

PROGRAM SPECIFICATION

Bachelor of Technology in Electrical Engineering (2019 – 2020)

Awarding Institution	A'Sharqiyah University
College / Centre	Engineering
Department	Department of Electronics and Communication Engineering
Program Title	Bachelor of Technology in Electrical Engineering
Program Code	EETE
Accredited By	
Final Award	Bachelor of Technology in Electrical Engineering
Level of Study	Undergraduate
Language of Study	English
Benchmarks	Engineering Technology Accreditation Commission (ETAC), ABET, USA
Entry requirements	<ul style="list-style-type: none"> a. A student should have successfully passed the courses of all subjects of the general education diploma or its equivalence with a pass rate of 60% or above. b. A student should achieve the standards set for the subjects of the General Foundation Program. c. A student should have passed the following subjects to qualify for enrollment in the College of Engineering: Pure Mathematics, Physics and Chemistry d. A student must be medically fit
Minimum period of registration	5 Semesters
Maximum period of registration	14 Semesters
Date specification produced	28/01/2017
Date specification last reviewed	10/07/2018

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1. THE COLLEGE OF ENGINEERING

The College of Engineering at A'Sharqiyah University (ASU) opened in 2011 and has grown quickly to a current enrollment of over 300 students. The College will continue to grow at this rapid pace in order to accommodate over 700 students in new classrooms and laboratories located in the new College of Engineering building that was completed in September 2017. With a first-rate building and state-of-the-art laboratories, the ASU Engineering College will continue to draw community members and prospective students to the growing campus. The College of Engineering at present offers undergraduate academic programs at Diploma/Degree levels in Civil Engineering, Environmental Engineering, Electronics and Communications Engineering and Construction Project Management.

College Mission

The mission of the College is to educate creative professional engineers, technologists and technicians and to equip them to serve society in a globalized knowledge economy. Working in partnership with its stakeholders; the College is committed to the creation and transfer of new knowledge and technologies through the efforts of faculty, staff and students.

College Vision

The College vision is to achieve national and international stature as a College of Engineering through excellence in engineering education, research and innovation, outreach and external community engagement whilst contributing to the competitiveness, social and economic development and prosperity of the Sultanate of Oman.

College Objectives

The Objectives of the College are to:

1. Enhance the effectiveness of College governance and management structures
2. Develop a set of high value local, regional and international partnerships to leverage strategic priorities
3. Generate maximum funds to invest in our future
4. Achieve cost optimization
5. Improve quality of teaching and learning
6. Develop and maintain innovative curriculum and delivery in the College
7. Contribute to knowledge and innovation through applied research and scholarship in priority areas
8. Ensure innovation in all areas of activity in the College
9. Contribute to the Community's cultural, social and economic development.
10. Provide students with an accessible and supported study experience and transition to employment
11. Improve participation, success and retention of students
12. Recruit, develop and retain talented staff, providing them with an enabling and satisfying work environment.
13. Provide state-of-the-art laboratory equipment and infrastructure for students and staff.
14. Promote University values.

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2. PROGRAM OUTLINE

The Bachelor of Technology in Electrical Engineering program teaches students about the technology tools and processes required to design, develop, build and maintenance of electrical and electronic systems and devices. Graduates in Electrical Engineering Technology are responsible for planning, designing, constructing, testing and maintaining electrical instruments and equipment in a wide range of industries such as manufacturing, energy, petroleum, transport, automobiles, schools & colleges, commercial & residential buildings and many more. The program is designed to fulfill the electrical industry's need for licensed professional technologists. The curriculum concentrates on combination of theoretical, applications and laboratory course work.

3. PROGRAM AIMS

The overall aim of the program is to deliver a high quality vocationally relevant undergraduate course in Bachelor of Technology in Electrical Engineering to prepare students for professional roles in design, develop, build and maintenance of electrical and electronic systems and devices. More specifically, the course aims to:

- Provide students with practical and technical knowledge and understanding of concepts, theories and applications relevant to electrical engineering technology in building, developing, testing, operation, and maintenance of electrical systems.
- Develop managerial skills which students will be able to apply in reaching professional judgments, solving problems and making decisions.
- Develop practical and technical skills relevant to electrical engineering technology which students will be able to apply in the academic context and their professional careers.
- Encourage self-motivation and independent thought, such that graduates will be confident in challenging established working practices and responding to the future needs of the electrical industry and its associated professions.
- Promote a culture of intellectual enquiry such that graduates will recognize the importance of lifelong learning for both personal and professional development.
- Demonstrate good oral and written communication skills with stakeholders, colleagues, team members and the general public.



