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		Issue No.	01
		Effective Date	27.01.2021

SECTION A: QUALIFICATION DETAILS													
<b>QUALIFICATION DEVELOPER (S)</b>		Limkokwing University of Creative Technology											
<b>TITLE</b>		Diploma in Furniture Design								<b>NCQF LEVEL</b>		6	
<b>FIELD</b>		Manufacturing, Engineering and Technology		<b>SUB-FIELD</b>			Furniture Design			<b>CREDIT VALUE</b>		365	
New Qualification				<input checked="" type="checkbox"/>		Review of Existing Qualification							
<b>SUB-FRAMEWORK</b>		General Education			<input type="checkbox"/>		TVET			<input checked="" type="checkbox"/>		Higher Education	
<b>QUALIFICATION TYPE</b>		Certificate	I	II	III	IV	V	Diploma	<input checked="" type="checkbox"/>	Bachelor or			
		Bachelor Honours			Post Graduate Certificate			Post Graduate Diploma					
		Masters					Doctorate/ PhD						
<b>RATIONALE AND PURPOSE OF THE QUALIFICATION</b>													
<p><b>Rationale</b></p> <p>The aspirations of this qualification are echoed in a report titled “2002 A frameworks for a long term vision for Botswana “The importance of technical training must be stressed throughout the education system. A more difficult task is however to emphasize the importance of technical skills to the Economy, and to upgrade the status of those who are employed in technical jobs. This can only be done through constant emphasis and recognition of the economic Contribution of technical skills both within government and outside through improved Salaries and incentives”, it is therefore clear that technical subjects or qualifications like this would help and add value to the economy of Botswana.</p>													

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Research conducted by Motlhanka and Mapfira (2010), Growing Manufacturing: Assessing Botswana's Diversification Efforts Through Manufacturing Sector Growth indicates the need for the qualification. They highlighted the following as challenges faced by the manufacturing industries in Botswana:

- Poor work ethic of the labour workforce
  - Poor labour productivity
  - Lack of creativity and innovation
  - As a result, the sector is uncompetitive
- Lack of skilled labour which affects:
  - Development of new goods
  - Development of new markets for products
  - Development new advanced production processes

Lack of an innovative qualification aimed at instilling a culture of continuous innovation among creative industries has been cited as an impediment to this sector's growth in Botswana (Local Enterprise Authority, 2008). Successful exploitation of new ideas has driven economic progress of many countries. "New technology and scientific understandings have unleashed new waves of innovation, creating many opportunities for creative industries to gain competitive advantage (Innovation Report, 2003)." This qualification form part of the top 20 skills in demand and industry priority areas as indicated in the Interim Sector Skills in Demand (December 2016) reports, Botswana labour market Observatory report from Human Resource Development Council.


#### **PURPOSE:**

The purpose of this qualification is to produce graduates with advanced knowledge, skills and competences to;


- Apply appropriate methodologies in research and analysis in relation to the furniture design process, meaning, and user experience.
- Apply creativity and innovative process techniques in synthesizing information, problem-solving and critical thinking.
- Apply the latest technologies to indigenous knowledge and come up with creative and innovative computer-aided visual messages and concepts.
- Create, integrate, and communicate ideas visually and textually.

#### **ENTRY REQUIREMENTS (including access and inclusion)**


- Certificate IV, NCQF level 4 (General Education or TVET) or equivalent.
- CAT and RPL will be applicable for entry and inclusion for this qualification. Access through RPL will be done in accordance with the National RPL Policy.

