

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

CORE CURRICULUM (STANDARD)*		MAJOR (ELECTRICAL AND COMPUTER ENGINEERING)	OTHER REQUIREMENTS	MINOR REQUIREMENTS
TSU COURSES	TCCNS EQUIVALENT			
43 credits		60 credits	22 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)	ENGT 111 (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 236 (3)	PHYS 218 (1)	
<u>Language, philosophy, and culture:</u>		ECE 311 (1)	PHYS 252 (3)	
ENG 2xx (3) ***		ECE 312 (1)	FS 102 (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 336 (3)		
<u>Government/political science:</u>		ECE 337 (3)		
POLS 235 (3)	GOVT 2305	ECE 338 (3)		
POLS 236 (3)	GOVT 2306	ECE 339 (3)		
<u>Social and behavioral sciences:</u>		ECE 414 (1)		
ECON 231 (3)	ECON 2301	ECE 434 (3)		
<u>Institutional Options:</u>		ECE 436 (3)		
SC 135 or 136 (3)	SPCH 1321 or SPCH 1315	ECE 437 (3)		
ECE 130 (3)***	ENGR 2304	ECE 439(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 taken be 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 333 (3), ECE 435 (3), & ECE 239(3).

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	FIRST SEMESTER		SECOND SEMESTER	
First Year	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
	ENGT 111 Intro to Project Management	1	MATH 242 Calculus & Analytic Geometry II	4
	FS 102 Freshman Seminar	1	SC 135 Business and Prof. Communication	3
		16 Hrs		18 Hrs
	THIRD SEMESTER		FOURTH SEMESTER	
Second Year	ENG 2xx Upper level English	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	ECE 236 Java Programming	3
	POLS 235 American Political System I	3	POLS 236 American Political System II	3
		18 Hrs		17 Hrs
	FIFTH SEMESTER		SIXTH SEMESTER	
Third Year	ECE 330 Engineering Mathematical Analysis	3	ECE 336 Introductory to VLSI Design	3
	ECE 331 Electronic Circuits	3	ECE 337 Operating Systems	3
	ECE 311 Electronic Circuits Lab	1	ECE 338 Computer and Wireless Networks	3
	ECE 332 Microprocessor Architecture	3	ECE 339 Real-time Embedded Systems	3
	ECE 312 Microprocessor Architecture Lab	1	ECE 319 Real-time Embedded Syst. Lab	1
	HIST 231 Social & Political History of U.S. I	3	HIST 232 Social & Political History of US. II	3
	MUSI 239 Fine arts for Daily living	3		
		17 Hrs		16 Hrs
	SEVENTH SEMESTER		EIGHTH SEMESTER	
Fourth Year	ECE 434 Data Communications	3	ECE 437 Digital Signal Processing	3
	ECE 414 Data Communications Lab	1	ECE 439 Applied Cyber Security	3
	ECE 436 Artificial Intelligence	3	**Technical Elective	3
	ECON 231 Principles of Economics I	3	ECE 441 Senior Project	4
			ECE-ECX ECE Comprehensive Exam	0
		10 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