SECTION A:	QUALIFICATION DETAILS																	
QUALIFICATION DEVELOPER (S)	Botswana International University of Science and Technology																	
TITLE	Bachelor of Engineering (Honours) in Electrical and Communications Engineering													NCQF LEVEL	8			
FIELD	Manufacturing, Engineering and Technology		SUB-FIELD		Electrical and Communications Engineering									CREDIT VALUE	654			
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:

According the Global Innovation Index, Botswana is ranked 89th out of 131 countries and is classified as one of the top five economies in Sub-Saharan Africa[1]. In recognition of the country's poor performance globally, the Government of Botswana has taken proactive steps for developing human capacity and infrastructure to drive sustainable economic diversification that leverages on research, science, technology, and innovation[2,3,4]. Vision 2036 advocates for sustainable economic development, together with human and social development that requires Batswana to attain the necessary skills and competencies so as to advance their country[5]. National Development Plan (NDP) 11 Goal states the need to provide an adequate supply of qualified, productive and competitive human resources policy frameworks[6]. Human Resource Development Council (HRDC) of Botswana has recognized 'Engineering and Technology' as one of the fields that are right now encountering deficiencies in the labour market (short term) and occupations that show moderately solid business development (long term) (HRDC, 2016)[6]. The communication technology and electrical engineering technology specifically renewable energy systems and smart grid technologies need engineers in electrical and communications engineering in the

labour market.

It is to this effect that the B.Eng Honours in Electrical and Communications qualification is necessary. This is one of the vital engineering qualifications particularly in developing countries like Botswana[7,8]. It provides strong theoretical foundation, practical skills, professional conduct, and critical thinking in engineering[9,10].

Aims

The modern power system needs both energy and communication flow together. Particularly Smart Grid needs communication techniques to transmit and distribute the power to the consumers. Communication networks are integral to modern power grid operations and are becoming increasingly critical as grid dynamics speed up and as more controls become closed loop in form. Existing operation and control (especially remote control) of power systems relies heavily on communication systems such as Supervisory Control and Data Acquisition (SCADA) systems. Power systems and communication networks have become increasingly interdependent due to advances in sensor, network, and software technologies that enable more cost-effective means to interconnect grid devices. There is a strong need to increase wide-area situational awareness to coordinate both normal operation and restoration in a more dynamic grid resulting from increasing Variable Energy Resources (VER) and Distributed Energy Resources (DER). The complexity of the utility industry has given rise to complexity in the supporting communication networks. This has, in turn, given rise to the need for infrastructure to support varying operational and security requirements.

Utilities are increasingly adopting data analytics in their operational systems to drive efficiency, reliability and more informed decisions. These analytics are enabled by the data-rich environments that the increasingly intelligent devices and sensors provide. This further emphasizes the dependence of communication networks that provide these connections to the utility operational systems. It is in this view that the discipline of Electrical Engineering and Communications Engineering are being merged to form the B.Eng Honours Electrical and Communications Qualification.

The qualification allows the students to cover all the basics of electricity, generation of power, transmission of power, control and analysis of power system, and communication techniques in power systems. The qualified Electrical and Communications Engineering graduates will be ready to take up employment, conduct research and innovation in the energy industry on; smart grids, Electric Hybrid Vehicles, Distributed Energy Resources and Variable Energy Resources to develop the economy and the scientific knowledge pool in Botswana and in the world[11].

Purpose of the Qualification

The purpose of the qualification is to produce graduate with the knowledge, skills, and competences, to:

- Design complete and complex systems from the simulation steps to the final realization and propose innovative solutions to improve existing systems.
- Understand broad range of the discipline knowledge and adapt these to multidisciplinary projects and environments.
- Carry out engineering projects and develop products.
- Carry out research with minimum supervision.
- Design systems to be used to solve related problems in Electrical and Communications Engineering.

