QUALIFICATION SPECIFICATION								SECTION A
QUALIFICATION DEVELOPER	LIMKOKWING UNIVERSITY OF CREATIVE TECHNOLOGY							
TITLE	Certificate V in Interactive Multimedia Design					**NCQF LEVEL**	5	
FIELD	Culture, Arts and Craft			**SUB-FIELD**	Interactive Multimedia Design			
New qualification	√	Review of existing qualification						
SUB-FRAMEWORK	General Education		TVET	√	Higher Education			
QUALIFICATION TYPE	Certificate	√	Diploma		Bachelor			
	Bachelor Honours		Master		Doctor			
CREDIT VALUE					**124**			

1.0 RATIONALE AND PURPOSE OF THE QUALIFICATION

1.1 Rationale

Interactive multimedia has been called a "hybrid technology." It combines the storage and retrieval capabilities of computer database technology with advanced tools for viewing and manipulating these materials. Multimedia has a lot of different connotations, and definitions vary depending on the context. Interactive multimedia**,** any computer-delivered electronic system that allows the user to control, combine, and manipulate different types of media, such as text, sound, video, computer graphics, and animation. Interactive multimedia integrates computer, memory storage, digital (binary) data, telephone, television, and other information technologies. Their most common applications include training programs, video games, electronic encyclopedias and travel guides. Interactive multimedia shift the user's role from observer to participant and are considered the next generation of electronic information systems.

National Planning Development Strategies

The certificate in Interactive Multimedia Design qualification is in high demand and market driven, both locally and internationally. This is evidenced from the Botswana national policy documents (NDP10) reviewed, that highlights the knowledge and skills priorities, addressed by the qualification. This proposed qualification comes at a time when the economy of Botswana is undergoing a lot of systems transformations across all its sectors, The qualification will assist the country in addressing the pillar of creating a prosperous, productive and innovative nation.

During the Steve Harvey town hall networking session at UB sports arena on August 21st 2019, H.E Dr. Masisi expressed the wish *"to turn Botswana into a multimedia country"*. The President said he envisioned a knowledge-based economy for Botswana and with a young economy and population, Botswana had been under developed and therefore needed skills to broaden the economy.

- *DailyNews, August 22, 2019*

For the country to actively partake in the multimedia industry, it needs to train young professionals who shall develop content and applications for various purposes and needs as expressed by the market.

In February 2016, Orange Botswana through the Orange Foundation launched a call for proposals for projects in digital education. This followed a 2015 announcement that Botswana is going digital which was attested to by BTv migrating from analogue to digital in the same year. The Foundation invited submissions from all associations, NGOs and communities that wish to use digital tools to support or advance the *teaching and learning system* for marginalised groups such as people living with disability, girls and women, in school and out of school youth, the poor and rural communities. Orange PR and Foundation Manager Boga Chilinde-Masebu emphasised that

> *"…there will be no need for a teacher to remember all the teaching content, the sequence of content and time to teach the content. The teacher just has to click and drag any multimedia content, real time 3D content and interactive applications related to syllabus which can be shown in the class which will help the students to remember many concepts more than through the traditional way of teaching… Digital learning requires a combination of technology, digital content and instruction"*

For the dream of a digital classroom to be achieved, there is need to train interactive multimedia design professionals who shall provide platforms for teachers to load content and assessment, thereby making it easily available for learners over digital platforms.

The Botswana National Research Science and Technology Plan (BNRSTP), 2005, policy document, clearly sets out priority areas for research in tandem with the overall theme of NDP 10, toward the realization of vision 2036 and beyond. BNRSTP policy document further reiterates that the research priority areas should be demand and market driven as opposed to the current supply driven approach. Indeed the proposed Certificate in Interactive Multimedia Design is demand and market driven, owing to the fact that there is no high breed qualification being offered by any university at certificate level locally and as such making it a unique qualification to undertake. On media, education and HRD, the policy proposes the need for improved access to information and knowledge, and a well-informed, educated and innovative nation.

This proposed qualification addresses some of the key pillars by the fact that it aims at stimulating multimedia personnel to become enthusiastic and effective designers, with a clear blend of the creative and innovative application of technology. The Certificate in Interactive Multimedia Design addresses the research priority areas of information, communication technologies as it is hinged on the creative use of ICT tools and methodologies, as such this certificate qualification agrees with the nation's priority areas of ICT in the field of creativity and innovation.

