Programme Specifications

Academic Year	(2019-2010) Academic Year
Programme Title	Electrical Power Engineering
Award	Bachelor of Engineering (BE)
Programme Code	EP
Degree Awarding Institution	Technological University (Kyaukse)
Associateship, Membership	
Accreditation status and Accreditors	Provisional, Engineering Education Accreditation Committee (EEAC, Myanmar)
Qualification Level (Myanmar National Qualification Framework)	Level 6
Degree Awarding Requirements	Student must pass 146 credits and obtain passing score in every subject
Department	Department of Electrical Power Engineering
Head of Programme	Dr. Nay Kyi Htwe
Contact	Ph no.09-2056590,09-765432825 email - kyaukseep@gmail.com,
Admission Criteria	As described in admission section
Requirements for sitting exam	see in each course specification
Subject Benchmark	N/A
Mode of Attendance	Full Time
Total Credits	146
Minimum Period of Study	6 years
Maximum period of study	18 years
Teaching/Learning Methods	Combination of lecturers, tutorials, practical, assignment, classwork, presentation, individual and group work, projects, industrial training, internship, mini-thesis.
Assessment	Class work, tutorials, practical, assignment, presentation, written examinations, projects, reports, oral presentation.

Programme Overview	Department of Electrical Power Engineering was opened to educate students in 1999 when the University was established. The department is offering six years full time program. The title of degree is Bachelor of Engineering in Electrical Power. Throughout the six years (12 Semesters), the department of offers courses. Each semester consists of 15 weeks lectures, 1 week semester break and 2 weeks for examination. The electrical power engineering is mainly divided by three portions such as the generation, transmission and distribution. The generation, delivery, and utilization of electric power and energy remain one of the most challenging and exciting fields of electrical engineering. The astounding technological developments of our age are highly dependent upon a safe, reliable, and economic supply of electric power. Engineering for sustainability is an emerging theme for the twenty-first century, and the need for more environmentally benign electric power system is a critical part of this new thrust. Renewable energy systems that take advantage of energy sources that won't diminish over time and are independent of fluctuations in price and availability are playing an ever-increasing role in modern power systems. Electrical Power Engineering programme offers research work in the field of Power System and Control, Electrical Machine and Control, Power Electronic and Control and Renewable Energy and Efficient Electric Power System. Post graduate study programme the power system analysis, power system economic, power system protection, discrete time control system, electrical power system quality and renewable and efficient electric power system.
Graduate Competencies	1. Ability to apply Engineering Knowledge 2. Problem Analysis Skill 3. Design/Development Skill

4. Research Skill
5. Abiliby to apply Modern Tool
6. Ability to apply informed reasoning and Professional Engineering practice in society
7. Ability to understand and evaluate Environment and Sustainability
8. ability to apply ethical principles
9. Ability to function effectively as Individual and a Team member or leader
10. Communication Skill
11. Ability to apply Project Management and Finance
12. Life Long Learning Skill

Programme Educational Objectives

1. Graduates of the programme will apply fundamental scientific and engineering principles to solve complex engineering problems systematically, creatively and innovatively with the aids of modern analytical and design tools to contribute to the advancement of Electrical Power engineering knowledge and practice.
2. Graduates of the programme will have the ability to communicate and manage as a leader to design and develop electrical power system and power electronics drives in multi-disciplinary environment.
3. Graduates of the programme will possess electrical engineering ethics to be successful in life-long learning.

Graduate Attributes

1. Apply the knowledge of Mathematics, Science, Engineering Fundamentals, Power Electronic Drives and Electrical Engineering to the solution of complex problems in engineering.
2. Identify, Formulate and analyze the complex problems in Electrical Engineering problems using first principles of mathematics, science and Engineering to derive conclusions.
3. Design and development of Electrical and Electronic drives that meet specified needs with the considerations for the societal and environmental issues.

4. Analyse complex problems in electrical apparatus and energy systems using research based knowledge and research methods to provide valid solutions.
5. Apply appropriate tools and techniques for the modeling and analysis of Electrical and Electronic devices and systems.
6. Apply Knowledge gained to assess societal, safety and cultural issues relevant to the professional engineering practice.
7. Understand the impact of solutions in electrical engineering field in societal and environmental contexts and demonstrate the importance of sustainable development.
8. Apply ethical principles and professional responsibilities in electrical engineering practice.
9. Function as an individual and teams in the multi-disciplinary environment.
10. Communicate effectively with the engineering community and society on complex engineering activities.
11. Apply the knowledge of engineering and management principles to implant the projects in multidisciplinary environment.
12. Recognize the need for and get skills to engage in life-long learning.