ENTRY REQUIREMENTS (including access and inclusion)

Entry Requirements

Minimum entry qualification

Certificate IV, NCQF Level 4 (BGCSE or Equivalent) with passes in English, Mathematics and Sciences

Recognition of Prior Learning (RPL) and Credit Accumulation and Transfer (CAT) will be applicable and considered for entry into this qualification. These shall apply according to provider policies in line with the national policies

SECTION B	***QUALIFICATION SPECIFICATION***
GRADUATE PROFILE (LEARNING OUTCOMES)	***ASSESSMENT CRITERIA***
1. Demonstrate highly specialised knowledge and understanding of fundamental concepts and principles of Electrical and Communications Engineering.	The learner must be able to: 1.1 Identify, describe, and explain core concepts and principles of electrical and communications in industry and in research institutes. 1.2 To apply highly specialised knowledge to real world application through comprehension questions and problems. 1.3 Demonstrate relationship among the core concepts and principles of electrical and communications. 1.4 Identify the range and limits of the applicability of the core concepts and principles of electrical and communications. 1.5 Understand the core concepts and principles of electrical and communications engineering and how they are applied to solve practical societal problems as well as problems in industry. 1.6 Identify the changes in specialised knowledge for electrical and communications. 1.7 Appraise the limitations of basic techniques used in electrical and communications. 1.8 Recognise the significance of contested scientific knowledge in a contemporary context. 1.9 Demonstrate how scientific information and ideas become generally accepted. 1.10 Apply the fundamental concepts and principles of Electrical and Communication to solve complex

	engineering problems.
2. Access, evaluate and synthesize scientific information.	2.1 Access information by using the library, internet, and other data storage facilities. 2.2 Evaluate the quality of information by using the scientific reasoning. 2.3 Information from a variety of sources, which may be contradictory or divergent, is synthesized. 2.4 Appropriate procedures for generating relevant information are designed, selected, and applied with due concern for bias and for any ethical or safety considerations. 2.5 Appropriate forms of enquiry are conducted by applying standard procedures within the discipline of Electrical and Communications Engineering, such as theoretical, experimental, and computational techniques. 2.6 Appropriate formats used for the data collection and recording. 2.7 Present valid arguments and conclusions from the collected data with scientific evidence. 2.8 Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using engineering sciences to design new ways of using electrical power to develop and improve the new products.
3. Exhibit strong practical knowledge, skill, and competence in electrical and communications engineering.	3.1 Capacity of students to combine the theoretical tools and the law controlling electrical and communications circuits to analyse critical quantities. 3.2 Demonstrate Logical thinking with naive and flawed

	scientific reasoning. 3.3 Inductive (effect to cause or specific to general) and deductive (cause to effect or general to specific) reasoning can be discriminated. 3.4 Performing Hypothetical-deductive reasoning. 3.5 Cause-effect relations can be discerned in the face of some level of uncertainty or gap in available information. 3.6 Thinking and reasoning process are reflected upon. 3.7 The self-conscious capacity to judge when understanding has been achieved or a problem has been adequately solved is demonstrated. 3.8 The graduate can offer the technical support, design and testing system, managing, and working with a team of engineers.
4. Communicate professional and technical scientific understanding in writing, orally and using visual, symbolic and/or other forms of representation to technical and non-technical clients.	4.1 Use of scientific and engineering language correctly to produce clear and coherent written documents, which follow appropriate engineering conventions. 4.2 Present scientific and engineering information is verbally in front of others. 4.3 Appropriate referencing conventions are used, plagiarism is avoided, and intellectual property is respected. 4.4 Non-verbal forms of representation are used correctly and appropriately. 4.5 The graduate can write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
5. Conduct engineering design exercises involving investigative research, interviewing	5.1 Capability in creating the overall circuit correctly and sizing all components to meet given specifications using

techniques and indirect methods of proof used to solve electrical and communications engineering problems.	mathematical theory and simulation to realize prototypes and then the final circuit. 5.2 Concrete and abstract problems, in familiar and unfamiliar contexts, are formulated, analysed, and solved. 5.3 The knowledge of theory is applied to real-world and contexts, and particular to problems in industry. 5.4 Knowledge is integrated, e.g., from various disciples or modes of enquiry, is solving scientific and industrial problems. 5.5 Capacity to control the validity of measurement results comparing them to the model and simulation results. 5.6 Produce high quality scientific and technical reports based on the experimental data systematically checking all reports with anti-plagiarism tools. 5.7 The graduate use research-based knowledge and research methods including prediction and modelling to complex engineering activities with an understanding of the limitations.
6. Demonstrate engineering methods, skills and tools in Information and Communication Technology (ICT).	6.1 Ability to wire correctly basic and complex Electrical and Communication circuits. 6.2 Capacity to follow consistent steps to realize any system starting from theory and simulation to the final system. 6.3 Tasks related to basic computer literacy skills are performed. 6.4 The validity of ICT solutions for problems posed by Electrical and Communication Engineering as a discipline are critically assessed.

