

Program Map: Electrical Engineering Technology
Engineering Technology Department, College of Science and Technology

Name:
Start Date:

SID:
Catalog Date:

Advisor:
Expected Graduation Date:

	Fall Courses			Spring Courses			Notes
	Course	Name	Hours	Course	Name	Hours	
Freshman	ENGL 1101* Area C	Composition I Pre-requisite: None	3	ENGL 1102* Area C	Composition II Pre-requisite: ENGL 1101	3	*A grade of C or better must be earned for this course
	MATH 1113* Area M	Pre-Calculus Pre-requisite: MATH 1111	3	MATH 2101* Field of Study Area	Calculus I Pre-requisite: MATH 1113	4	Accumulate minimum of 30 semester hours in your Freshmen Year.
	CHEM 1211* Field of Study Area	Principles of Chemistry I** Pre-requisite: None	3	PHYS 1111K* Area T Lab	Introductory Physics I Pre-requisite: MATH 1113	4	
	CHEM 1211L* Field of Study Area	Principles of Chemistry I Lab** Pre-requisite: None	1	ELET 3101K* Major ELET Core	Electric Circuit I Pre-requisite: MATH 1113	4	
	CSCI 1130 Area T (non-lab)	Computer & its Applications* Pre-requisite: None	3	CSCI 1301* or 1371* Major	Computer Science I or Computing for Engineers Pre-requisite: MATH 1111 Pre-requisite: MATH 1113	3	
	COST 1103 Field of Study Area	COST First Year Experience Pre-requisite: None	2				
Fall Milestones			Total	Spring Milestones			
Students must take MATH 1113 to prevent delay in graduation			15	Students must take ELET 3101K to prevent delay in graduation			18

	Fall Courses			Spring Courses			Notes	
	Course	Name	Hours	Course	Name	Hours		
Sophomore	MATH 2111* Field of Study Area	Calculus II Pre-requisite: MATH 2101	4	ELET 3311K* Major ELET Core	Digital Systems II Pre-requisite: ELET 3301K	4	*A grade of C or better must be earned for this course	
	PHYS 1112K* Area T Lab	Introductory Physics II Pre-requisite: PHYS 1111K	4	Area A Option	Pre-requisite: Varies	3	Accumulate minimum of 60 semester hours in your Sophomore Year.	
	ELET 3301K* Major ELET Core	Digital Systems I Pre-requisite: ELET 3101K	4	HUMN 1201 Area I	Critical Thinking & Communication Pre-requisite: None	3		
	ELET 3111K* Major ELET Core	Electric Circuit II Pre-requisite: ELET 3101K	4	ENGT 3502K*	Applied Machine Learning Pre-requisite: CSCI 1301 or CSCI 1371	3		
	Fall Milestones			Total	Spring Milestones			Total
Students must take MATH 2111, ELET 3111K, and ELET 3301K to prevent delay in graduation			16					13

	Fall Courses			Spring Courses			Notes
	Course	Name	Hours	Course	Name	Hours	
Junior	ELET 3201K* Major ELET Core	Electronics I Pre-requisite: ELET 3101K	4	ELET 3211K* Major ELET Core	Electronics II Pre-requisite: ELET 3201K	4	*A grade of C or better must be earned for this course
	ELET 3411K* Major ELET Core	Microcontrollers Pre-requisite: ELET 3301K	4	ELET 3511K* Major ELET Core	Electrical Machinery Pre-requisite: ELET 3111K	4	Accumulate minimum of 90 semester hours in your Junior Year.
	POLS 1101 Area P	American Government Pre-requisite: None	3	ENGT 2101K* Field of Study Area	Computer Graphics Pre-requisite: MATH 1113	3	
	AFRS 1501 Area I	Survey African American History Pre-requisite: None	2	HIST 2111 or 2112 Area P	U.S. History Pre-requisite: None	3	Students are encouraged to obtain an internship, which can be used for Major Technical Elective Credit; communicate with the Department Chair to register for the internship course and get it approved for credits prior to the internship.
	Area A Option	Pre-requisite: Varies	3	Area S Option	Pre-requisite: Varies	3	
Fall Milestones			Total	Spring Milestones			
			16	Student must take ELET 3211K to prevent delay in graduation			17