The BNRSTP policy document further propounds that research supporting the Information Communication Technology industry is expected to lead to improved efficiency and effectiveness in the broader economy and create new employment opportunities. Finally, the proposed certificate agrees with the objectives of NDP10, chapter 8 point 8.42 which states; "*NDP 10 presents an opportunity for assessment and monitoring of the ICT sector's delivery of services. This will publicise the country outside its borders in a cost effective manner, as well as providing service to the country's diaspora. Consequently, the growth of the ICT industry will create more employment and attract foreign investment".*

At national level, there is continued emphasis on the need for the country to include interactive multimedia as part of the national vision to transform the country to a digital hub. Multimedia has great potential to enhance the learning environment. In his paper, Use of Multimedia Technology in Teaching and Learning Communication Skill, Associate Professor Patel highlights that Multimedia teachings enrich teaching content and make the best of class time and break the "teacher centered" teaching pattern and fundamentally improve class efficiency. Botswana Institute for Technology Research and Innovation (BITRI) objectives under education/learning highlight the need "to provide interactive mobile solutions for access of general educational material by all primary and secondary school pupils"

Current and Future Trends in interactive multimedia domain

Multimedia and modern education

Today, multimedia has become an important part of education all over the world. Now educational institutions have become more mindful of how they convey knowledge to students. It is evident that with the use of multimedia, students are better able to comprehend what they are being taught at schools as compared to the old traditional way of disseminating knowledge. With the use of graphics, sounds and animation etc. the comprehension power of students increases substantially. For instance today a majority of learners are greatly captivated by multimedia in its different forms. Leveraging multimedia in lecturers and or presentations through computerized systems full of colorful text, artistic graphics, clear sounds and animation attracts attention from Learners.

Multimedia and Industry

Many organizations today utilize multimedia applications in their various creations from presentations, to products creation, just to name a few. The Certificate in Interactive Multimedia equips an individual to be exponent in multimedia application. The importance of this qualification is also confirmed by the exponential pace at which local and international universities embark on offering short Multimedia courses.

There is need to produce graduates with interactive multimedia design skills who can venture into the teaching and learning industry as personnel who can use ICT and related tools to enhance the teaching and learning process through use of multimedia tools that utelise graphics, video, text, animation and sound to develop delivery and assessment material. Such can facilitate emulations to simulate, in an interactive manner, principles taught across various subject matters taught including engineering, chemistry, mechanics and so forth. Furthermore, such tools can be used in various fields of practice to emulate effects, based on variables as input.

1.2 Purpose

The purpose of this qualification is to produce interactive multimedia design personnel at Junior /entry level who are skilled in the following key areas: graphic design, web design and interactive multimedia applications development. Graduates who have taken this qualification will have the opportunity to expand

expertise of current and emerging concepts, practices, tools and technologies applicable to the design and production of interactive multimedia applications, while developing an understanding of the relationships between multimedia design and information technology principles and practices that are core to today's growing media industry around the world. Individuals from this qualification will have the opportunity to advance their educational level to diplomas in the relevant field. The qualification will produce individuals:

(a) Who have the practical skills and ability to create and integrate interactive multimedia solutions across various fields of practice
(b) Who have problem-solving skills to solve interactive multimedia related problems in the work place on a daily basis
(c) Who are grounded in the application of technology, creativity and innovation in the invention and production of unique consumer products
(d) Who are skilled to make a positive impact in the interactive multimedia industry
(e) Capable of applying technology to indigenous knowledge and come up with creative and innovative interactive multimedia product designs that will solve people's problems

2.0 ENTRY REQUIREMENTS (including access and inclusion)

2.1 Fulltime Entry Requirements:

Applicants in possession of appropriate NCQF level 4 Certificate and equivalent qualification will be considered for entry into the qualification.

Applicants who do not meet the above criterion but possess relevant industry experience may be considered using RPL and CATS policies for access. This will be done following consideration of the ETP, aligned with BQA policies.

