical Education

TITLE	Diploma in Jewellery Design and Manufacture			***NCQF LEVEL***	***6***
FIELD	Culture Arts and Crafts	***SUB-FIELD***	Arts and Crafts	***CREDIT VALUE***	***360***

New Qualification	✓	*Review of Existing Qualification*	

SUB-FRAMEWORK	*General Education*		*TVET*	✓	*Higher Education*	

QUALIFICATION TYPE	*Certificate*	*I*		*II*		*III*		*IV*		*V*		*Diploma*	✓	*Bachelor*	
	Bachelor Honours		*Post Graduate Certificate*		*Post Graduate Diploma*										
	Masters		*Doctorate/ PhD*												

RATIONALE AND PURPOSE OF THE QUALIFICATION

RATIONALE:

In the past few decades, higher education has seen a paradigm shift. The idea of Education and Training Providers (ETPs) as a place for providing instruction has largely been reimagined as a place for producing learning. In the world of globalization almost every country in the world wants their education system to be the best, so their students can obtain the necessary skills and knowledge taught by the ETPs that meets the challenges of the 21st century. The need to produce competitive and skilled graduates applied to countries in Africa and Southern Africa also.

Furthermore, Botswana like other countries in Sub-Saharan Africa, recognized Technical Education as one of the vital areas that could contribute to job creation for the youth and diversify the country's economy. It is against this background that Botswana, introduced a number of outcome-based Diploma qualifications at

its Institutions of higher learning to equip students with lifelong skills and knowledge for the world of work, hence this Diploma in Jewellery Design and Manufacture qualification was developed.

This qualification has been put together in line with Botswana government's Vision 2036 which acknowledged the Creative Industries as one of the sectors identified as important to the development of Botswana's Human Resource.Furthermore, the Human Resources Development Plan (HRDP 2016) states that Jewellery Design and Manufacture has been recognized as one of the occupations in top demand and the skills that should be built into the Jewellery Design and Manufacture qualification include People Management, Administration, Budgeting, ICT, Social Media, Database Management, Visionary and Customer Service among others (code no: 7313, page 5 & 18).

Moreover, the Botswana NDP11 (pg. 71), states that the availability of new curriculums in Technical Vocational and Education such as the Jewellery Design and Manufacture curriculum, is essential in providing a conducive environment for economic growth and hasten the country's move from a factor-driven to a knowledge-based economy.

PURPOSE:

The purpose of this qualification is to produce Jewellery Design and Manufacture professionals, who meet the increasingly sophisticated needs of the sector with advanced technical knowledge, skills and competencies and will be able to:

- Manage a Jewellery Design and Manufacturing workshop
- Perform duties and tasks pertaining to Jewellery making in accordance with established codes of practice and international best practice in the field of Jewellery Design and Manufacture
- Demonstrate Good interpersonal skills, communication skills leadership skills and teamwork.
- Demonstrate ability to recruit, train and supervise staff in a jewellery shop.
- Develop marketing, stock management, pricing systems and basic money management.
- Promote and market Jewellery Design and manufacture services.
- Manage and prepare displays for jewellery sales set up.
- Ensure compliance with health and safety legislation and licensing laws.
- Plan and manage events in a jewellery shop set up.

ENTRY REQUIREMENTS (including access and inclusion)

Minimum entry requirement for this qualification is a:

Certificate IV, NCQF Level 4 (General Education or TVET), or equivalent.

RPL:
Provision and inclusion of access will include Learners who have credits in a similar qualification.

Special Entry as Mature Entry:
Learners with a minimum working experience of 2 years in Jewellery Design and Manufacture Industry

Transfer Learners with credits accumulated form the same qualification (CAT)

SECTION B	***QUALIFICATION SPECIFICATION***
GRADUATE PROFILE (LEARNING OUTCOMES)	***ASSESSMENT CRITERIA***
LO 1 Demonstrate an understanding of jewellery adornment and the development of jewellery in the Global context	1.1 Demonstrate an understanding of jewellery and adornment 1.2 Investigate body adornment 1.3 Investigate tribal jewellery and adornment of the Southern African region 1.4 Demonstrate an understanding of the current jewellery industry
LO 2 Demonstrate basic skills relating to the application of the hand tools, equipment, machinery, consumables, and chemicals used in the jewellery workshop.	2.1 Demonstrate the safe use of the hand tools, machinery and other equipment used in the jewellery workshop 2.2 Demonstrate the safe use of the chemicals and consumables used in the jewellery workshop 2.3 Demonstrate preparation techniques 2.4 Demonstrate basic shaping techniques