	Fall Courses			Spring Courses			Notes
	Course	Name	Hours	Course	Name	Hours	
Senior	ELET 4101K* Major ELET Core	Programmable Logic Controllers Pre-requisite: ELET 3301K	4	MAJOR*	ELET Option Pre-requisite: Varies	4	*A grade of C or better must be earned for this course
	MAJOR*	ELET Option Pre-requisite: Varies	4	MAJOR*	ELET Option Pre-requisite: Varies	4	Student must take the exit exam and interview.
	MAJOR*	CSCI Option Pre-requisite: Varies	3	ENGT 3701* Major	Engineering Economy Pre-requisite: MATH 1113	3	
	ENGT 4401* Major	Senior Project Pre-requisite: ELET 3411K; or ELET 3311K; or ELET 3211K	3	Area S Option	Pre-requisite: None	3	Does this Degree Program Require a Minor? No
	Fall Milestones			Total	Spring Milestones		
			14				14

Total Hours Required for this Degree Program: **123**

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Core Curriculum (Programmed Preferred Options in Bold)

Area I – Institutional Priority 5 hrs.

AFRS 1501 Survey of African-American Experience 2 hrs.

Select one of the following:

- i. DATA 1501 Introduction to Data Science 3 hrs.
- ii. POLS 2401 Global Issues 3 hrs.
- iii. HUMN 1201 Critical Thinking & Communication 3 hrs.
- iv. AFRS 2000 Introduction to Africana Studies 3 hrs.

Area M – Mathematics and Quantitative Skills 3 hrs.

- i. MATH 1001 Quantitative Reasoning 3 hrs.
- ii. MATH 1111 College Algebra 3 hrs.
- iii. MATH 1401 Elementary Statistics 3 hrs.
- iv. **MATH 1113 Pre-Calculus 3 hrs.**

Area P – Social Science and U.S. History 6 hrs.

POLS 1101 American Government 3 hrs.

Select one of the following:

- i. HIST 2111 U.S. History to the Post-Civil War Period 3 hrs.
- ii. HIST 2112 U.S. History from the Post-Civil War to Pre 3 hrs.

Area A – Arts, Humanities, and Ethics 6 hrs.

Select two of the following:

- i. ENGL 2111 World Literature I 3 hrs.
- ii. ENGL 2112 World Literature II 3 hrs.
- iii. ENGL 2121 British Literature I 3 hrs.
- iv. ENGL 2122 British Literature II 3 hrs.
- v. ENGL 2131 American Literature I 3 hrs.
- vi. ENGL 2132 American Literature II 3 hrs.
- vii. ENGL 2140 Introduction to African American Literature 3 hrs.
- viii. ENGL 2521 Introduction to Film 3 hrs.
- ix. ARTS 1101 Introduction to Visual Art 3 hrs.
- x. HUMN 2011 Humanities 3 hrs.
- xi. MUSC 1101 Introduction to Music 3 hrs.
- xii. THEA 2101 Introduction to Theatre 3 hrs.
- xiii. DNCE 2010 Dance Appreciation 3 hrs.
- xiv. PHIL 2010 Introduction to Philosophy 3 hrs.
- xv. PHIL 2030 Introduction to Ethics 3 hrs.

Area C – Communications in Writing 6 hrs.

- i. ENGL 1101 English Composition I 3 hrs.
- ii. ENGL 1102 English Composition II 3 hrs.

Area T – Technology, Mathematics and Sciences 11 hrs.

