

Bachelor of Science in electrical Engineering
Electrical Engineering

The 2026-2027 list of core courses can be found in the 2026-2027 Undergraduate Catalog: www.utrgv.edu/catalog > See 'Bachelors Degree Program Regulations'

Symbols Key											
Campus: B - Offered in Brownsville; E - Offered in Edinburg; O - Offered Online; T - Travel Required											
Bolted Course Number*: Program Admission Requirement											
Min Grade: A - Excellent; B - Good; C - Satisfactory; D - Below Average; CR - Credit; P - Passing; S - Satisfactory.											
Core: 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;											
Core: 090 - Applied Communication and Literacies; Humanities; Leadership; Science Labs; Interdisciplinary; Technologies; Language Diversity & Writing											
Year	Semester	Credit Hours	Campus	Course Number	Course Title	Minimum Grade	Core	Prerequisite	Additional Notes		
1	Fall	3	B/E/O	Choose 1	Communication	C	010	For all 010 courses: Satisfactory scores on English portion of ACT test and TSI examination or ENGL 0301. For ENGL 1302, a grade of "C" or better in ENGL 1301.	See Core Curriculum for details. Option: ENGL 1301		
1	Fall	4	B/E/O	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.			
1	Fall	3	B/E	CSCI 1381	Introduction to Programming C++	C	090	Concurrent enrollment or credit for MATH 1314 or higher level mathematics course.			
1	Fall	1	B/E	EECE 1101	Introduction to Electrical and Computer Engineering	C					
1	Fall	3	B/E/O	Choose 1	Social and Behavioral Sciences		080		See Core Curriculum for course options.		
1	Fall		B/E/O	UNIV	1301 Learning Framework 1101 Academic and Career Success 1001/1300 Living and Working by Design				As required, based on a number of factors such as credit hours earned, TSI status, high school rank, major declaration, etc.		
1	Fall	14	Semester Total Hours								
1	Spring	4	B/E/O	MATH 2414	Calculus II	C		MATH 2413 (or MATH 2487) with a grade of 'C' or better.			
1	Spring	3	B/E/O	MATH 2346	Mathematics for Electrical and Computer Engineers	C		CSCI 1381 or CMPE 1170/1370 (or CMPE 1378/1178) or CSCI 1470 with a grade of 'C' or better, and MATH 2413 (or MATH 2487) with a grade of 'C' or better.			
1	Spring	4	B/E/O	PHYS 2425	Physics for Scientists and Engineers I	C	030	MATH 2413.			
1	Spring	3	B/E	EECE 2306	Digital Systems Engineering I	C		Grade of C or better or registration in CMPE 1101 or ELEE 1101 or CSCI 1101 or EECE 1101.			
1	Spring	1	B/E	EECE 2106	Digital Systems Engineering I Lab	C		Grade of C or better or registration in [CMPE 2330 or ELEE 2330 or EECE 2306].			
1	Spring	15	Semester Total Hours								
1	SUMMER	3	B/E/O	Choose 1	Communication	C	010	For all 010 courses: Satisfactory scores on English portion of ACT test and TSI examination or ENGL 0301. For ENGL 1302, a grade of "C" or better in ENGL 1301.	See Core Curriculum for details. Options: ENGL 1302 or ENGL 1305		
1	SUMMER	3	B/E/O	Choose 1	Creative Arts		050		See Core Curriculum for course options.		
1	SUMMER	6	Semester Total Hours								
Year	Semester	Credit Hours	Campus	Course Number	Course Title	Minimum Grade	Core	Prerequisite	Additional Notes		
2	Fall	3	B/E/O	MATH 3341	Differential Equations	C		MATH 2414 with a grade of 'C' or better.			
2	Fall	4	B/E/O	PHYS 2426	Physics for Scientists and Engineers II	C	030	PHYS 2425 and MATH 2414.			
2	Fall	3	B/E	EECE 2305	Electric Circuits I	C		Grade of C or better in MATH 2414 and [CMPE 1101 or ELEE 1101 or EECE 1101] and a grade of C or better or registration in PHYS 2426.			
2	Fall	1	B/E	EECE 2105	Electric Circuits I Lab	C		Grade of C or better or registration in [CMPE 2320 or ELEE 2305 or EECE 2305].			
2	Fall	3	B/E	EECE 2319	Numerical Computation and Data Visualization	C		Grade of C or better in CSCI 1381 and a grade of C or better or registration in MATH 2346.			
2	Fall	14	Semester Total Hours								
2	Spring	4	B/E/O	MATH 2415	Calculus III	C		MATH 2414 (or MATH 2488) with a grade of 'C' or better.			
2	Spring	3	B/E	CHEM 1309 or CHEM 1311	Chemistry for Engineers or General Chemistry I			Minimum grade of C is required in one of the following courses: MATH 1314, MATH 1414, MATH 2412, MATH 2413 or MATH 2487.			
2	Spring	3	B/E	EECE 3321	Signals and Systems	C		Grade of C or better in [CMPE 2320 or ELEE 2305 or EECE 2305] and a grade of C or better or registration in MATH 3341.			
2	Spring	3	B/E	EECE 3301	Electronics I	C		Grade of C or better in [CMPE 2320 or ELEE 2305 or EECE 2305] and [CMPE 2120 or ELEE 2105 or EECE 2105]			
2	Spring	1	B/E	EECE 3101	Electronics I Lab	C		Grade of C or better in [CMPE 2320 or ELEE 2305 or EECE 2305] and [CMPE 2120 or ELEE 2105 or EECE 2105] and a grade of C or better or registration in [EECE 3301 or ELEE 3301].			
2	Spring	3	B/E/O	Choose 1	American History		060		See Core Curriculum. Options: HIST 1301 or HIST 2327		
2	Spring	17	Semester Total Hours								