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<b>SECTION B</b>		<b>QUALIFICATION SPECIFICATION</b>	
<b>GRADUATE PROFILE (LEARNING OUTCOMES)</b>		<b>ASSESSMENT CRITERIA</b>	
<b>1.1</b> Develop a concept from initial draft through to production.		1.1.1 Create simple structural and decorative designs, in sketching pictorial drawings, and in making orthographic working sketches for a variety of furniture. 1.1.2 Produce technical drawings by and through the use of computer. 1.1.3 Apply and visualize basic drafting fundamentals in furniture design. 1.1.4 Interpret and apply drafting standards and terminologies. 1.1.5 Conceptualize and produce design solutions that display the learners understanding of design trends, styles, the history of furniture design.	
<b>1.2</b> Apply appropriate methodologies in research and analysis in relation to the furniture design process.		1.2.1 Collect data from a wide range of sources, employing appropriate research techniques. 1.2.2 Analyse data using appropriate data analysis techniques and make decisions.	
<b>1.3</b> Apply creativity and innovative process techniques in synthesizing information, problem-solving and critical thinking.		1.3.1 Apply critical thinking and creativity in designing furniture and interior layouts. 1.3.2 Use collected data to inform new furniture specifications. 1.3.3 Apply texture and form into furniture design and manufacturing. 1.3.4 Apply problem-solving skills in handling different work-related problem situations. 1.3.5 Translate furniture design visuals into technical drawings. 1.3.6 Develop and document procedures and specifications for furniture design processes.	
<b>1.4</b> Communicate furniture ideas and concepts into written, verbal, visual and digital presentations.		1.4.1 Identify appropriate presentation techniques in visualization communication. 1.4.2 Present a set of design solutions effective to a target audience. 1.4.3 Interpret and use industrial terminology in problem solving. 1.4.4 Integrate innovative ideas into furniture through the use of new materials and technologies. 1.4.5 Assess the reinterpretation of traditional furniture styles/ designs in new markets.	

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<b>1.5</b> Apply technical skill, knowledge and craftsmanship to prove feasibility of concepts	<b>1.5.1</b> Make decision on material and colour alternatives for the selected piece of furniture. <b>1.5.2</b> Draw images from a modeled scene using shading and other techniques <b>1.5.3</b> Differentiate between positive space and negative space on a drawing medium such as paper. <b>1.5.4</b> Generate and conceptualize ideas and work using variety of tools. <b>1.5.5</b> Use a variety of media and/or process to demonstrate knowledge of rendering techniques.
<b>1.6</b> Use fabrication methods to build prototype models for hard-goods and soft goods and packaging.	<b>1.6.1</b> Develop, trial and evaluate prototypes. <b>1.6.2</b> Select suitable material for the furniture prototyping. <b>1.6.3</b> Develop work stages and methods alongside product qualities. <b>1.6.4</b> Determine which of several configurations is the optimum with respect to performance, reliability, cost, modes of behavior under varying conditions. <b>1.6.5</b> Apply family of materials used in soft goods and hard-goods, including sustainable materials and manufacturing processes. <b>1.6.6</b> Construct custom furniture using advanced techniques.
<b>1.7</b> Use relevant CAD and rendering software efficiently to produce furniture	<b>1.7.1</b> Develop and produce computer aided drawings. <b>1.7.2</b> Use Computer-aided Design (CAD) to Create And Display 3-D Models
<b>1.8</b> Scale up/down furniture models.	<b>1.8.1</b> Produce furniture models in different scales <b>1.8.2</b> Convert models from one scale to another by up-scaling or down-scaling <b>1.8.3</b> Convert a 2D drawing/pictorial drawing into a 3D prototype. <b>1.8.4</b> Assemble a 3D prototype into a semi-finished product. <b>1.8.5</b> Quantify components for a designed product.
<b>1.9</b> Explain and apply different manufacturing processes.	<b>1.9.1</b> Apply manufacturing techniques to produce a variety of furniture. <b>1.9.2</b> Convert the model into the actual materials. <b>1.9.3</b> Machine the different parts of the envisaged piece of furniture. <b>1.9.4</b> Join parts of the product into a complete and finished furniture. <b>1.9.5</b> Apply finishing to the completed item/product. <b>1.9.6</b> Apply suitable upholstery techniques to complete furniture.

