Bachelor of Applied Science in Chemical Engineering Technology

The program covers the laws of chemistry, physics, and mathematics to change the structure of chemical substances and purify new substances that are created in the process. The program prepares the students for positions as engineers with the technical and managerial skills necessary to enter careers in the design, manufacturing, operation, and maintenance of chemical processes. Students will gain strengths in heat and mass transfer in plants and process control design projects. Graduates typically have strengths in applied design, development and implementation of chemical engineering systems.

Note: Liberal Studies Physical and Biological Science and Mathematics requirements are satisfied by Chemical ET Core courses.

		Course Credits
Chemical Engineering Core Courses		
Required Credits: 66		
ECH 1003	General Chemistry	3
ECH 1103	Chemical Engineering Principles I	3
ECH 2003	Physical Chemistry	3
ECH 2013	Chemical Engineering Principles II	3
ECH 2033	Fluid Mechanics	3
ECH 2043	Analytical Chemistry	3
ECH 2053	Organic Chemistry	3
ECH 2063	Thermodynamics	3
ECH 2073	Petroleum Testing	3
ECH 3003	Mass Transfer	3
ECH 3013	Materials and Corrosion	3
ECH 3023	Heat Transfer	3
ECH 3033	Electrical Fundamentals & Instrumentation	3
ECH 3043	Process Control: Chemical	3
ECH 3053	Unit Operation I	3
ECH 3063	Reaction Kinetics	3
ECH 4002	Design Project I	2
ECH 4022	Design Project II	2
ECH 4053	Transport Phenomena	3
EGN 1103	Engineering Measurements & CAD Introduction	3
EGN 3102	Project Management	2
EGN 3202	Engineering Economics	2
EGN 3332	Health Safety & Enivronment	2
ERK 3002	Work Placement	2

		Course Credits
Mathematics and Science Required Courses		
Required Credits: 21		
LSM 1113	Statistical Mathematics	3
MTH 1103	Pre-Calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
MTH 2503	Linear Algebra & Differential Equations	3
MTH 3013	Calculus III	3
PHY 1103	Physics I	3

	Course Credits
Chemical Engineering Technology Requirement **See program chair for available courses**	
Required Credits: 12	
Select 4 4000 level courses	12

	Course Credits
Liberal Studies	
Required Credits: 39	
A. Communication	12
B. Mathematics	3
C. Art and Humanities	6
D. Social and Behavioral Studies	9
E. Physical and Biological Sciences	6
F. Global Studies	3

Total Required Credits	*129*	*Minimum Duration of Study*	*4*
Maximum Duration of Study	*6*	*Program Code*	*ECHAB*
Cost Recovery Program	*No*	*Major Code*	*ETCHAB*

Bachelor of Applied Science in Electrical Engineering Technology

The program deals with the generation, transmission, distribution and control of electric energy systems and related equipments. This program prepares the students for positions as engineers with the technical and managerial skills necessary to enter careers in the design, application, installation, manufacturing, operation and maintenance of power systems. Students gain strengths in instrumentations, machines and power electronics. Graduates are well prepared for analysis, applied design, development and implementation of electrical systems.

Note: Liberal Studies Physical and Biological Science and Mathematics requirements are satisfied by Electrical ET Core courses.

		Course Credits
Electrical Engineering Core Courses		
Required Credits: 63		
EEC 1003	Electric Circuits I	3
EEC 2003	Electric Circuits II	3
EEC 2013	Digital Electronics	3
EEC 2033	Microcontroller Systems	3
EEC 2053	Analog Electronic Devices	3
EEC 3003	Instrumentation & Control	3
EEC 3073	Signals & Systems	3
EEC 4043	Control Systems	3
EEL 2003	Energy Production & Transmission	3
EEL 2023	Power Generation & Transmission	3
EEL 2043	Principles of Machines & Power	3
EEL 3003	Electrical Machines	3
EEL 3013	Electrical Power Distribution	3
EEL 3023	System Protection & Coordination	3
EEL 4002	Design Project I (CC)	2
EEL 4022	Design Project II (CC)	2
EEL 4413	Power Systems Analysis	3
EGN 1103	Engineering Measurements & CAD Introduction	3
EGN 2003	Computer Programming	3
EGN 3102	Project Management	2
EGN 3202	Engineering Economics	2
EGN 3332	Health Safety & Enivronment	2
ERK 3002	Work Placement	2

		Course Credits
Mathematics and Science Required Courses		
Required Credits: 24		
LSM 1113	Statistical Mathematics	3
MTH 1103	Pre-Calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
MTH 2503	Linear Algebra & Differential Equations	3
MTH 3013	Calculus III	3
PHY 1103	Physics I	3
PHY 1203	Physics II	3

	Course Credits
Electrical Engineering Technology Requirement **See program chair for available courses**	
Required Credits: 12	
Select 4 4000 level courses	12

	Course Credits
Liberal Studies	
Required Credits: 39	
A. Communication	12
B. Mathematics	3
C. Art and Humanities	6
D. Social and Behavioral Studies	9
E. Physical and Biological Sciences	6
F. Global Studies	3

Total Required Credits	*129*	*Minimum Duration of Study*	*4*
Maximum Duration of Study	*6*	*Program Code*	*0EEAB*
Cost Recovery Program	*No*	*Major Code*	*ETELAB*

Bachelor of Applied Science in Electronic Engineering Technology

The program focuses on the fields of telecommunications, instrumentation and control systems and data communications and networks. This program prepares the students for positions as engineers with the technical and managerial skills necessary to enter careers in the design, application, installation and maintenance of electronic systems. Students gain strengths in digital and embedded systems, programming and system control. Graduates are well prepared for analysis, applied design, development and implementation of electronic systems.