1. Select one of the following:

- i. **CSCI 1130 Computer and its Applications 3 hrs.**
- ii. CSCI 1301 Computer Science I 3 hrs.
- iii. CILS 1130 Introduction to Computer Applications 3 hrs.
- iv. ASTR 1000 Introduction to the Universe 3 hrs.
- v. ISCI 1101 Integrated Science I 3 hrs.
- vi. BIOL 1103 General Biology 3 hrs.
- vii. BIOL 1104 Human Biology 3 hrs.
- viii. DATA 1501 Introduction to Data Science 3 hrs.
- ix. ENV5 1140 Environmental Issues 3 hrs.
- x. FSCI 1101 Introduction to Molecular Forensic Science 3 hrs.
- xi. MATH 1111 College Algebra 3 hrs.
- xii. MATH 1401 Elementary Statistics 3 hrs.
- xiii. MATH 1113 Pre-Calculus 3 hrs.

2. Select two of the following lab sciences:

- i. BIOL 1103/1103L General Biology 4 hrs.
- ii. BIOL 1104/1104L Human Biology 4 hrs.
- iii. CHEM 1101K Introductory Chemistry 4 hrs.
- iv. ISCI 1111K Integrated Science II 3 hrs.
- v. MSCI 1501K Introduction to Marine Biology 4 hrs.
- vi. PHSC 1011K Physical Science I 4 hrs.
- vii. PHSC 1012K Physical Science II 4 hrs.
- viii. **PHYS 1111K Introductory Physics I 4 hrs.**

ix. **PHYS 1112K Introductory Physics II 4 hrs.**

x. **PHYS 2211K Principles of Physics I 4 hrs.**

xi. **PHYS 2212K Principles of Physics II 4 hrs.**

xii. BIOL 1107/1107L Principles of Biology I 4 hrs.

xiii. BIOL 1108/1108L Principles of Biology II 4 hrs.

xiv. CHEM 1211/1211L Principles of Chemistry 4 hrs.

xv. CHEM 1212/1212L Principles of Chemistry 4 hrs.

Area S – Social Sciences 6 hrs.

Select two of the following:

- i. AFRS 2000 Introduction to Africana Studies 3 hrs.
- ii. ANTH 1101 Introduction to Anthropology 3 hrs.
- iii. ECON 2105 Principles of Macro-Economics 3 hrs.
- iv. GEOG 1101 Introduction to Human Geography 3 hrs.
- v. HIST 1111 World Hist to Early Modern Times 3 hrs.
- vi. HIST 1112 World History Early Modern Times to Pres 3 hrs.
- vii. POLS 2401 Global Issues 3 hrs.
- viii. PSYC 1101 Introduction to General Psychology 3 hrs.
- ix. PSYC 2103 Human Growth & Development 3 hrs.
- x. SOCI 1101 Introduction to Sociology 3 hrs.
- xi. SOCI 1160 Social Problems 3 hrs.

Electrical Engineering Technology Major Technical Options

CSCI Option: Select One (3hrs)

CSCI 2601K	Information security fundamentals	3 credits
CSCI 3385K	Computer Network & Design	3 credits

ELET Option: Select Three (12hrs)

ELET 3401K	Microcomputer Interfacing	4 credits
ELET 3412K	Cybersecurity and embedded systems	4 credits
ELET 3501K	Control Systems	4 credits
ELET 3701K	Data Acquisition Systems	4 credits
ELET 4401K	Industrial Electronics	4 credits
ELET 4402K	Network defense & counter measures	4 credits
ELET 4611K	Fiber Optics	4 credits
ELET 4621K	Digital Communications	4 credits

Distinctive Courses/Descriptions

Electrical Engineering Technology

The electrical engineering technology curriculum provides instruction in the fundamentals of modern electrical theory, with emphasis on the application of theoretical principles to actual electrical circuits, embedded systems, power systems, and digital circuits. Graduates of the electrical engineering technology program are prepared to function effectively in several capabilities, including:

Research and Development Technologist - engages in the development, building and testing of new equipment in the areas of digital systems, power systems, communications, and electrical systems.

Process Control Technologist - supervises the operation of automatic control equipment for industrial processes.

Field Engineering Specialist – installs, tests, and maintains equipment such as data processing machines and other electrical systems.

Embedded System Specialist - maintains and/or designs microcontrollers-based equipment and other embedded system devices.