	2.5 Demonstrate basic joining techniques 2.6 Demonstrate basic finishing techniques
LO 3 Apply basic jewellery drawing techniques including metal rendering techniques, technical drawing and three-quarter view, 2D and 3D drawing representations of jewellery pieces to design incorporate on gemstones using colour.	3.1 Apply basic jewellery drawing construction techniques 3.2 Produce a two-dimensional rendered jewellery drawing in pencil 3.3 Produce a two-dimensional rendered jewellery drawing in colour 3.4 Produce a technical drawing of a jewellery piece 3.5 Produce a rendered three-quarter view drawing 3.6 Produce 2D representations of gemstones 3.7 Apply realistic 2D and 3D representations of jewellery pieces incorporating gemstones using coloured pencils 3.8 Present jewellery designs incorporating gemstones using watercolour paint
LO 4 Demonstrate fundamental metallurgical knowledge relevant to casting techniques and heat application in general, will have used different casting methods and will have produced a cast piece of jewellery.	4.1 Demonstrate metallurgical knowledge relevant to casting techniques 4.2 Demonstrate the ingot mould casting technique 4.3 Create samples exploring different casting methods 4.4 Produce a cast piece of jewellery
LO 5 Apply knowledge of design process from the research stage through to the final design solution.	5.1 Construct a project plan for a given design brief 5.2 Research a range of sources of inspiration 5.3 Develop preliminary designs 5.4 Develop a final design solution in response to the design brief
LO 6	6.1 Demonstrate the engraving techniques on

Demonstrate different skills of decorative techniques used in jewellery industry.	jewellery pieces 6.2 Demonstrate enamel techniques on jewellery pieces 6.4 Apply granulate techniques on jewellery pieces 6.5 Apply facet techniques on jewellery pieces 6.6 Apply etching techniques on jewellery pieces
LO 7 Demonstrate knowledge and skills associated with beadwork to produce a finalised piece of jewellery using beading techniques	7.1 Investigate different types of beads 7.2 Demonstrate different beading techniques 7.3 Design a contemporary design for Jewellery piece 7.4 Produce a contemporary piece of jewellery based on beading techniques
LO 8 Describe a range of common gemstones and gemstone cuts found in the jewellery industry.	8.1 Describe a range of common gemstones and gemstone cuts found in the jewellery industry 8.2 Construct a rub-over setting 8.3 Construct a simple piece of jewellery based on the produced rub-over setting 8.4 Demonstrate the setting of a cabochon on a cut Gemstone
LO 9 Demonstrate knowledge, skills and understanding associated with traditional craft techniques indigenous to Botswana.	9.1 Research traditional craft techniques indigenous to Botswana 9.2 Demonstrate different traditional craft techniques indigenous to Botswana 9.3 Develop a contemporary design for a piece of jewellery based on traditional craft techniques indigenous to Botswana 9.4 Produce a contemporary piece of jewellery based on traditional craft techniques indigenous to Botswana

LO 10 Apply optical theories underlying gemmological study and be able to use gemmological equipment to analyse gem materials.	10. 1 Outline optical theories underlying gemmological study 10.2 Demonstrate the use of gemmological equipment to analyse gem materials 10.3 Identify the characteristics of a diamond 10.4 Outline processes of the diamond Industry
LO 11 Apply computer aided design techniques (CAD – CAM) to produce jewellery designs suitable for subsequent prototyping.	11.1 Carry out elementary geometry using CAD software 11.2 Demonstrate precision-modelling of curves and surfaces using CAD software 11.3 Produce parallel projection views of jewellery designs using CAD software 11.4 Produce photo-realistic jewellery designs using CAD software 11.5 Explore different additive manufacturing Techniques 11.6 Produce CAD models of jewellery pieces suitable for rapid prototyping 11.7 Evaluate the integrity of CAD models for prototyping 11.8 Produce a high fidelity prototype of the CAM model using a bureau service
LO 12 Demonstrate knowledge and skills associated with engaging in a small jewellery business including marketing, stock management, pricing systems and basic money management.	12.1 Identify potential target groups for a business 12.2 Investigate factors associated with marketing a product 12.3 Demonstrate an understanding of stock management 12.4 Demonstrate an understanding of a jewellery pricing system