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	1.9.7 Justify the use of the selected manufacturing processes.
1.10 Manufacture and commission furniture	1.10.1 Apply cost factors to work practices 1.10.2 Estimate and cost job 1.10.3 Manufacture a wide range of furniture products. 1.10.4 Set up, operate and maintain basic static machines 1.10.5 Develop strategies for more sustainable use of resources 1.10.6 Evaluate furniture design proposals and concepts
1.11 Apply upholstery techniques in furniture production: household and general furniture	1.11.1 Develop cutting plan and cut single upholstery fabric 1.11.2 Compare and select the appropriate technique of finishing different materials, wood furniture, metal, foam or plastic furniture. 1.11.3 Fit and apply final cover materials to furniture using basic techniques 1.11.4 Fit and apply final cover materials to furniture using decorative techniques 1.11.5 Apply contemporary foundations to upholstered furniture 1.11.6 Apply specialist decorative effects and finish to furniture by spraying
1.12 Apply safety precautions in furniture production processes	1.12.1 Demonstrate understanding and application of good habits of work such as cleanliness, accuracy, neatness, orderliness and speed 1.12.2 Apply safety, health and environmental protection procedures

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<b>SECTION C</b>	<b>QUALIFICATION STRUCTURE</b>				
<b>COMPONENT</b>	<b>TITLE</b>	<b>Credits Per Relevant NCQF Level</b>			<b>Total Credits</b>
		<b>Level [ 5 ]</b>	<b>Level [ 6 ]</b>	<b>Level [ 7 ]</b>	
<b>FUNDAMENTAL COMPONENT</b> <i>Subjects/ Courses/ Modules/Units</i>	Fundamentals of Design	10			10
	Creative and Innovation Studies		15		15
	Introduction to Computer Skills	10			10
	Communication and Study Skills	10			10
	Digital Presentation Techniques		20		20
	Computer Graphics		24		24
	Sociology and Design		10		10
	Photography		20		20
	Entrepreneurship for the Arts		12		12
<b>CORE COMPONENT</b> <i>Subjects/Courses/ Modules/Units</i>	Conceptual Skills for Product Designers	12			12
	Technical Documentation		10		10
	Furniture Design Appreciation		12		12


 <b>BOTSWANA</b> Qualifications Authority	<b>BQA NCQF QUALIFICATION TEMPLATE</b>	Document No.	DNCQF.P02.GD01
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	Design Studio		<b>49</b>		<b>49</b>
	Design Technology		<b>12</b>		<b>12</b>
	Computer Aided Design		<b>27</b>		<b>27</b>
	Manufacturing Techniques		<b>20</b>		<b>20</b>
	Materials & Processes	<b>10</b>			<b>10</b>
	Ergonomics		<b>10</b>		<b>10</b>
	Models & Prototypes		<b>12</b>		<b>12</b>
	Professional Practice			<b>10</b>	<b>10</b>
	Industrial Attachment		<b>40</b>		<b>40</b>
<b>ELECTIVE/ OPTIONAL COMPONENT</b>  <i>Subjects/Courses/ Modules/Units</i>	Principles of Marketing		<b>10</b>		<b>10</b>
	Animation Practice		<b>10</b>		<b>10</b>
	Packaging Design		<b>10</b>		<b>10</b>

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<b>SUMMARY OF CREDIT DISTRIBUTION FOR EACH COMPONENT PER NCQF LEVEL</b>	
<b>TOTAL CREDITS PER NCQF LEVEL</b>	
<b>NCQF Level</b>	<b>Credit Value</b>
5	52
6	303
7	10
<b>TOTAL CREDITS</b>	<b>365</b>
<b>Rules of Combination:</b> <b>(Please Indicate combinations for the different constituent components of the qualification)</b>	
Fundamental components=131 Core components=224 Elective/options=10 A learner should take one module from the three modules listed under the elective section.	



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### **ASSESSMENT ARRANGEMENTS**

The qualification will encompass both formative and summative assessment, which will be designed by assessors who are BQA registered and accredited.

