

COLLEGE OF ENGINEERING AND COMPUTER SCIENCE

Bachelor of Science in Electrical Engineering

Electrical Engineering prepares individuals to use science, math, computers, and modern technology together with well developed critical thinking and problem-solving skills to analyze, design, construct, and maintain products and services related to electrical and electronic devices and systems. Some areas in which an electrical engineer may specialize are computers, communication systems, control systems, signal processing, microelectronics, and electrical power systems. Electrical engineers work in design, development, research, testing, manufacturing, and sales. With experience, many electrical engineers also serve as managers of large engineering projects, executives in major corporations, or as owners of their own companies. Whether developing and designing computers; space vehicle guidance, navigation, and control systems; satellite, optical and wireless communication systems; advanced medical diagnostic equipment and precision surgical tools; or large electric power systems, an electrical engineer has varied and growing opportunities for a challenging and rewarding career in today's high tech world. *(The Electrical Engineering program is accredited by the ABET Engineering Accreditation Commission.)*

Recommended 4-Year Curriculum

FRESHMAN YEAR

First Semester			Credit Hours	Second Semester			Credit Hours
ENGR	1200	Engineering Methods	2	PHYS	2325	University Physics I	3
ENGL	1301	English Composition I	3	PHYS	2125	University Physics I Lab	1
CHEM	1311	General Chemistry I	3	ENGL	1302	English Composition II	3
CHEM	1111	General Chemistry I Lab	1			*Fine and Perf. Arts Elective	3
MATH	2413	Calculus I	4	MATH	2414	Calculus II	4
UNIV	1300	Freshman Seminar	3	EENG	1201	Electrical Engineering I	2
				EENG	2101	Matlab for Engineers	1
Total Semester Hours			16	Total Semester Hours			17

SOPHOMORE YEAR

First Semester			Credit Hours	Second Semester			Credit Hours
HIST	1301	United States History I	3	HIST	1302	United States History II	3
MATH	3404	Multivariate Calculus	4	ECON	2302	Microeconomics	3
ENGR	2301	Engr. Mechanics-Statics	3	MATH	3305	Differential Equations	3
EENG	2201	Program. For Engineers	2	EENG	3302	Digital Systems	3
PHYS	2326	University Physics II	3	EENG	3304	Linear Circuits Anal. I	3
PHYS	2126	University Physics II Lab	1	EENG	3104	Linear Circuits Anal. I Lab	1
Total Semester Hours			16	Total Semester Hours			16

JUNIOR YEAR

First Semester			Credit Hours	Second Semester			Credit Hours
MATH	3203	Matrix Methods	2	POLS	2305	American Government	3
EENG	3307	Microprocessors	3	EENG	4311	Signals and Systems	3
MENG	3301	Thermodynamics I	3	EENG	3303	Electromagnetic Fields	3
EENG	3305	Linear Circuits Analysis II	3	ENGR	3314	Design Methodology-Engr.	3
EENG	3306	Electronic Circuits I	3	EENG	4309	Electronic Circuits II	3
EENG	3106	Electronic Circuits I Lab	1	EENG	4109	Electronic Circuits II Lab	1
Total Semester Hours			15	Total Semester Hours			16

SENIOR YEAR

First Semester			Credit Hours	Second Semester			Credit Hours
EENG	4115	Senior Design	1	EENG	4315	Senior Design II	3
ENGR	4308	Automatic Controls	3	ENGR	4109	Senior Seminar	1
EENG	4310	Electric Power Systems	3	POLS	2306	Texas Politics	3
EENG	4312	Communications Theory	3			*Humanities Elective	3
EENG	3350	Random Signal Analysis	3			+Technical Elective	3
		+Technical Elective	3	ENGL		*World/European Literature	3
Total Semester Hours			16	Total Semester Hours			16

Total hours must equal at least 128 hours

NOTES:

*See UT Tyler Core Curriculum for approved course(s).

+ Consult with your advisor for specific degree requirements and schedule planning.