Note: Liberal Studies Physical and Biological Science and Mathematics requirements are satisfied by Electronic ET Core courses.

		Course Credits
Electrical Engineering Core Courses		
Required Credits: 63		
EEC 1003	Electric Circuits I	3
EEC 2003	Electric Circuits II	3
EEC 2013	Digital Electronics	3
EEC 2033	Microcontroller Systems	3
EEC 2053	Analog Electronic Devices	3
EEC 3003	Instrumentation & Control	3
EEC 3013	Electronics II	3
EEC 3043	Communication Systems	3
EEC 3073	Signals & Systems	3
EEC 3103	Digital Communications	3
EEC 3503	Embedded System Design	3
EEC 4002	Design Project I	2
EEC 4013	Data Communications & Networks	3
EEC 4022	Design Project II	2
EEC 4043	Control Systems	3
EEL 2043	Principles of Machines & Power	3
EGN 1103	Engineering Measurements & CAD Introduction	3
EGN 2003	Computer Programming	3
EGN 3102	Project Management	2
EGN 3202	Engineering Economics	2
EGN 3332	Health Safety & Enivronment	2
EMT 3003	Programmable Logic Controllers	3
ERK 3002	Work Placement	2

		Course Credits
Mathematics and Science Required Courses		
Required Credits: 24		
LSM 1113	Statistical Mathematics	3
MTH 1103	Pre-Calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
MTH 2503	Linear Algebra & Differential Equations	3
MTH 3013	Calculus III	3
PHY 1103	Physics I	3
PHY 1203	Physics II	3

	Course Credits
Electrical Engineering Technology Requirement **See program chair for available courses**	
Required Credits: 12	
Select 4 4000 level courses	12

	Course Credits
Liberal Studies	
Required Credits: 39	
A. Communication	12
B. Mathematics	3
C. Art and Humanities	6
D. Social and Behavioral Studies	9
E. Physical and Biological Sciences	6
F. Global Studies	3

Total Required Credits	*129*	*Minimum Duration of Study*	*4*
Maximum Duration of Study	*6*	*Program Code*	*0EEAB*
Cost Recovery Program	*No*	*Major Code*	*ETECAB*

Bachelor of Applied Science in Mechanical Engineering Technology

The program deals with the manipulation of energy through useful mechanical devices and the application of thermodynamics and heat transfer systems. The program prepares students for positions as engineers with the knowledge, problem solving ability, and managerial skills to enter careers in the design, installation, manufacturing, testing and maintenance of mechanical systems. Students will gain expertise in mechanical design, turbomachinary and process control. Graduates will typically have strengths in the analysis, applied design, development and implementation of mechanical systems and processes.

Note: Liberal Studies Physical and Biological Science and Mathematics requirements are satisfied by Mechanical ET Core courses.

		Course Credits
Mechanical Engineering Core Courses		
Required Credits: 63		
EEC 2073	Electrical Engineering Fundamentals	3
EGN 1103	Engineering Measurements & CAD Introduction	3
EGN 3102	Project Management	2
EGN 3202	Engineering Economics	2
EGN 3332	Health Safety & Enivronment	2
EMC 2003	Computer Aided Drafting	3
EMC 2013	Materials Selection & Testing	3
EMC 2023	Statics and Dynamics	3
EMC 2033	Manufacturing Technology	3
EMC 2043	Mechanics of Materials	3
EMC 2053	Fluid Mechanics	3
EMC 3003	Industrial Plant Maintenance	3
EMC 3013	Fabrication & Welding	3
EMC 3023	Thermodynamics I	3
EMC 3033	Heat Transfer	3
EMC 3053	Thermodynamics II	3
EMC 3063	Mechanical Design I	3
EMC 3163	Process Control: Mechanical	3
EMC 4002	Design Project I	2
EMC 4003	Turbomachinary	3
EMC 4022	Design Project II	2
EMC 4043	Refrigeration and Air Conditioning System	3
ERK 3002	Work Placement	2

		Course Credits
Mathematics and Science Required Courses		
Required Credits: 24		
LSM 1113	Statistical Mathematics	3
MTH 1103	Pre-Calculus	3
MTH 1203	Calculus I	3
MTH 2103	Calculus II	3
MTH 2503	Linear Algebra & Differential Equations	3
MTH 3013	Calculus III	3
PHY 1103	Physics I	3
PHY 1203	Physics II	3

	Course Credits
Electrical Engineering Technology Requirement **See program chair for available courses**	
Required Credits: 12	
Select 4 4000 level courses	12

	Course Credits
Liberal Studies	
Required Credits: 39	
A. Communication	12
B. Mathematics	3
C. Art and Humanities	6
D. Social and Behavioral Studies	9
E. Physical and Biological Sciences	6
F. Global Studies	3

Total Required Credits	*129*	*Minimum Duration of Study*	*4*
Maximum Duration of Study	*6*	*Program Code*	*0MMAB*
Cost Recovery Program	*No*	*Major Code*	*ETMEAB*