3.0 QUALIFICATION SPECIFICATION	SECTION B
GRADUATE PROFILE (LEARNING OUTCOMES)	**ASSESSMENT CRITERIA**
3.1 Solve industry problems through the use of computer based graphic design processes	3.1.1 Apply typography design principles in creating art work for web. 3.1.2 Explain principles of how to create visual communications through typography and layout techniques. 3.1.3 Design user centered multimedia applications / products. 3.1.4 Communicate using visual expressions. 3.1.5 Create art work using typography principles and elements. 3.1.6 Create typography art work for screen.
3.2 Develop web pages using multimedia elements for interactive media solutions	3.2.1 Develop HTML web pages using an authoring software. 3.2.2 Apply cascading style sheets to web pages in order to separate form from content. 3.2.3 Modify web pages with simple interactivity. 3.2.4 Apply usability guidelines when designing web pages and web content.
3.3 Deliver creative multimedia that meets the project objectives and brand guidelines	3.3.1 Execute interactive multimedia projects from conceptualisation. 3.3.2 Apply interactive design principles and elements. 3.3.3 Develop interactive multimedia solutions from Design 3.3.4 Add user interactivity in multimedia applications.
3.4 Produce animated interactive media content and information that adheres to principles of human computer interaction	3.4.1 Build dynamic/animated Web sites with aesthetics based on designs. 3.4.2 Code applications in action script 3.4.3 Create animations using an authoring and scripting application of choice

3.5	Delivering interactive media solutions using suitable hardware and applications	3.5.1 3.5.2 3.5.3	Identify different types of computer software applications and their functions. Configure computer software to specifications needed to operate Operate different types of input and output devices needed to perform tasks related to production of interactive products.
3.6	Develop websites using appropriate software/programming languages such as HTML and JavaScript : that are user-friendly and appealing	3.6.1 3.6.2 3.6.3	Develop websites authoring and hosting technologies. Develop conceptualizations skills in visual literacy, aesthetics and information design. Test and publish websites.
3.7	Deliver interactive media solutions in required formats	3.7.1 3.7.2 3.7.3 3.7.4	Design interfaces for different applications for web. Use identified best tools in designing interfaces. Communicate visually using interfaces designed for different uses. Apply screen design principles and rules.
3.8	Carry out basic research to gather interactive multimedia design ideas to shape production of products that are in line with international trends.	3.8.1 3.8.2 3.8.3	Conduct research on multimedia production and technologies in advancing the needs of industry. Develop multimedia research by applying multimedia principles and practices Describe the evolution of multimedia.

4.0 QUALIFICATION STRUCTURE			SECTION C
FUNDAMENTAL COMPONENT Subjects / Units / Modules /Courses	**Title**	**Level**	**Credits**
	Conceptual Design	5	10
	Introduction to ICT	5	10
	Fundamentals of Multimedia	5	8
	Interactive Design	5	12
	Web Design	5	10
	Research and Study Skills	5	10
CORE COMPONENT Subjects / Units / Modules /Courses	Social Media Management	5	10
	Basic Entrepreneurship	5	10
	Multimedia Content Development	5	10
	Web Animation	5	12
	User Interface Design Techniques	5	12
ELECTIVE COMPONENT Subjects / Units / Modules /Courses	2D Animation	5	10
	Video Production	5	10

The table below shows module distribution in relation to fundamental, core and elective components. Students are to choose 1 module out of 2 electives. The total number of credits required for a student to graduate in this qualification is 124 credits.

Module Classification	Module status	Total number of modules	Total number of Credits	Credit Percentages
Fundamental Component	Compulsory	6	60	48.4%
Core Component	Compulsory	5	54	43.5%
Elective Component	Students choose 1 out of 2 modules	1	10	8.1%
	Totals	**12**	**124**	**100%**

5.0 RULES OF COMBINATIONS, CREDIT DISTRIBUTION (WHERE APPLICABLE):

Qualification Year	Minimum NCQF Credit Level	NCQF Descriptor Level Credit Composition Rule	Qualification credit distribution
Year 1 Semester 1	120	**Certificate Level 5** • Maximum credits 120	124
Year 1 Semester 2			
Students must take and pass all pre-requisite modules to be allowed to take successive modules.			

6.0 ASSESSMENT AND MODERATION ARRANGEMENTS

6.1 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;

Assessment Method	Weight (%)
Formative Assessments	60
Summative Assessments	40

6.2 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.

