

**BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING & COMPUTER ENGINEERING
DOUBLE MAJOR 5-YEAR PLAN – BSEE FIRST**

Year 1: FALL SEMESTER		SPRING SEMESTER	
Course Name	Credits	Course Name	Credits
<u>MATH 2413</u> Calculus & Analytical Geometry I	4	MATH 2414 Calculus & Analytical Geometry II	4
<u>CHEM 1311</u> General Chemistry I	3	Foreign Lang./Communication Elective ⁽²⁾	3
<u>CHEM 1111</u> General Chemistry I Lab	1	<u>PHYS 2425</u> University Physics I	4
<u>ELEN 1100</u> Introduction to ECE	1	History Elective ⁽³⁾	3
<u>ENGL 1301</u> English Composition I	3	<u>ELEN 1301</u> Computers & Programming I ⁽⁴⁾	3
Social and Behavioral Sciences Elective ⁽¹⁾	3		
TOTAL	15	TOTAL	17
Year 2: FALL SEMESTER		SPRING SEMESTER	
<u>MATH 2415</u> Calculus III	4	<u>MATH 3301</u> Ordinary Differential Equations	3
<u>MATH 2318</u> Linear Algebra	3	<u>ELEN 3381</u> Electrical Analysis	3
<u>PHYS 2426</u> University Physics II	4	<u>ELEN 2411</u> Circuits Analysis I	4
<u>INEN 3320</u> Prob & Statistics Engineering, or <u>MATH 3370</u> Intro to Theory of Statistical Inference	3	<u>ELEN 3431</u> Digital System Design I	4
Language, Philosophy and Culture Elective ⁽⁵⁾	3	<u>COSC 2375</u> or <u>MATH 3321</u> Discrete Structures	3
TOTAL	17	TOTAL	17
Year 3: FALL SEMESTER		SPRING SEMESTER	
<u>ELEN 3312</u> Circuits Analysis II	3	<u>ELEN 3322</u> Electronics II	3
<u>ELEN 3421</u> Electronics I	4	<u>ELEN 3313</u> Signals, Systems, & Transforms	3
<u>ELEN 3371</u> Electromagnetics	3	<u>ELEN 3441</u> Fundamentals of Power Engineering	4
<u>ELEN 4486</u> Embedded Microprocessor Systems	4	<u>ELEN 4387</u> Computer Organization & Arch.	3
<u>POLS 2301</u> Intro. to American Government I	3	<u>POLS 2302</u> Intro. to American Government II	3
TOTAL	17	TOTAL	16
Year 4: FALL SEMESTER		SPRING SEMESTER	
<u>ELEN 4351</u> Control Engineering	3	<u>ELEN 2301</u> Computers & Programming II	3
<u>ELEN 4361</u> Communication Systems	3	<u>ELEN 3340</u> Digital Integrated Circuits	3
<u>ELEN 3320</u> Computer Networks	3	<u>ELEN 3451</u> Digital System Design II	4
<u>ELEN 4314</u> Fundamentals of Digital Signal Processing	3	ELEN Elective ⁽⁶⁾	3
Creative Arts Elective ⁽⁷⁾	3	History Elective ⁽³⁾	3
TOTAL	15	TOTAL	16
Year 5: FALL SEMESTER		SPRING SEMESTER	
<u>ELEN 4306</u> Senior Project Design I	3	<u>ELEN 4307</u> Senior Project Design II	3
<u>ELEN 3330</u> Operating Systems	3	ELEN Elective ⁽⁶⁾	3
ELEN Elective ⁽⁶⁾	3	ELEN Elective ⁽⁶⁾	3
ELEN Elective ⁽⁶⁾	3	ELEN Elective ⁽⁶⁾	3
TOTAL	12	TOTAL	12
TOTAL Hours for Double Major in EE and CE			151

Notes:

All STEM courses require a grade of 'C' or better to satisfy degree plan/prerequisite requirements.

- Social and Behavioral Sciences Electives are ANTH 2346, ANTH 2351, BULW 1370, CRIJ 1301, ECON 1301, ECON 2301, ECON 2302, FINC 2310, INEN 2373, POLS 1301, PSYC 2301, PSYC 2315, SOCI 1301, or SOWK 2361.
- Foreign Language or Communications Electives are COMM 1315, COMM 1321, DSDE 1371, ENGL 1302, FREN 1311 or SPAN 1311.
- Two semesters of US or Texas history from: HIST 1301, 1302 or 2301.
- ELEN 1301 Computers & Programming I is required unless substituted by an equivalent programming course such as COSC 1336, 1320, 1420, and 1436, CS 101, ENGR 2304, ITSE 1307, or TACS (High School programming course).
- Language, Philosophy and Culture Electives are PHIL 1370 or PHIL 2306,
- 3 EE electives and 3 CE electives. Non-ELEN courses may substitute EE/CE Electives if approved by the department chair.
- Creative Arts Electives are ARTS 1301, ARTS 1303, DANC 2304, MUSI 1306, COMM 1375, COSC 1324, MUSI 1309, MUSI 1310, PHIL 1330 or THEA 1310.

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<u>ELEN 4351</u> Control Engineering	3	ELEN Elective ⁽⁶⁾	3
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