	6.5 ICT that is appropriate to Electrical and Communication Engineering as a discipline is used for: mathematical model construction; simulation applications; image and pattern recognition; automation and control; managing and controlling the system. 6.6 The graduate creates, select and apply appropriate techniques, resources and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
7. Develop professional engineering solutions for sustainable development.	7.1 Ability to take all the precautions to protect oneself, colleagues and the work environment against Electrical and Communication risks and the output of any invention. 7.2 Scientific knowledge that is relevant to current societal issues is identified. 7.3 The graduate understands the impact of professional engineering solutions in the society and demonstrates the knowledge of and need for sustainable development.
8. Work effectively as an individual and a member of a team in a scientific project or investigations.	8.1 Evidence of successful and effective contributions in group work is provided. 8.2 The outcomes of engineering group work are communicated effectively and with respect for the contributions of each group member. 8.3 Organisational skills in managing group work are applied. 8.4 Graduate can function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary settings.
9. Apply engineering knowledge and ways of	9.1 Engineering knowledge that is relevant to current

thinking to societal and industrial issues, considering ethical and cultural considerations.	societal and industrial issues is identified. 9.2 Public information dealing with current engineering related issues is critically evaluated. 9.3 Ethically and culturally sensitive decisions on the effects of engineering-based activities on society are made. 9.4 The socio-economic impact of engineering interventions in society and industry is identified. 9.5 Engineering knowledge is applied for the direct benefit of society and to drive industry. 9.6 Graduate applies ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
10. Manage and organise self in terms independent learning activities responsibly.	10.1 Appropriate study skills are demonstrated (learning from text, note-taking, summarising, analysis and synthesis). 10.2 Effective learning strategies which suite personal needs and context are developed and used. 10.3 Demonstrate effective time management. 10.4 The graduate recognizes the need for and has the preparation and ability to engage independent and lifelong learning in the broadest context of technological change.
11. Apply social, legal, ethical, and professional guidelines in engineering decision making.	11.1 Ability to maintain continued competence and to keep abreast of up-to-date tools and techniques are identified. 11.2 Understanding of the system of professional development is demonstrated 11.3 Acceptance of responsibility for own actions by

	individual is identified 11.4 Judgment in decision making during problem solving and design issues is identified 11.5 Limitation of decision making to area of current competence is identified. 11.6 Apply reasoning informed by the contextual knowledge to access societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
12. Undertake an engineering management research project under supervision.	12.1 Evidence of closely aligning learning to professional practice. 12.2 Ability to develop and apply skills whilst integrating knowledge to complete a practical industry project in own area or a project related to any research institutions affiliated to Engineering. 12.3 Electrical and Communication Engineering research investigations are performed which produce meaningful results. 12.4 Appropriate analysis of the data is undertaken, and results are discussed in terms of published scientific literature and presented in the form of a written dissertation. 12.5 The graduate can demonstrate knowledge and understanding of the engineering and management principles and apply the set one's own work, as a member and leader in a team, to manage projects and in multi-disciplinary environments.

SECTION C		***QUALIFICATION STRUCTURE***				
COMPONENT	***TITLE***	***Credits Per Relevant NCQF Level***				***Total*** ***(Per** Subject/ Course/ Module/ Units)*
		Level [5]	***Level [6]***	***Level [7]***	***Level [8]***	
FUNDAMENTAL COMPONENT *Subjects/ Courses/ Modules/Units*	Introduction to Technical Communication & Academic Literacy	5				6
	Pre-Calculus I	5				12
	General Chemistry I	5				12
	General Chemistry II	5				12
	Introduction to Electricity and Magnetism	5				12
	Pre-Calculus II	5				12
	Level 5 Fundamental Credits					**66**
CORE COMPONENT *Subjects/Courses/ Modules/Units*	Introduction to Computing		6			12
	Engineering Graphics		6			12
	Introduction to Mechanics		6			12
	Introduction to Engineering		6			12