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4. LEARNING OUTCOMES

Upon completion of the program, students will be able to:

<p>A. KNOWLEDGE AND UNDERSTANDING</p>	<p>(a) Demonstrate essential knowledge and understanding of basic mathematics, sciences and engineering technologies to solve electrical engineering problems.</p> <p>(b) Demonstrate systematic knowledge and understating of technical specifications and design requirements of modern electrical technology systems.</p> <p>(c) Demonstrate thorough knowledge and deep understanding of performance metrics and key indicators of electrical engineering circuits, systems, and networks.</p> <p>(d) Demonstrate knowledge and understanding of measurements and experiments of electrical circuits and systems as well as data presentation and interpretation.</p> <p>(e) Demonstrate knowledge and understanding of the design and development of electrical circuits, systems, and networks to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.</p>
<p>B. SUBJECT-SPECIFIC INTELLECTUAL SKILLS</p>	<p>(a) Apply electrical technology knowledge to identify, characterize and presents creative solutions to technical problems in a variety of specialty areas within the broad field of electrical engineering technology.</p> <p>(b) Apply advanced electrical technology techniques and concepts to model and design traditional and green electrical energy systems that meet predefined technical specifications and operational requirements.</p> <p>(c) Evaluate the performance of electrical engineering circuits, systems, and networks using realistic metrics and key indicators.</p> <p>(d) Analyze the results of experimental measurements of electrical engineering circuits, systems, and networks to improve their functionality and operational behaviors.</p>
<p>C. PROFESSIONAL PRACTICAL SKILLS /</p>	<p>(a) Conduct electrical engineering measurements and experiments to troubleshoot and rectify failures in electrical engineering circuits and systems.</p> <p>(b) Analyze the performance of electrical technology systems through data analysis and results interpretation.</p> <p>(c) Apply advanced electrical technology tools to obtain solutions for complex electrical engineering problems.</p> <p>(d) Apply project management techniques to manage electrical engineering projects.</p> <p>(e) Demonstrate proficiency in electrical technology services.</p>



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D. TRANSFERABLE SKILLS	<p>Communication (a) Develop and apply good oral and written communication skills with a range of stakeholders including colleagues, team members and the general public.</p> <p>Teamwork and interpersonal skills (b) Create and share learning and knowledge and to contribute effectively to teamwork.</p> <p>Information literacy and study skills (c) Apply contemporary theory and critical thinking to real-time issues faced in engineering organizations. (d) Be competent in the use of information technology for engineering practice</p> <p>Numeracy (e) Apply numerical and quantitative techniques appropriate for engineering use.</p> <p>Leadership and entrepreneurship (f) Apply leadership principles for effective control, employee empowerment and motivation in engineering organizations.</p>
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5. PROGRAM STRUCTURE

University Requirements (12 Credits)

Course Code	Course Title	Pre-Requisites	Credits
ISLM101	Islamic Civilization		3
ENGL101	English Communication Skills I		3
ENGL102	English Communication Skills II	ENGL101	3
MNGT313	Entrepreneurship		3
Total			12

College Requirements (24 Credits)

Course Code	Course Title	Pre-Requisites	Credits
CHEM111	Applied Chemistry		3
PHYS111	Applied Physics		3
MATH101	Calculus I		3
ENGR201	Engineering Drawing		3
MATH102	Calculus II	MATH101	3
MATH204	Probability and Statistics	MATH101	3
ENGR321	Applied Engineering Mathematics	MATH102	3
ENGR322	Summer Internship	Pass 85 Credits	0
ENGR111	Computer Applications		3
Total			24



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Major Requirements

(91 Credits)

Course Code	Course Title	Pre-Requisites	Credits
EETE1022	Circuits Theory I	MATH101	4
EETE1021	Digital Systems	MATH101	4
EETE2012	Circuits Theory II	EETE1022	4
EETE2011	Fundamentals of Electronics	EETE1022	4
EETE2021	Renewable Energy	EETE1022	4
EETE2022	Measurement and Instrumentation	EETE2012	4
EETE2023	Electric Machines I	EETE2012	4
EETE2024	Power Systems I	EETE1022	4
EETE3011	Power Systems II	EETE3011	4
EETE3012	Electrical Machines II	EETE2023	4
ECEN341	Signals and Systems	MATH102	3
EETE314	Electromagnetic Fields	MATH102 & EETE1022	3
EETE3021	Control Systems	ECEN341	4
EETE411	High Voltage Engineering	EETE2024	3
EETE412	Capstone Design Project I	Pass 90 Credits	3
EETE413	Microprocessor and Microcontrollers	EETE1021 & ECEN112	3
EETE4011	Power Electronics	EETE2011	4
EETE421	Industrial Instrumentation	ECEN461 & EETE2022	3
EETE4012	Introduction to Communication Systems	ECEN341	4
EETE422	Capstone Design Project II	EETE412	3
EETE315	Complex variables and applications	MATH102 & EETE1022	3
EETE415	Power System Protection	EETE2024	3
EETE423	Power System Operation and Control	EETE3011 & EETE3021	3
Electrical Engineering Technology Elective (3 Courses)			9
Total			91