	12.5 Demonstrate basic money management Skills
LO 13 Demonstrate ability to do basic practical skills of metal working techniques such as tube and wire production.	13.1 Demonstrate an understanding of jewellery findings 13.2 Demonstrate an understanding of jewellery techniques associated with chain production 13.3 Apply jewellery techniques associated with chain production 13.4 Produce a piece of jewellery using chain production Techniques
LO 14 Apply the lost wax casting method for the batch production of jewellery items in precious metal.	14.1 Produce a master pattern suitable for replication 14.2 Prepare casting flasks for the investing process 14.3 Conduct the investing process 14.4 Conduct the burnout process 14.5 Conduct the vacuum assisted casting process 14.6 Finish castings to produce a small batch series of jewellery 14.7 Produce a vulcanised rubber mould 14.8 Produce repeat wax models from the rubber mould
LO 15 Demonstrate the skill of setting a stone when making jewellery.	15.1 Arrange stones 15.2 Apply different setting techniques 15.3 Apply finishing touches
LO 16 Demonstrate the principles and concepts of jewellery pieces production and development for sustainability	16.1 Investigate principles of sustainability 16.2 Develop concepts for sustainable jewellery 16.3 Produce a sustainable jewellery piece

LO 17 Demonstrate key elements of marketing including strategies to achieve competitive advantage in the jewellery business.	17.1 Identify key concepts of marketing 17.2 Explore strategies to achieve competitive advantage 17.3 Develop a marketing strategy for a jewellery business 17.4 Investigate ethics in marketing

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SECTION C	***QUALIFICATION STRUCTURE***			
FUNDAMENTAL COMPONENT *Subjects/ Courses/ Modules/Units*	***TITLE***	***Credits Per Relevant NCQF Level***		***Total (Per** Subject/ Course/ Module/ Units)*
		Level [5]	***Level [6]***	
	Occupational Health and Safety	8		8
	Communication Skills 2		8	8
	ICT 2		8	8
	Entrepreneurship 2		8	8
TOTAL				**32**
CORE COMPONENT *Subjects/Courses/ Modules/Units*	Jewellery and Adornment in the Global Context		15	15
	Introduction to the Jewellery Workshop	8		8
	Jewellery Drawing 1	8		8
	Basic Casting Techniques		15	15
	Design Process in Jewellery		16	16
	Jewellery Decorative Techniques	10		10
	Jewellery Drawing 2		15	15
	Gemology and Stone Setting		17	17
	Wire & Chain Production Techniques		17	17

	Gemology and The Diamond		17	17
	CAD for Jewellery		15	15
	Business Development in Jewellery Sector		8	8
	Lost Wax Casting		16	16
	CAM 3D Modelling		15	15
	Stones Setting		15	15
	Sustainable Jewellery	8		8
	Marketing Jewellery	8		8
	Industrial Placement		60	60
	Integrated Project		30	30
TOTAL				**313**
ELECTIVE/ OPTIONAL COMPONENT *Subjects/Courses/ Modules/Units*	Jewellery Beadwork		15	15
	Traditional Craft Techniques in Jewellery		15	15
TOTAL				**15**

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SUMMARY OF CREDIT DISTRIBUTION FOR EACH COMPONENT PER NCQF LEVEL	
TOTAL CREDITS PER NCQF LEVEL	
NCQF Level	***Credit Value***
Level 5	*50*
Level 6	*310*
TOTAL CREDITS	***360***

Rules of Combination:

(Please Indicate combinations for the different constituent components of the qualification)

The rules of combination for this qualification are defined below and cover the minimum and maximum credit values required to be accumulated, along with details of any mandatory units.