	Introduction to calculus		6			12
	Workshop Practice		6			12
	Engineering Mathematics I		6			12
	Programming Logic		6			12
	Computer Networks		6			12
	Technical and Professional Communication		6			6
	Electric Circuit Theory		6			12
	Material Science		6			12
	Engineering Mathematics II		6			12
	Object-Oriented Programming		6			12
	Signals and Systems		6			12
	Principles of Communication Engineering		6			12
	Electrical Machines		6			12
	Analogue Electronics		6			12
	Level 6 Core Credits					**210**

	Engineering Mathematics III			7		12
	Linear Control Systems			7		12
	Power Transmission and Distribution			7		12
	Digital Electronics			7		12
	Electromagnetic Field Theory			7		12
	Electronics Devices and Circuits			7		12
	Engineering Mathematics IV			7		12
	Electrical and Communications Design 1			7		12
	Power Electronics and Drives			7		12
	RF & Microwave Engineering			7		12
	Digital Communication & Networks			7		12
	Microcontrollers			7		12
	Research Methods for Engineering and Technology			7		6
	Industrial Training			7		36

	Economics, Business & Entrepreneurship			7		12
	Level 7 Core Credits					**198**
	Electrical Machine Design				8	12
	Electrical and Communications Design 2				8	12
	Power System Analysis				8	12
	Smart grid and Distributed Power Systems				8	12
	Telecommunications Systems and Network Management				8	12
	Electrical, Computer & Telecommunications Engineering Project I				8	12
	High Voltage Engineering				8	12
	Electrical, Computer & Telecommunications Engineering Project II				8	24
	Power Line Communication				8	12
	Engineering				8	12

	Business and Society					
	Level 8 Core Credits					**132**
ELECTIVE/ OPTIONAL COMPONENT *Subjects/Courses/ Modules/Units* **The students must choose a minimum of 48 credits from the list of modules.**	Electromagnetic Interference/Compatibility				8	12
	Electric Vehicles				8	12
	Power Quality				8	12
	Optical Communications				8	12
	Reliability and Maintainability				8	12
	Broadcasting Engineering				8	12
	Energy Management System and SCADA				8	12
	Design & Installation of Electrical & ICT Services				8	12
	Power System Operation and Control				8	12
	HVDC and FACTS				8	12
	Wireless Sensor Networks and IoT				8	12
	Special Electrical Machines				8	12

	Satellite Communications				8	12
	Power System Protection & Switch gear				8	12

SUMMARY OF CREDIT DISTRIBUTION FOR EACH COMPONENT PER NCQF LEVEL	
TOTAL CREDITS PER NCQF LEVEL	
NCQF Level	***Credit Value***
Fundamentals Level 5	66
Core Level 6	210
Core Level 7	198
Core Level 8	132
Electives Level 8	48
TOTAL CREDITS	**654**

Conclusion/Summary

NCQF exit level - 8

Minimum total number of credits following Certificate IV - 654

Minimum total number of credits at the exit level - 180

Maximum number of credits at level 5 - 66

Minimum number of credits allocated to research - 60

Rules of Combination:

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

To graduate with the 5-years Bachelor of Engineering (BEng) Honours degree Qualification in **Electrical and Communications**, students must have successfully completed a minimum of 654 Credit Units. Design has an intrinsically multidisciplinary character and requires technology-based knowledge but also project management skills[11]. The bachelor honours program in Electrical and Communications Engineering offers an integrated approach of these skills by project-based learning and subject-specific courses. Communication subjects and Integrated Project Management are part of the curriculum. The total study Qualification of 5 years is split up in the general phase (2 years) and the core Phase (3 years). The elective courses at year five will have two advanced modules in high power engineering and from advanced communication engineering. The students can choose their own choice of electives based on the majority student's interest the course will be offered to them.