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(Choose 9 Credit Hours)

Course Code	Course Title	Pre-Requisites	Credits
EETE416	Electric Distribution	EETE2012	3
EETE418	Mechatronics	EETE413	3
EETE419	Automated Control Systems	EETE3021	3
ECEN541	Digital Signal Processing	ECEN341	3
EETE424	Distributed Generation	EETE2024 & EETE3021	3
EETE425	Distributed Control Systems	EETE3021	3
EETE426	Microelectronic Systems	EETE413	3
EETE427	Neural Networks & Fuzzy Logic	ENGR321	3
EETE428	Utilization of Electrical Energy	EETE2024	3
EETE429	Smart Grid	EETE2024	3
EETE511	Electrical Power Systems Quality	EETE2024	3
EETE512	Power Systems Control and Stability	EETE3011	3
EETE514	Power Systems Reliability and Planning	EETE2024	3
EETE515	Optimization Techniques in Engineering	ENGR321	3
EETE516	Digital Control Systems	EETE3021	3
ENGR404	Engineering Economics		3
ECEN515	Communication Networks	EETE4012	3
ECEN543	Wireless Communications	EETE4012	3

6. PROGRAM REFERENCE POINTS

The Bachelor of Technology in Electrical Engineering Program described herein, has been developed based on ABET benchmark statements for Electrical/Electronics Engineering Technology.

The courses and their content have been designed to mimic Electrical Engineering Technology Programs offered in USA, Australia, and New Zealand. The Electrical Engineering Technology Program was constructed by a team of faculties who have benched it against other university programs and are confident that the ASU program can achieve OAAA and ABET accreditation.

Further, the content of courses in the ASU Program was benchmarked against technical courses offered at national and international universities in Oman, USA, Australia, and New Zealand such as:

- Sultan Qaboos University (SQU): The similarity between the core courses in the proposed program and program offered at SQU is 80%,
- Higher College of Technology (HCT): The similarity between the core courses in the proposed program and program offered at HCT is 91.86%.
- University of Nizwa (UoN): The similarity between the core courses in the proposed program and program offered at UoN is 80.4%.
- State University of New York, CANTON - USA (Bachelor of Electrical Engineering)



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- University of Cincinnati – Ohio, USA (BS in Electrical Engineering Technology)
- The University of Toledo - Ohio, USA (BS in Electrical Engineering Technology)
- Central Queensland University - Australia (Bachelor of Engineering Technology, Specialization: Electrical Engineering)
- Auckland University of Technology – New Zealand (Bachelor of Engineering Technology, Specialization: Electrical Engineering)
- California University of Pennsylvania - USA (BS in Electrical Engineering Technology)
- Purdue University - USA (BS in Electrical Engineering Technology)

7. TEACHING AND LEARNING METHODS (indicative)

In accordance with sound educational research and current best practice, the programme will be delivered through a broad range of learning and teaching strategies. The delivery of the programme and its assessment will reflect A'Sharqiyah University's Learning, Teaching and Assessment Strategy and in particular emphasises:

- The development of autonomous learners
- Provision of learning opportunities that are personally and professionally relevant and quality assured
- The maintenance of a supportive learning environment
- The promotion of the scholarship of teaching

At this level of study, students are encouraged to take responsibility for their own learning with staff facilitating the learning process. The aim is to encourage a high level of student autonomy in learning and the capacity to apply this within the wider environment. These overall aims are achieved through the use of a variety of learning and teaching techniques which include **lectures, tutorials, seminars, laboratory experiments, site visits, self-study, projects, workshops, discussions, debates, group work, case studies, problem-based learning and visiting speakers.**

A learner-centred approach will be adopted with the aim of promoting independent learning; as a consequence, direct face-to-face teaching contact hours will be supplemented by tutor-guided and independent reading and research which will emphasise the need to work in a critical way with theory and empirical research sources.

