

**CURRICULUM SUMMARY FOR THE BACHELOR OF SCIENCE IN
ELECTRICAL AND COMPUTER ENGINEERING
ELECTRICAL ENGINEERING CONCENTRATION
TOTAL CREDITS REQUIRED:125**

CORE CURRICULUM (STANDARD)*		MAJOR (ELECTRICAL AND COMPUTER ENGINEERING)	OTHER REQUIREMENTS	MINOR REQUIREMENTS
TSU COURSES	TCCNS EQUIVALENT			
43 credits		61 credits	21 credits	0 credits
<u>Communication:</u>		ECE 110 (1)	CHEM 111 (1)	
ENG 131 (3)	ENGL 1301	ECE 111 (1)	ENGR 131 (3)	
ENG 132 (3)	ENGL 1302	ECE 131 (3)	FS 102 (1)	
<u>Mathematics:</u>		ECE 211(1)	MATH 242 (4)	
MATH 241 (4)**	MATH 2413	ECE 215 (1)	MATH 243 (4)	
<u>Life and physical sciences:</u>		ECE 231 (3)	MATH 251 (3)	
CHEM 131 (3)	CHEM 1311	ECE 235 (3)	PHYS 217 (1)	
PHYS 251 (3)	PHYS 2325	ECE 311 (1)	PHYS 218 (1)	
<u>Language, philosophy, and culture:</u>		ECE 312 (1)	PHYS 252 (3)	
ENG 2xx (3) ***		ECE 315 (1)		
<u>Creative arts:</u>		ECE 319 (1)		
MUSI 239 (3)	HUMA 1315	ECE 330 (3)		
<u>American history:</u>		ECE 331 (3)		
HIST 231 (3)	HIST 1301	ECE 332 (3)		
HIST 232 (3)	HIST 1302	ECE 334 (3)		
<u>Government/political science:</u>		ECE 335 (3)		
POLS 235 (3)	GOVT 2305	ECE 338 (3)		
POLS 236 (3)	GOVT 2306	ECE 339 (3)		
<u>Social and behavioral sciences:</u>		ECE 412 (1)		
ECON 231 (3)	ECON 2301	ECE 432 (3)		
<u>Institutional Options:</u>		ECE 430 (3)		
SC 135 or 136 (3)	SPCH 1321 or SPCH 1315	ECE 433 (3)		
ECE 130 (3)***	ENGR 2304	ECE 437 (3)		
		ECE 438 (3)		
		ECE 441 (4)		
		ECE-ECX (0)		
		Technical Elective (3)^		

*Students should be advised by a major advisor prior to registering for any credit, particularly any core curriculum credit as listed.

**MATH 241 will be taken in lieu of Math 136 to satisfy the mathematics core requirement. For engineering majors only.

***ECE 130 will be taken in lieu of CS116 to satisfy the institutional option of core requirement.

^ Technical Electives may be selected from ECE 336 (3), ECE 435 (3), ECE 430 (3), ECE 333, & ECE 239(3)

**BACHELOR OF SCIENCE IN
ELECTRICAL AND COMPUTER ENGINEERING
ELECTRICAL ENGINEERING CONCENTRATION
TOTAL CREDITS: 125**

First Year	FIRST SEMESTER		SECOND SEMESTER	
	ECE 110 Introduction to Engineering	1	ECE 131 Circuit Analysis I	3
	ECE 130 Programming for Engr. Applications	3	ECE 111 Circuit Analysis Lab I	1
	ENG 131 Freshman English I	3	ENG 132 Freshman English II	3
	ENGR 131 Engineering Graphics	3	CHEM 131 General Chemistry I	3
	MATH 241 Calculus & Analytic Geometry I	4	CHEM 111 General Chemistry I Lab	1
	MUSI 239 Fine in Daily Living	3	MATH 242 Calculus & Analytic Geometry II	4
	FS 102 Freshman Seminar	1		
	18 Hrs		15 Hrs	
Second Year	THIRD SEMESTER		FOURTH SEMESTER	
	SC 135 Business and Prof. Communication	3	MATH 251 Differential Equation	3
	MATH 243 Calculus & Analytic Geometry III	4	PHYS 252 University Physics II	3
	PHYS 251 University Physics I	3	PHYS 218 University Physics II Lab	1
	PHYS 217 University Physics I Lab	1	ECE 235 Digital System	3
	ECE 231 Circuit Analysis II	3	ECE 215 Digital System Lab	1
	ECE 211 Circuit Analysis Lab II	1	ENG 2xx Upper level English	3
	POLS 235 American Political System I	3	POLS 236 American Political System II	3
	18 Hrs		17 Hrs	
Third Year	FIFTH SEMESTER		SIXTH SEMESTER	
	ECE 330 Engineering Mathematical Analysis	3	ECE 334 Signal and System	3
	ECE 331 Electronic Circuits	3	ECE 335 Control Systems	3
	ECE 311 Electronic Circuits Lab	1	ECE 315 Control System Lab	1
	ECE 332 Microprocessor Architecture	3	ECE 338 Computer and Wireless Networks	3
	ECE 312 Microprocessor Architecture Lab	1	ECE 339 Real-time Embedded System	3
	HIST 231 Social & Political History of U.S. I	3	ECE 319 Real-time Embedded System Lab	1
			HIST 232 Social & Political History of US. II	3
	14 Hrs		17 Hrs	
Fourth Year	SEVENTH SEMESTER		EIGHTH SEMESTER	
	ECE 430 Applied Electromagnetics	3	ECE 433 Microwave Engineering	3
	ECE 432 Communication Systems	3	ECE 437 Digital Signal Processing	3
	ECE 412 Communication System Lab	1	ECE 438 Power System Analysis	3
	*ECON 231 Principles of Economics I	3	ECE 441 Senior Project	4
	**Technical Elective	3	ECE-ECX ECE Comprehensive Exam	0
		13 Hrs		13 Hrs

NOTE: Students should be advised by a major advisor prior to registering for any credit, particularly any core curriculum credit as listed.

**The Technical Elective should be selected from one of the following three-credit courses:

- ECE 239 Electromechanical Energy Conversions
- ECE 333 Software Engineering
- ECE 435 Network Programming