Curriculum

Year I

Semester I

Code		Title	Credits
M	11011	Myanmar I	2
E	11011	English I	2.5
EM	11001	Engineering Mathematics I	4.5
E.Ch	11011	Engineering Chemistry I	4.5
E.Ph	11011	Engineering Physics I	3.5
ME	11011	Basic Engineering Drawing I	2
EP	11011	Principle of Electrical Engineering I	2.5

Semester II

Code		Title	Credits
M	12011	Myanmar II	2
E	12011	English II	2.5
EM	12002	Engineering Mathematics II	4.5
E.Ch.	12012	Engineering Chemistry II	4.5
E.Ph.	12011	Engineering Physics II	3.5
ME	12011	Basic Engineering Drawing II	2
EP	12011	Principle of Electrical Engineering II	2.5

Year II

Semester I

Code		Title	Credits
E	21011	English	2.5
EM	21003	Engineering Mathematics III	4.5
ME	21015	Engineering Mechanics I	2.5
EP	21011	Electrical Engineering Circuit Analysis I	2.5

Semester II

Code		Title	Credits
E	22011	English	2.5
EM	22004	Engineering Mathematics IV	4.5
ME	22015	Engineering Mechanics II	2.5
EP	21011	Electrical Engineering Circuit Analysis II	2.5

EP	21014	Basic Electronics I	2.5	EP	22014	Basic Electrics II	2.5
EP	21021	Electromechanics I	2.5	EP	22021	Electromechanics II	2.5
EP	21026	Generation, Transmission and Distribution	2.5	EP	22026	Generation, Transmission and Distribution	2.5

Year III

Semester I

	Code	Title	Credits
E	31011	English	2.5
EM	31005	Differential Equation I	4.5
ME	31034	Mechanical Engineering Fundamental I	2.5
EP	31011	Electrical Engineering Circuit Analysis III	2.5
EP	31014	Power Electronics I	2.5
EP	31021	Electrical Machine and Operation I	2.5
EP	31033	Electromagnetic Field I	2.5
EP	31033	Electrical Measurement Instrumentation	2.5

Semester II

	Code	Title	Credits
E	32011	English	2.5
EM	32006	Differential Equation II	4.5
ME	32034	Mechanical Engineering Fundamental II	2.5
EP	32011	Electrical Engineering Circuit Analysis IV	2.5
EP	32014	Power Electronics II	2.5
EP	32021	Electrical Machine and Operation II	2.5
EP	32033	Electromagnetic Field II	2.5
EP	32034	Electrical Design, Estimating and Costing	2.5

Year IV

Semester I

	Code	Title	Credits
E	41011	English	2.5
EM	41007	Discrete Mathematics I	4.5
EC	41004	Microprocessor System	2.5
EP	41027	Linear Control System I	2.5
EP	41028	Programmable Logic Control I	2.5
EP	41021	Electrical Machine Design I	2.5
EP	41036	Design & Layout of Power System I	2.5
EP	41042	Power System Analysis I	2.5

Semester II

	Code	Title	Credits
E	42011	English	2.5
EM	42007	Discrete Mathematics II	4.5
EC	42004	Microprocessor System	2.5
EP	42027	Linear Control System II	2.5
EP	42028	Programmable Logic Control II	2.5
EP	42021	Electrical Machine Design II	2.5
EP	42036	Design & Layout of Power System II	2.5
EP	42042	Power System Analysis II	2.5

Year V

Semester I

	Code	Title	Credits
EP	51017	Modern Control System I	2.5
EP	51014	Electrical Machine and Control I	2.5
EP	51022	Power System Protection I	2.5
EP	51002	Economic Operation of Power System	2.5

Semester II

	Code	Title	Credits
EP	52017	Modern Control System II	2.5
EP	52014	Electrical Machine and Control II	2.5
EP	52022	Power System Protection II	2.5
EP	52012	Power System Stability	2.5

EP	51043	Electromechanical Energy Conversion	2.5	EP	52043	Electromechanical Energy Conversion	2.5
EP	51015	Energy Technology	2.5	EP	52015	Energy Technology	2.5

Year VI

Semester I				**Semester II**			
	Code	Title	Credits	Code		Title	Credits
EP	61033	Computer Aided Electrical Engineering	1.5			Graduation Thesis	9
EP	61014	Electrical Safety and Ethic	1				
EP	61012	Power System Reliability (Assignment only)	1				
EP	61022	Industrial Engineering and Management	1.5				
EP	61011	Humanities and Social Science	4				
		Industrial Training	4				