Additionally, Moodle Virtual Learning Environment will be used for developing interactive activities such as quizzes or forums; it also allows staff and students to create discussion groups. Students are encouraged to make significant use of on-line resources especially journals and e-books.

8. ASSESSMENT METHODS (Indicative)

In developing the assessment strategy, the team members have considered the Learning and Teaching Strategy and International best practice. Additionally, the assessments reflect the University's Academic Regulations.

Students will be assessed on their achievement of the programme learning outcomes which, in turn, are achieved by meeting the learning outcomes of both the core and elective courses. The assessment of the programme learning outcomes will therefore be achieved by assessment at the course level. Selection of the methods for assessment will be determined by the requirements of each individual course and the rationale for selection of those methods



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will be left to the course descriptors.

Assessments are chosen to examine a student's ability to integrate theory and practice, and to think critically in relation to theory, empirical research and practice. Subject specific, professional and transferable skills are developed within classroom-based and independent learning activities. Most courses assess a variety of skills, either directly or indirectly through the assessment work for the module.

The assessment strategy in the taught elements of the course is designed to allow students to demonstrate subject knowledge, skills, tools and techniques appropriate to the discipline. Examples of assessment methods which will be used include: **Quizzes, midterm exams, final exams, practical assessment in labs, project evaluation, viva questions.**

The research course enables students to study and research into a specific topic in depth, and also develops further the capacities for self-managed learning, critical thinking and the creative application of knowledge to solve problems.

9. CAREER and STUDY OPPORTUNITIES

The program facilitates entries and job opportunities to various industrial employers including:

1. Power Generation;
2. Power Transmission;
3. Power Distribution and Utilization;
4. Power Electronics;
5. Electrical Instrumentation;
6. Maintenance and Troubleshooting in Electrical Power Stations; and
7. Renewable Energy industry.

The graduate from this course can also pursue further study and can improve their academic qualification by pursuing a Master's degree.

10. STUDENT SUPPORT

Students attend an orientation program at the start of their studies. They are supported by a Course Coordinator and the Head of Department is also available to advise on program-related queries.

Academic advising is an essential element of the educational process. Students are assigned academic advisors who help them in selecting their course of study and in planning their schedules. Academic advisors also approve students' schedules each semester. The academic advisor assists students in obtaining a well-balanced education and in interpreting university policies and procedures, it is ultimately the students' individual responsible for selecting their courses, meeting course prerequisites, and adhering to university policies and procedures. Students may also consult faculty, department or program chairs, program coordinators, and Deans.

Students have access to the University's library with a range of reading materials, online resources and study support.

The University's Student Affairs Office supports students in adjusting to university life and advises on issues such as finance, regulations, legal matters, accommodation, transportation, disabilities and career guidance. Opportunities are also provided for students to participate in various extra-curricular activities.

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The Student Council is also an important source of support and guidance. The University has a Student Fund which considers applications on a case by case basis.

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11. A ASSESSMENT of LEARNING OUTCOMES (Degree)

KEY: F= Formative assessment S= Summative assessment FS= Formative AND Summative assessment

Upon completion of the program, students will be able to:

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SES:

	EETE1022	EETE1021	EETE2012	EETE2011	EETE2021	EETE2022	EETE2023	EETE2024	EETE3011	EETE3012	ECEN341	EETE314
KNOWLEDGE AND UNDERSTANDING												
(a) Demonstrate essential knowledge and under-standing of basic mathematics, sciences and engineering technologies to solve electrical engineering problems.	FS		FS		FS	FS	FS	FS	FS	FS		
(b) Demonstrate systematic knowledge and understating of technical specifications and design requirements of modern electrical technology systems.	FS		FS		FS	FS	FS	FS	FS	FS		
(c) Demonstrate thorough knowledge and deep under-standing of performance metrics and key indicators of electrical engineering circuits, systems, and networks.	FS		FS		FS	FS	FS	FS	FS	FS		
(d) Demonstrate knowledge and understanding of measurements and experiments of electrical circuits and systems as well as data presentation and interpretation.	FS		FS		FS	FS	FS	FS	FS	FS		
(e) Demonstrate knowledge and understanding of the design and development of electrical circuits, systems, and networks to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.	FS		FS		FS	FS	FS	FS	FS	FS		
SUBJECT-SPECIFIC INTELLECTUAL SKILLS												
(a) Apply electrical technology knowledge to identify, characterize and presents creative solutions to technical problems in a variety of specialty areas within the broad field of electrical engineering technology.	FS		FS		FS	FS	FS	FS	FS	FS		
(b) Apply advanced electrical technology techniques and concepts to model and design traditional and green electrical energy systems that meet predefined technical specifications and operational requirements.	FS		FS		FS	FS	FS	FS	FS	FS		
(c) Evaluate the performance of electrical engineering circuits, systems, and networks using realistic metrics and key indicators.	FS		FS		FS	FS	FS	FS	FS	FS		
(d) Analyze the results of experimental measurements of electrical engineering circuits, systems, and networks to improve their functionality and operational behaviors.	FS		FS		FS	FS	FS	FS	FS	FS		