Year	Semester	Credit Hours	Campus	Course Number	Course Title	Minimum Grade	Core	Prerequisite	Additional Notes	
3	Fall	2	B/E	EECE 3225	Electrical Engineering Lab I	C		Grade of C or better in: [ELEE 2330 or CMPE 2330 or EECE 2306] and [ELEE 2130 or CMPE 2130 or EECE 2106] and [ELEE 2319 or CSCI 2380 or CMPE 2380] and a grade of C or better or registration in [ELEE 3321 or CMPE 3322 or EECE 3321] and [CMPE 3403 or ELEE 3301 or EECE 3301].		
3	Fall	3	B/E	EECE 3315	Electromagnetics Engineering			Grade of C or better in [EECE 2305 or ELEE 2305], MATH 2415 and PHYS 2426.		
3	Fall	4	B/E	EECE 3435	Microprocessor Systems	C		Grade of C or better in [ELEE 2330 or CMPE 2330 or EECE 2306] and [CSCI 1370 or CSCI 1381 or CSCI 1470].		
3	Fall	3	B/E	EECE 4303	Digital Systems Engineering II			Grade of C or better in [ELEE 2330 or CMPE 2330 or EECE 2306].		
3	Fall	3	B/E/O	Choose 1	American History		060		See Core Curriculum. Options: HIST 1302 or HIST 2328	
3	Fall	15	Semester Total Hours							
3	Spring	2	B/E	EECE 3230	Electrical Engineering Lab II	C		[EECE 2319 or ELEE 2319] and [EECE 3225 or ELEE 3225] with a minimum grade of C.		
3	Spring	3	E	EECE 3340	Probability and Statistics for Electrical and Computer Engineers	C		Grade of 'C' or better in MATH 2414.		
3	Spring	3	B/E	EECE 3302	Electronics II			Grade of C or better in [EECE 3301 or ELEE 3301] and [EECE 3321 or ELEE 3321].		
3	Spring	3	B/E	EECE 43XX or 33XX	Prescribed Elective				Must be an approved 3000- or 4000-level EECE Prescribed Elective Course. See program of study for approved list.	
3	Spring	3	B/E/O	POLS 2305	U.S. Federal Govt & Politics		070			
3	Spring	14	Semester Total Hours							
Year	Semester	Credit Hours	Campus	Course Number	Course Title	Minimum Grade	Core	Prerequisite	Additional Notes	
4	Fall	3	E	EECE 4321	Automatic Controls			Grade of C or better in [EECE 3321 or ELEE 3321] and MATH 3341.		
4	Fall	3	B/E	EECE 4328	Solid State Devices			Grade of C or better in [EECE 3301 or ELEE 3301].		
4	Fall	3	B/E	EECE 4351	Communication Theory			Grade of C or better in [EECE 3340 or ELEE 3340] and [EECE 3321 or ELEE 3321].		
4	Fall	3	B/E	EECE 4361	Senior Design I	C		Grade of C or better in [ELEE 3435 or CMPE 3437 or EECE 3435 or CSCI 2333 or CMPE 2333] and [CMPE 3403 or ELEE 3301 or EECE 3301] and [STAT 3337 or CMPE 3343 or ELEE 3340 or EECE 3340 or EECE 3230 or ELEE 3230] and [CMPE 3340 or CSCI 3340 or EECE 3230 or ELEE 3230] and [having finished with a grade of C or better or be enrolled in at least 6 credits of 4000-level EECE coursework].		
4	Fall	3	B/E/O	PHIL 2326	Ethics, Technology, and Society		040			
4	Fall	15	Semester Total Hours							
4	Spring	3	B/E	EECE 43XX or 33XX	Prescribed Elective				Must be an approved 3000- or 4000-level EECE Prescribed Elective Course. See program of study for approved list.	
4	Spring	3	B/E	EECE 43XX or 33XX	Prescribed Elective				Must be an approved 3000- or 4000-level EECE Prescribed Elective Course. See program of study for approved list.	
4	Spring	3	B/E	EECE 4362	Senior Design II			Grade of C or better in [EECE 4361 or ELEE 4361] or CMPE 4371 or CMPE 4373.		
4	Spring	3	B/E/O	POLS 2306	Texas Government & Politics		070			
4	Spring	3	B/E/O	Choose 1	Integrative/Experiential Learning Option		090		Complete three credit hours from the approved core curriculum except PHIL 2326 in addition to CSCI 1381.	
4	Spring	15	Semester Total Hours							
		125	TOTAL HOURS							
		(42)	Advanced minimum credit hours							