COMPONENT	LEVEL 5	LEVEL 6
Core	**42** credits	**271** credits
Fundamental	**8** credits	**24** credits
Elective	**0** credits	**30** credits

- The Fundamental Component consists of 4 **Unit** Standards to the value of **32 credits** all of which are compulsory
- The Core Component consists of 19 Unit Standards to the value of **313 credits** all of which are compulsory
- Elective Component consists of **2** Unit Standards to the value of **30 credits** of which a candidate is to complete **1** unit out **(15 Credits)** of the **2** units available
- Integrated Project Unit to the value of **30 credits**
- Industrial Attachment to the value of **60 credits**

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ASSESSMENT ARRANGEMENTS

There will be **ASSESSMENT** administered in order for the candidates to satisfy the qualification according to set National Assessment Policy.

Formative assessment will contribute 60% and Summative assessment 40% of the total weightings of the assessment

BQA registered and Accredited Assessors will be engaged for the process of assessing the candidates as per ETP policy which is aligned with National/ BQA policy guidelines on moderation.

MODERATION ARRANGEMENTS

BQA registered and accredited moderators or suitably qualified persons will be engaged for the process of moderating the candidates and as per ETP policy which is aligned with National/ BQA policy guidelines on moderation.

RECOGNITION OF PRIOR LEARNING

Recognition of Prior Learning (RPL) Policy and Procedures are in place.

RPL ASSESSMENT

This Qualification acknowledges the opportunities presented by an RPL system. The system embraces all forms of learning and skills acquisition specifically that which takes place outside formal settings such as families, workplaces, communities, and civil society groups. All these have a potential to uplift the general quality of life of individuals. In this regard the Qualification provides exemption and award of credits at entry for all individuals with industrial and workplace experience and any other form of skills, and knowledge assessed through the RPL procedure.

This qualification promotes RPL for credit and access as opportunities for all individuals with workplace experience who want to earn a full or partial qualification. In addition, the department will support the work of other training providers in the implementation of RPL. Appropriate alignment to the National RPL policy will be made once the latter is in place.

The RPL process is used to:

- Identify students' training and skills
- Match the experience up to the criteria as set out by the course qualification
- Assess the knowledge and skills in the particular field of experience
- Credit students based on previous training and skills already acquired

Candidates are required to provide:

- Appraisals
- Portfolio work
- References
- Curriculum Vitae

Candidates may (if necessary) be required to attend a practical test or knowledge-based test as a part of RPL assessment. Based on the outcome of this assessment, candidates will be credited accordingly or be required to return to learning from the beginning. The RPL policy provides a detailed direction and guidance on procedures and processes involved in this assessment.

Candidates may submit evidence of prior learning and current competence and/or undergo appropriate forms of RPL assessment for the award of credits towards the qualification in accordance with applicable RPL policies and relevant national-level policy and legislative framework. Implementation of RPL shall also be consistent with requirements, if any, prescribed for the field or sub-field of study by relevant national, regional, or international professional bodies.

PRL and CAT will be observed following the RPL and CAT Policies for exemptions of Candidates to gain entrance for this qualification.

CREDIT ACCUMULATION AND TRANSFER

Candidates may submit evidence of credits accumulated in related qualification in order to be credited for the qualification they are applying for.

PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

LEARNING PATHWAYS

Horizontal and/or Diagonal Articulation (related qualifications of similar level that graduates may consider)

Horizontal Articulation (qualifications to which this qualification are equivalent to)

- Diploma in Gemmology
- Diploma in Accessories design
- Diploma in Fashion design
- Diploma in Leather goods manufacturing
- Diploma in Interior design
- Diploma in Design and Technology

Vertical Articulation (qualifications to which the holder may progress to

- Degree in Jewellery design and manufacturer
- Bachelor of Science in Gemmology
- Degree in Accessories design
- Degree in Fashion design
- Degree in Design and Technology

EMPLOYMENT PATHWAYS

On successful completion of this qualification the holder may be absorbed in the job market as:

- Junior Jewellery designer
- Junior jewellery manufacturer
- Costume Design accessory Consultant (Theatre, film, and television)
- Gemstone setter
- Gemstone's dealers
- Diamond sorter and polisher
- Junior jewellery consultant
- Junior jewellery valuator
- Jewellery blogger
- Jewellery sales and marketing representative
- Jewellery Design Educator / Trainer
- Jewellery Merchandizer
- Jewellery studio Technician
- Jewellery Repairer

QUALIFICATION AWARD AND CERTIFICATION

For a Candidate to be awarded Diploma in Jewellery and manufacture they must have acquired a minimum of **360** credits.

