

## Bachelor of Science in Electrical Engineering (BSEE)

2017-2018

	I	Hrs	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
FIRST YEAR	FALL	3	ENGL 1301	Rhetoric and Composition I (Core)	C	010	For all 010 courses: Satisfactory scores on ENGL portion of ACT test or TSI reading/writing exams or ENGL 0301.	Options: or ENGL 1387 (H)
		4	MATH 2413	Calculus I	C	020	MATH 2412 with a grade of 'C' or better; or passing the Precalculus Exemption Test administered by the Department of Mathematics.	
		3	CSCI 1380	Computer Science I	C	090	Concurrent enrollment or credit for MATH 1314 or higher level mathematics course.	Either CSCI 1380 or CSCI 1370 can be taken.
		1	ELEE 1101	Introduction to Electrical Engineering				
		3	Choose 1	Social and Behavioral Sciences (Core)		080		Choose one of the following: ANTH 1324, 2302, 2306 or 2351. ECON 1301 or 2301. ENGL 2315 PSYC 2301, SOCI 1301.
			UNIV 1301	Learning Framework				Only if required, based on ACT/SAT and high school rank.
	14 Semester Total Hours							
	SPRING	4	MATH 2414	Calculus II	C		MATH 2413 (or MATH 2487 (H)) and concurrent enrollment in MATH 2414 (or MATH 2488 (H)).	
		3	MATH 2346	Mathematics for Electrical and Computer Engineers	C		CSCI 1380 (or CSCI 1387) or CMPE 1170/1370 (or CMPE 1378/1178) with a grade of 'C' or better, and MATH 2413 (or MATH 2487) with a grade of 'C' or better.	
		4	PHYS 2425	Physics for Scientists and Engineers I	C	030	MATH 2413 (or MATH 2487) and concurrent enrollment in MATH 2414 (or MATH 2488).	
		3	ELEE 2330	Digital Systems Engineering I	C			
		1	ELEE 2130	Digital Systems Engineering I Lab	C		Credit/registration in ELEE 2330.	
	15 Semester Total Hours							
	SUMMER	3	ENGL 1302	Rhetoric and Composition II (Core)	C	010	For all 010 courses: Satisfactory scores on ENGL portion of ACT test or TSI reading/writing exams or ENGL 0301. For ENGL 1302/1388, a grade of "C" or better in ENGL 1301/1387.	Options: or ENGL 1388 (H) or ENGL 1305
		3	Choose 1	Creative Arts (Core)		050		Choose one of the following: ARTS 1301, 1303, or 1304. DANC 2323, ENGL 2312 OR 2314. FREN 2323, MUSI 1306, 1308, or 1310. PHIL 1330, THTF 1310 or 2366.
		6 Semester Total Hours						
SECOND YEAR	FALL	3	MATH 3341	Differential Equations	C		MATH 2414 (or MATH 2488 (H)).	
		4	PHYS 2426	Physics for Scientists and Engineers II	C	030	PHYS 2425.	
		3	ELEE 2305	Electric Circuits I	C		MATH 2414 (or MATH 2488) and credit/registration in PHYS 2426.	
		1	ELEE 2105	Electric Circuits I Lab			Credit/registration in ELEE 2305.	
		3	ELEE 2319	Numerical Computation and Data Visualization	C		CSCI 1380 (or CSCI 1387) and credit/registration in MATH 2346.	
		14 Semester Total Hours						
	SPRING	4	MATH 2415	Calculus III	C		MATH 2414 (or MATH 2488) with a grade of 'C' or better.	
			CHEM 1307 or CHEM 1311 or MECE 2301	Chemistry for Engineers or General Chemistry I or Statics			Prerequisites for CHEM: College Algebra or Precalculus. Prerequisites for MECE 2301 Statics: Grade of 'C' or better in PHYS 2425, and credit/registration in MATH 2414 (or MATH 2488 (H)).	Chemistry Labs: CHEM 1107 OR CHEM 1101 are <u>NOT</u> required.
		3	ELEE 3321	Signals and Systems	C		ELEE 2305 and credit/registration in MATH 3341.	
		3	ELEE 3301	Electronics I	C		ELEE 2305 and credit/registration in ELEE 3321.	
		1	ELEE 3101	Electronics I Lab			Credit/registration in ELEE 3301.	
		3	HIST 1301	U.S. History I (Core)		060		Options: or HIST 1387 or HIST/MASC 2327
		17 Semester Total Hours						