The weightings for the assessments will be as follows;

<b>Assessment Method</b>	<b>Weight</b>
Formative Assessments	60
Summative Assessments	40

### **MODERATION ARRANGEMENTS**

There will be internal and external moderation undertaken by moderators registered and accredited by BQA. All processes and procedures will be in line with NCQF requirements. This will be conducted in reference to the institution's moderation policy and procedures.

Moderation of assessment takes place at the key stages of the assessment process, i.e. design of tasks and marking of assignments (including consideration of results).

### **RECOGNITION OF PRIOR LEARNING**

The Qualification will be awarded through RPL in line with BQA RPL policy and well-established ETP policy.

### **CREDIT ACCUMULATION AND TRANSFER**

There is provision for awarding the Qualification through CAT in line with BQA CAT policy and well-established ETP policy.

### **PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)**


This qualification is designed to facilitate vertical, horizontal and diagonal progression both locally and internationally.

#### **Vertical Progression**

1. Vertical progression – Exit

Graduates from this qualification may progress to the following;

- Associate Degree in Furniture Design

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- Bachelor of Arts in Industrial Design
- Bachelor of Design (Design and Technology)
- Bachelor of Design (Industrial Design)
- Bachelor of Arts in Product Design and Development
- Bachelor of Arts in Manufacturing
- Bachelor of Arts in Furniture Design and Manufacturing

### Horizontal Progression

Students may progress horizontally between qualifications if they meet the minimum requirements for admission to the target qualification. Other comparable qualification to this diploma include,

- Diploma in Design and Technology
- Diploma in Interior Design
- Diploma of Design (Manufacturing)

### Employment Pathways

Other than progressing academically students may get into the field and work as;


1. Draftspersons (manual and computer aided design, 2D & 3D) e.g. in mines)
2. Workshop Technician & or assistant (metal, wood, plastic and other materials)
3. Maintenance technician in government and private buildings
4. Research assistant (design and consumer analysis)
5. Furniture designer and manufacturer
6. Exhibition planner
7. Stall manager
8. Fabrication technician

### QUALIFICATION AWARD AND CERTIFICATION

9.1 To qualify for qualification award and certification, a students must

- Attain a minimum of 365 credits overall, including a maximum of 52 credits at Level 5.
- Complete satisfactorily any additional and specified requirements of the qualification.
- Have official verification that he/she has covered and passed all the modules

9.2 A certificate will be awarded on completion of the Qualification.

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## **REGIONAL AND INTERNATIONAL COMPARABILITY**

Currently there is no institution that offers Diploma in Furniture design in Botswana or regionally for benchmarking purposes. However international Universities and Qualifications were used as indicated on the table below, which shows three international comparable qualifications to our proposed qualification.

1. Nanyang Academy of Fine Arts (Singapore)
2. National College of Arts (NCA) (Pakistan)
3. Scottish Vocational Qualification (Scotland)

For more details refer to the attached matrix

### **Similarities**

- In general, the three-bench marked qualification are similar to the proposed qualification
- Main Exit Outcome(s) from the three benchmarked qualification are 90-100% to the proposed qualification
- All the three qualifications have similar modules and unit standards

### **Differences**

- Only one qualification did not capture modules but instead captured unit standard.
- Trends in Furniture design qualifications and the market outlook

The general trend noted is that many universities introduce hands on (Industry work) assessment in the qualification to allow students to get Industry experience while still learning, which empower students with practical skills and new technologies applied in the industry.


### **Contextualization**

This qualification, combine real-life industry projects and design theory with a hands-on focus on production to create sustainable contemporary modern furniture products. Students will learn to develop creative and original furniture designs with a strong grounding in design methods, manufacturing technologies and processes informed by cultural and social factors.

The qualification is designed to meet the expectations of the International best practices in furniture design industry, preparing students with the skills to be job ready from day one.

## **REVIEW PERIOD**

Every 5 years.

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