Certification

A certificate will be awarded to a Candidate upon completion of the qualification in accordance with applicable policies.

REGIONAL AND INTERNATIONAL COMPARABILITY

REGIONAL

Regionally, South Africa South African Qualifications Authority (SQA) was used for comparability.

Similarities

The proposed qualification and SAQA qualification both have a 3-year duration at diploma level 6 and their credits are both at 360. Competencies on exit outcomes are similar with the proposed qualification. The proposed qualification has the following competencies

Demonstrate the principles and concepts of jewellery, pieces production and development for sustainability, demonstrate different skills of decorative techniques used in jewellery industry, apply basic jewellery drawing techniques including metal rendering techniques, technical drawing, and three-quarter view, 2D and 3D drawing representations of jewellery pieces to design incorporate on gemstones using colour and demonstrate an understanding of jewellery adornment and the development of jewellery in the Global context whereas the SAQA has the following similar competencies: produce creative jewellery, design creative jewellery, use drawing as a design tool in the making of jewellery and demonstrate an appropriate contextual understanding of theoretical aspects of jewellery

The proposed qualification has the following modules: communication skills, design process in jewellery, jewellery drawing, entrepreneurship, business development in jewellery sector and basic casting techniques which are similar to academic and professional literacies, jewellery design, jewellery drawing, business skills, jewellery theory and materials which are the modules of SAQA.

Differences

The proposed qualification has some modules that are not offered by SAQA institutions, and these are:

Traditional Craft Techniques in Jewellery, Industrial Placement, Integrated Project and Jewellery and Adornment in the Global Context

INTERNATIONAL

Internationally, Australia (Australian National Training Authority, ANTA) and United Kingdom / Scotland (Scottish Qualification Authority, SQA), and France *(Keystone)* Institutions were used for comparability.

Similarities

The similarities are that the 3 awarding bodies have similar exit outcomes which are: Design processes skills, technical production skills, design and manufacture Jewellery and objects and acquire skills to produce, manage, market, promote and present Jewellery Design.

Additionally, the structures are comparable although named differently. Furthermore, the 3 Awarding bodies observe RPL through instructor approval and relevant industry experience.

Likewise, the 3 international bodies have more competency-based modules as well as the Integrated project module.

Differences

The difference is the naming of the qualifications and the naming of some modules such as:

Complex Technical Skills, *Illustration*, Develop Computer Aided Design Skills, Multimedia, Computerized illustration, Create a website with professional Images, Expanding design and creative thinking, Selection of niche manufacturing skills, Advanced jewellery manufacturing skills, Portfolio of work and skills and Jewellery Portfolio.

Comparability and articulation of the proposed qualification with the ones examined

After acquiring this qualification, the candidates will have a horizontal qualification similar to: *Diploma in* Jewellery / *Metal Arts*, *Diploma in Fashion Design*, Diploma in Design for Jewellery Production, Diploma in Jewellery Manufacture and vertically articulate to Bachelor of Technology, Degree in Jewellery Design and Manufacture,

Bachelor Degree in Jewellery Design, *Bachelor of Science in Industrial Design***,** Bachelor of Arts in in Jewellery, Degree in Jewellery Design and Jewellery and Silverware Manufacturing

Work opportunities

Upon completion of this qualification, candidates will have opportunities to work as jewellery *designer*, jewellery *manufacture*, jewellery *studio technician*, *costume design accessory consultant (theatre, film, and television),* jewellery *m*erchandizer, jewellery *customer service salesperson* which are offered by other qualifications which were compared to this qualification.

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

This qualification was developed based on an Occupational profile (Attached) developed by industry using the DACUM (Develop a Curriculum) Method. I was also aligned to the International Standard Classification of Occupations of 2008 (ISCO 08 – Unit Group 3513).