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REQUI RED COUR SES:	EETE1022	EETE1021	EETE2012	EETE2011	EETE2021	EETE2022	EETE2023	EETE2024	EETE3011	EETE3012	ECEN341	EETE314
Upon completion of the program, students will be able to:												
PROFESSIONAL / PRACTICAL SKILLS												
(a) Conduct electrical engineering measurements and experiments to troubleshoot and rectify failures in electrical engineering circuits and systems.	FS		FS		FS	FS	FS	FS	FS	FS		
(b) Analyze the performance of electrical technology systems through data analysis and results interpretation.	FS		FS		FS	FS	FS	FS	FS	FS		
(c) Apply advanced electrical technology tools to obtain solutions for complex electrical engineering problems.	FS		FS		FS	FS	FS	FS	FS	FS		
(d) Apply project management techniques to manage electrical engineering projects.	FS		FS		FS	FS	FS	FS	FS	FS		
(e) Demonstrate proficiency in electrical technology services.	FS		FS		FS	FS	FS	FS	FS	FS		
TRANSFERABLE SKILLS (INCLUDING FOR EMPLOYABILITY)												
Communication Skills	F	F	F	F	F	F	F	F	F	F	F	F
(a) Develop and apply good oral and written communication skills with a range of stakeholders including colleagues, team members and the general public.												
Teamwork and interpersonal skills	F	F	F	F	F	F	F	F	F	F	F	F
(b) Create and share learning and knowledge and to contribute effectively to teamwork.												
Information Literacy and Study Skills	F	F	F	F	F	F	F	F	F	F	F	F
(c) Apply contemporary theory and critical thinking to real-time issues faced in engineering organizations.												
(d) Be competent in the use of information technology for engineering practice.												
Numeracy	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS
(e) Apply numerical and quantitative techniques appropriate for engineering use.												
Leadership and entrepreneurship	F	F	F	F	F	F	F	F	F	F	F	F
(f) Apply leadership principles for effective control, employee empowerment and motivation in engineering organizations.												

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REQUI RED COUR SES:	EETE3021	EETE411	EETE412	EETE413	EETE4011	EETE421	EETE4012	EETE422	EETE315	EETE415	EETE423	MNGT313
Upon completion of the program, students will be able to:												
KNOWLEDGE AND UNDERSTANDING												
(a) Demonstrate essential knowledge and understanding of basic mathematics, sciences and engineering technologies to solve electrical engineering problems.		FS	FS		FS	FS		FS		FS	FS	
(b) Demonstrate systematic knowledge and understating of technical specifications and design requirements of modern electrical technology systems.		FS	FS		FS	FS		FS		FS	FS	
(c) Demonstrate thorough knowledge and deep understanding of performance metrics and key indicators of electrical engineering circuits, systems, and networks.		FS	FS		FS	FS		FS		FS	FS	
(d) Demonstrate knowledge and understanding of measurements and experiments of electrical circuits and systems as well as data presentation and interpretation.		FS	FS		FS	FS		FS		FS	FS	
(e) Demonstrate knowledge and understanding of the design and development of electrical circuits, systems, and networks to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.		FS	FS		FS	FS		FS		FS	FS	
SUBJECT-SPECIFIC INTELLECTUAL SKILLS												
(a) Apply electrical technology knowledge to identify, characterize and presents creative solutions to technical problems in a variety of specialty areas within the broad field of electrical engineering technology.		FS	FS		FS	FS		FS		FS	FS	
(b) Apply advanced electrical technology techniques and concepts to model and design traditional and green electrical energy systems that meet predefined technical specifications and operational requirements.		FS	FS		FS	FS		FS		FS	FS	
(c) Evaluate the performance of electrical engineering circuits, systems, and networks using realistic metrics and key indicators.		FS	FS		FS	FS		FS		FS	FS	
(d) Analyze the results of experimental measurements of electrical engineering circuits, systems, and networks to improve their functionality and operational behaviors.		FS	FS		FS	FS		FS		FS	FS	
PROFESSIONAL / PRACTICAL SKILLS												