7.0 RECOGNITION OF PRIOR LEARNING

Provision for **Recognition of Prior Learning (RPL)** and **Credit Accumulation and Transfer System (CATS)** will be considered for this qualification. Individual providers will implement RPL and CATS in accordance with relevant policies and procedures, compliant with BQA policies. Prospective candidates will follow the application process set by the providers, and will be subjected to the necessary selection and assessment processes and procedures to determine if they qualify.

8.0 PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

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

8.1 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 Certificate include,

- Certificate in Animation
- Certificate in Games Design
- Certificate in Creative Multimedia

8.2 Vertical progression – Exit

Students graduated from this qualification may progress to the following;

- Diploma in Interactive Multimedia
- Diploma in Animation
- Diploma in Games Design
- Diploma in Creative Multimedia
- Associate Degree in Interactive Multimedia
- Associate Degree in Animation
- Associate Degree in Games Design
- Associate Degree in Creative Multimedia

8.3 Employment Pathways

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

- Assistant Interactive Multimedia Designer
- Assistant Web Designer
- Assistant Social Media Manager
- Assistant Graphic Designer
- Assistant Web Animator

9.0 QUALIFICATION AWARD AND CERTIFICATION

9.1 Minimum standards of achievement for the award of the qualification

To qualify for qualification award and certification, a students must
Attain a minimum of 124 credits overall, including a maximum of 40 credits at Level 4.

Have official verification that he/she has covered and passed all the modules

9.2 Certification

The successful candidate, upon meeting minimum standards of achievement for the award of the qualification, shall be awarded a certificate.

10.0 REGIONAL AND INTERNATIONAL COMPARABILITY

In order to stay abreast or perhaps to be on the competitive edge, with other universities both locally and internationally; Limkokwing University had undergone through a process of benchmarking the Certificate in Interactive Multimedia Design with local and international universities. This was done to achieve the following aspects:

- Identify similarities and differences of the qualifications with other institutions
- Develop plans and targets for future performance.
- Formulate unique selling point of the Certificate qualification in Interactive Multimedia Design

Locally the closest qualification was a level 3 Certificate in Graphic Design and Animation, with only 2 modules. This is too low for consideration for benchmarking.

Following is a list of Benchmarked Qualification

Institutions	AAA School of Advertising (South Africa)	Creative Arts College (South Africa)	UC Blue Ash College (United States of America)	Sheridan College (United States of America)
Programme	National Certificate: Interactive Media	Certificate in Interactive Media (Graphics)	Certificate in Interactive Web Multimedia	Certificate In Media Management (formally interactive multimedia).
Duration	1 years (12 months)	1 years (12 months)	1 years (12 months)	1 year (12 months)
Credits	Not stated	Not stated	Not stated	46
Entry points	Grade 11 or equivalent qualification NQF 3 with	Matric (NQF Level 4) or RPL (Computer Knowledge is essential)	Open Admission This program is open to all students with a high school	Post-secondary diploma or degree and/or Demonstrated competence

	English and Mathematical Literacy		diploma or GED and the desire to succeed in college. Although admission is open, students accepted into the program must meet the academic standards of the program to advance to upper levels of study.	through related work and/or educational experience. Students are expected to have computer literacy skills prior to admission (Microsoft Windows, image editing software, Web page tools).
Common Modules	• Graphic Design • 2D Animation	• Interactive Design • Web Animation • Video Production	• Introduction to Web Design • Graphic Design	• Web Design 1 • Web Application Development

10.1 Similarities

The following are noted similarities:

- The duration of training is the same; the key core modules taught in the qualifications are 70% to 100% similar.
- The number of modules offered for the qualifications are 70% the similar. The names could be different but the assumption is that the content is more or less the same. The certificates graduates also progresses to diploma level and the modules covered are exempted.

10.2 Differences

Key differences are noted in the following areas

- For the two other qualifications the target audience is open even to diploma or degree holders who might want to take the qualifications.
- The number of credits varies for each school per module.

10.3 Strength of the qualification

The qualification covers some very important aspects of Information Communication Technology, from computer software, web design and development, graphics imaging, basic animation and computer skills. The qualification is intended to produce well rounded individuals with suitable skills, competences and knowledge appropriate for the industry. It also allows them to advance to diploma and degree qualifications. Students completing this qualification will find employment in various industries including government departments, parastatals and private organizations.

REVIEW PERIOD
Every five (5) years