CORE: The 2017-2018 list of core courses can be found at: [www.utrgv.edu](http://www.utrgv.edu) > Academics > Undergraduate > General Education Core  
[www.utrgv.edu/core](http://www.utrgv.edu/core)

	I	Hrs	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
THIRD YEAR	FALL	2	ELEE 3225	Electrical Engineering Lab I	C		ELEE 2330 and ELEE 2130, plus credit or registration for ELEE 3301, ELEE 3321, and ELEE 2319.	
		3	ELEE 3315	Electromagnetics Engineering			ELEE 2305, MATH 2415 and PHYS 2426.	
		4	ELEE 3435	Microprocessor Systems	C		ELEE 2330 and CSCI 1380 (or CSCI 1387).	
		3	ELEE 4303	Digital Systems Engineering II			ELEE 2330.	
		3	HIST 1302	U.S. History II (Core)		060		Options: <b>1).</b> HIST 1302 or HIST 1388 (H) , if completed HIST 1301 or HIST 1387 (H). <b>2).</b> HIST/MASC 2328, if completed HIST/MASC 2327.
	15 Semester Total Hours							
	SPRING	2	ELEE 3230	Electrical Engineering II Lab	C		ELEE 3225.	
		3	ELEE 3340	Probability and Statistics for Electrical Engineers	C		MATH 2414	
		3	ELEE 3302	Electronics II			ELEE 3301 and ELEE 3321.	
		3	ELEE X3XX	Technical Elective				Must be a 3000 or 4000 level ELEE Technical Elective Course.
		3	POLS 2305	U.S. Federal Government & Politics (Core)		070		Options: or POLS 2385 (H)
	14 Semester Total Hours							
FOURTH YEAR	FALL	3	ELEE 4321	Automatic Controls			ELEE 3321 and MATH 3341.	
		3	ELEE 4328	Solid State Electronic Devices			ELEE 3301.	
		3	ELEE 4351	Communication Theory			ELEE 3340 and ELEE 3321.	
		3	ELEE 4361	Senior Design I	C		ELEE 3230, ELEE 3435, and credit/registration in at least 9 credits of 4000 level ELEE coursework.	
		3	PHIL 2326	Ethics, Technology, and Society		040		
	15 Semester Total Hours							
	SPRING	3	ELEE X3XX	Technical Elective				Must be a 3000 or 4000 level ELEE Technical Elective Course.
		3	ELEE X3XX	Technical Elective				Must be a 3000 or 4000 level ELEE Technical Elective Course.
		3	ELEE 4362	Senior Design II			ELEE 4361.	
		3	POLS 2306	Texas Government & Politics (Core)		070		Options: or POLS 2386 (H)
		3	Choose 1	Integrative/Experiential Learning Option (Core)		090		Choose any one course from Humanities (040 Language, Philosophy & Culture) except PHIL courses. Options: ANTH 1354, ENGL 2313, 2321, 2326, 2331, 2341, 2351, 2387 (H), 2388 (H), FREN 2382, MASC 2301, MUSI 1309.
	15 Semester Total Hours							

### Graduation Requirements

- Students must receive a grade of 'C' or better in any course in the degree plan that is a prerequisite or corequisite, directly or indirectly, for an ELEE course.
- In addition to the graduation requirements listed in the UTRGV 2015-2017 Undergraduate Catalog, demonstration of proficiency in a language other than English is required at the undergraduate level equivalent to a minimum of six credit hours. Proficiency can be demonstrated by a college credit exam, a placement test approved through the UTRGV Department of Writing and Language Studies, and/or up to six credit hours of college-level language coursework.

**125 TOTAL HOURS**

Approved: Thursday, June 22, 2017

**(54) TOTAL ADVANCED HOURS**

Revised: Thursday, June 22, 2017

Revised (Department): Wednesday, October 25, 2017

### Symbols Key

**Critical (!):** sequence sensitive course.

**Minimum Grade:** A - Excellent; B - Good; C - Satisfactory; D - Below Average; CR - Credit; P - Passing; S - Satisfactory.

**(H):** Honors Course.

**General Education Core (GEC) Sections:** 010 - Communication; 020 - Mathematics; 030 - Life and Physical Sciences; 040 - Language, Philosophy & Culture; 050 - Creative Arts; 060 - American History; 070 - Government/Political Science; 080 - Social and Behavioral Sciences; 090 - Computer Application; 090 - Interdisciplinary ;090 - Science Labs; 090 - Wellness.

**Language Proficiency Requirement:** Student is required to demonstrate language proficiency in a language other than English at the undergraduate level equivalent to a minimum of six credits.