ASSESSMENT ARRANGEMENTS

Assessment's arrangement

Formative assessments: The candidates will be evaluated based on the summative assessment approach which includes test, lab report and assignment. This evaluates the attainment of the highly specialised knowledge and skills for qualification learning outcomes. Evaluation will be done on set of skill to identify the module specific learning outcomes. Formative assessment weightage is 40%.

Summative assessments: The type of summative assessment used is final examination, which is with the weightage of 60%. Formative assessment and summative assessment combined to produce the final mark.

Final Mark (100Marks) = Summative Assessment (60 Marks) + Formative Assessments (40 Marks)

Pass Mark: The student will be considered as passed each module after attaining weighted mark of 50% and above.

MODERATION ARRANGEMENTS

Appointment of External Examiners

External Examiners shall be appointed for a specified duration on the recommendation of the Departmental Board.

Internal Moderation

- Except with the permission of the institutional committee, all courses or modules shall be subject to internal moderation. The duties of the Internal Moderator shall include:
- Moderates the examination question papers (main and supplementary) and the associated marking guides for the specific/modules/ of their responsibility.
- Shall fill his/her portion of the appropriate form obtainable from the Department and return it to the Internal Examiner who shall deliver the question paper, model solution and signed moderation form to the Head of Department.
- Moderates' samples of marked scripts for the modules of their responsibility and completes the required form obtainable from the Department.
- Re-marks scripts of the modules of their responsibility in cases of student appeals.

- Moderates at least 50% of the assessment instruments of modules assessed through continuous assessment only.
- Ensures that the examination paper complies with the guidelines for Question Paper Development and Examinations Script Management Process/checklist, test or assignment compiled by the examiner is fair in respect of standard, adequate in terms of coverage of the syllabus and correct in terms of correctness and clearness
- Moderates about 10% of scripts, with a minimum of 20 and a maximum of 40 scripts. If there are fewer than 20 scripts, it is advised that all scripts should be moderated.
- Makes one of the following recommendations at the completion of the moderation process:
  - accepts the marks of the examiner.
  - Corrects any detected mistakes in the marks of sampled scripts. In cases of major mistakes, the moderator should investigate marks of students outside the sampled scripts.
  - Adjusts upward or downward marks of all candidates. Any such proposal should be well motivated for consideration by the Departmental Examiners Board (DEB). The moderator must clearly indicate how the adjustment is to be made (e.g., 5% added/subtracted to/from each mark), and
  - Does not accept the marks of the examiner if there are several inconsistent markings and refers the matter to the Head of the Department.

External Moderation

- Except with the permission of the institutional committee, all exit-level courses shall be subject to external moderation.
- For all courses in Level 7 and above (particularly Exit level courses), the examination papers shall be approved by the External Examiner.
- When there is divergence of opinion between the External Examiner and the Internal Examiner, the recommendation of the External Examiner(s) shall normally stand.
- The External Examiner shall write a report to the Departmental Board on the standard and quality of the examinations and other relevant matters.

RECOGNITION OF PRIOR LEARNING

Clear structures through which understudies can collect learning credits and transfer such qualities toward suitable capabilities approves and perceive learning increased through formal and casual methods, gives adaptability to understudies, and enables understudies to advance generally flawlessly through their long-

lasting learning venture.

Students may apply for acknowledgment of earlier realizing whether such learning has been increased through formal investigation, through working environment learning, or through some other formal or casual methods. Any competitor applying for Recognition of Prior Learning (RPL) will be relied upon to give proof of such discovery that must be significant, adequate, substantial, irrefutable, and true. What's more, the hopeful might be met by an individual from staff or need to step through a formal examination, which may incorporate a live showing of abilities and capabilities, to evaluate fitness.

CREDIT ACCUMULATION AND TRANSFER

RPL and CAT will be considered for award of Qualification.

PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

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

Vertical:

Completion of Bachelors of Honours in Electrical and Communications Engineering meets the requirement for admission to a

- Master of Engineering in Electrical Engineering
- Master of Engineering in Energy Engineering
- Master of Engineering in Communication Engineering
- Master of Engineering in Computer and Telecommunications Engineering
- Master of Engineering in Power Systems Engineering
- Master of Engineering in Embedded Systems

Horizontal:

A Bachelor of Honours in Electrical and Communications candidate could continue to pursue a bachelor honours in any other university in the Electrical and Communications specialized disciplines such as;

- Bachelor of Engineering (Honours) in Electronics and Instrumentation Engineering
- Bachelor of Engineering (Honours) in Energy Engineering
- Bachelor of Engineering (Honours) in computer and Telecommunications Engineering
- Bachelor of Engineering (Honours) in Control and Instrumentation Engineering

Employment Pathway:

The qualification will produce graduate's suitable positions as

- Power Plant Engineer
- Control Engineer
- Power Plant Manager
- Energy Engineer
- Circuit Designer
- Communication Engineer
- Networking Engineer
- Systems Engineer
- Project Manager

QUALIFICATION AWARD AND CERTIFICATION

The learner will be awarded a **"Bachelor of Engineering (Honours) in Electrical and Communications Engineering"** after attaining 654 credits as specified in the rules of combination and credit distribution. If the student does not need the prescribed minimum standards of the qualification the learner will exit with a transcript. Certificate will be awarded to the candidates who have met the qualification requirements.

REGIONAL AND INTERNATIONAL COMPARABILITY

Three programmes were compared with the qualification as follows:

BEng Electrical and Electronic Engineering, The University of Johannesburg, NCQF Level 8

This qualification seeks to give students a firm understanding of the principles of electrical and electronic engineering, learn how to design, analyse and test the electrical machines, generating power, transmitting

and distributing the power to the end customers as well as design and maintain telecommunications systems. Students are also shown how to control the system with proper protection of the power system, controlling the electrical machines in the industry with the help of power electronics devices and controllers. They also explore advanced concepts both in electrical delivery and telecommunications circuitry. Candidates are required to achieve a minimum of 564 credits. Graduates for this qualification may pursue M.Eng in Power engineering, power electronics and drives Engineering, wireless communications and satellite communications. Graduates may work as professional engineers in a variety of industries such as manufacturing, power generation, sustainable energy, telecommunications companies and increasingly cellular phone and space communications industries.

B.Eng., Electrical and Electronics Engineering, University of Nottingham, NQF Level 6

This qualification seeks to develop engineers with the ability to develop power products that are ubiquitous in modern life, dealing with interconnections that allow electronic control of electrical and communication techniques. Candidates are required to achieve a minimum of 280 credits. Graduates for this qualification may pursue a Master of Science in either Electrical or Electronic Engineering Technology. Graduates may work as engineers in the power industry, telecommunication engineering, electronics engineer, project managers and engineering consultants.

BEng Electrical and Electronics, University of Stellenbosch, NQF level 8

This qualification seeks to develop Electrical and Electronic engineers who are well equipped to develop specialised embedded controllers and the relevant electronics. There is a high emphasis on the final year project which is allotted a significant portion of the final year of study to effect sound design capabilities. Candidates are required to achieve a minimum of 592 credits. Graduates for this qualification may pursue a Master of Engineering (MEng), by research or structured. Graduates may work in the following industries: power plant, process industries, communications, education, electronics, healthcare, research and development.

Bachelor of Engineering Honours Electrical and Communications, BIUST, NQF level 8

The proposed qualification seeks to provide an educational approach where emphasis is placed on integrated studies and on the production of graduates who are generalists, rather than specialists. The Electrical and Communications Engineering programme aims to produce highly qualified engineers in the domain of power generation, transmission, communication engineering to support the growth of Botswana economy and to improve soon the world. Strong relationship is to be established with the energy production companies in

Botswana to adapt the Specialisation programmes to the critical needs encountered in this industry. Students will have a great opportunity to learn through projects, internships, and interactions with the current companies in their domain and to create their own business mainly in the power sector and communication engineering industry. Candidates are required to achieve a minimum of 654 to graduate. Graduates for this qualification may pursue MEng degrees in Electrical Power Engineering, Telecommunications Engineering, Energy Engineering, Power Electronics and Drives at NCQF Level 9. Graduates may work as power plant engineer, control engineer, power plant manager, energy engineer, circuit designer, consulting engineers and researchers.
REVIEW PERIOD
5 years in line with the NCQF
OTHER INFORMATION
N/A