The University of Texas Rio Grande Valley

Bachelor of Science in Electrical Engineering (BSEE)
Bachelor of Science in Electrical Engineering

2018-2019

FIRST YEAR

	H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
FALL	3	Choose 1	Communication (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.	See General Education Core for more details. Options: ENGL 1301 **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		See General Education Core for course options.
		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) with a grade of 'C' or better.	
	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	030/090	MATH 2413 (or MATH 2487) and concurrent enrollment in MATH 2414 (or MATH 2488).	1 hour of lab to count for 090 Core
	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	Choose 1	Communication (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.	See General Education Core for more details. Options: ENGL 1302 **or** ENGL 1388 (H) **or** ENGL 1305
	3	Choose 1	Creative Arts (Core)		050		See General Education Core Curriculum
	6	**Semester Total Hours**					

SECOND YEAR

	H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
FALL	3	MATH 3341	Differential Equations	C		MATH 2414 (or MATH 2488)	
	4	PHYS 2426	Physics for Scientists and Engineers II	C	030/090	PHYS 2425.	1 hour of lab to count for 090 Core
	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.	
	3	MECE 2301 or CHEM 1311 or CHEM 1307 or CHEM 1309	Statics or General Chemistry I or Chemistry for Engineers			Prerequisite for CHEM: MATH 1314/1414	Prerequisite for MECE 2301 Statics: A grade of 'C' or better in MECE 1101 and PHYS 2425, and credit/registration in MATH 2414 (or MATH 2488).
	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	Choose 1	American History (Core)		060		See General Education Core for more details. Options: HIST 1301 **or** HIST 1387 **or** HIST/MASC 2327
	17	**Semester Total Hours**					

CORE: The 2018-2019 list of core courses can be found at: www.utrgv.edu > Academics > Undergraduate > General Education Core
www.utrgv.edu/core

	!	H	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	Choose 1	American History (Core)		060		See General Education Core for more details. Options: HIST 1302 **or** HIST 1388 **or** HIST/MASC 2328
	15 Semester Total Hours							
THIRD YEAR — SPRING		2	ELEE 3230	Electrical Engineering II Lab	C		ELEE 3225.	
		3	ELEE 3340	Probability and Statistics for Electrical	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	Choose 1	Government/Political Science (Core)		070		See General Education Core for more details Options: POLS 2305 **or** POLS 2385 (H)
	14 Semester Total Hours							

	!	H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
FOURTH YEAR — FALL		3	ELEE 4321	Automatic Control Systems			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							
FOURTH YEAR — 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	Choose 1	Government/Political Science (Core)		070		See General Education Core for more details Options: POLS 2306 **or** POLS 2386 (H)
		3	Choose 1	Integrative/Experiential Learning Option (Core)		090		Choose any course from Humanities (040 Language, Philosophy & Culture) except PHIL courses.
	15 Semester Total Hours							

Graduation Requirements

Progression requirements: Students must receive a grade of 'C' or better in all courses that are prerequisites or corequisites for electrical engineering courses. Graduation requirements: 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

(54) TOTAL ADVANCED HOURS

Approved: Wednesday, April 4, 2018

Revised: Thursday, March 21, 2019

Symbols Key

Critical ('!'): sequence sensitive course.
Minimum Grade: A - Excellent; B - Good; C - Satisfactory; D - Below Average; CR - Credit; P - Passing; S - Satisfactory.

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 - Applied Communication and Literacies; 090 - Humanities; 090 - Leadership; 090 - Science Labs; 090 - Interdisciplinary ; 090 - Technologies; 090 - Language Diversity & Writing.

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.