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Upon completion of the program, students will be able to:

REQUI RED COUR SES:	EETE3021	EETE411	EETE412	EETE413	EETE4011	EETE421	EETE4012	EETE422	EETE315	EETE415	EETE423	MNGT313
(a) Conduct electrical engineering measurements and experiments to troubleshoot and rectify failures in electrical engineering circuits and systems.		FS	FS		FS	FS		FS		FS	FS	
(b) Analyze the performance of electrical technology systems through data analysis and results interpretation.		FS	FS		FS	FS		FS		FS	FS	
(c) Apply advanced electrical technology tools to obtain solutions for complex electrical engineering problems.		FS	FS		FS	FS		FS		FS	FS	
(d) Apply project management techniques to manage electrical engineering projects.		FS	FS		FS	FS		FS		FS	FS	FS
(e) Demonstrate proficiency in electrical technology services.		FS	FS		FS	FS		FS		FS	FS	
TRANSFERABLE SKILLS (INCLUDING FOR EMPLOYABILITY)												
Communication Skills (a) Develop and apply good oral and written communication skills with a range of stakeholders including colleagues, team members and the general public.	F	F	F	F	F	F	F	F	F	F	F	F
Teamwork and interpersonal skills (b) Create and share learning and knowledge and to contribute effectively to teamwork.	F	F	F	F	F	F	F	F	F	F	F	F
Information Literacy and Study Skills (c) Apply contemporary theory and critical thinking to real-time issues faced in engineering organizations. (d) Be competent in the use of information technology for engineering practice.	F	F	F	F	F	F	F	F	F	F	F	F
Numeracy (e) Apply numerical and quantitative techniques appropriate for engineering use.	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS
Leadership and entrepreneurship (f) Apply leadership principles for effective control, employee empowerment and motivation in engineering organizations.	F	F	F	F	F	F	F	F	F	F	F	F

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4. PROGRAM STRUCTURE DIAGRAM

Bachelor of Technology in Electrical Engineering

Year 1		Year 2		Year 3		Year 4	
Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
ENGR111 Computer Applications	EETE1021 Digital Systems Pre-R: MATH101	ENGR201 Engineering Drawing	EETE315 Complex Variables and Applications Pre-R: MATH102 & EETE1022	EETE3011 Power Systems II Pre-R: EETE2024	MATH204 Probability and Statistics Pre-R: MATH102	EETE411 High Voltage Engineering Pre-R: EETE2024	EETE421 Industrial Instrumentation Pre-R: EETE3021
ISLM101 Islamic Civilization	EETE1022 Circuits Theory I Pre-R: MATH101	EETE2011 Fundamentals of Electronics Pre-R: EETE1022	EETE2022 Measurement and Instrumentation Pre-R: EETE2012	EETE3012 Electrical Machines II Pre-R: EETE2012	EETE413 Microprocessor and Microcontrollers Pre-R: EETE1021 & ENGR111	Electrical Engineering Technology Elective	Electrical Engineering Technology Elective
PHYS111 Applied Physics	MATH102 Calculus II Pre-R: MATH101	EETE2012 Circuits Theory II Pre-R: EETE1022	EETE2023 Electrical Machines I Pre-R: EETE2012	EETE4011 Power Electronics Pre-R: EETE2011	ENGR321 Applied Engineering Mathematics Pre-R: MATH102	EETE412 Capstone Design Project I	Electrical Engineering Technology Elective
ENGL101 English Communication Skills I	CHEM111 Applied Chemistry	EETE2021 Renewable Energy Pre-R: EETE1022	EETE2024 Power Systems I Pre-R: EETE1022	ECEN341 Signals and Systems Pre-R: MATH102	EETE415 Power System Protection Pre-R: EETE2024	MNGT313 Entrepreneurship	EETE422 Capstone Design Project II Pre-R: EETE412
MATH101 Calculus I	ENGL102 English Communication Skills II Pre-R: ENGL101			EETE314 Electromagnetic Fields Pre-R: MATH102 & EETE1022	EETE3021 Control Systems Pre-R: ECEN341	EETE4012 Introduction to Communication Systems Pre-R: ECEN341	EETE423 Power System Operation and Control Pre-R: EETE3011 & EETE3021
					ENGR322 Summer Internship		

University Requirement

College Requirement

Major Requirement