

**Department of Electrical Engineering and Computer Science
Electrical Engineering Catalog 2025**

Fall 14 hours	Math 132 or 141 or 147 (3-4) (QR) FA,SP,SU Math 132 Prereq: Math 131 Math 141 Prereq: ACT Math 28 or SAT Math 660	EF 142 or 151 or 157 (4) (EI) FA, SP EF 142 Prereq: EF 141 with C- or better and Math 131 EF 142 Coreq: Math 132 EF 151 Coreq: 141/147 or higher and EECS majors COSC 101/102	COSC 101* (3) FA, SP	English 101 or 131 (3) FA, SP, SU 101 Standard; 131 English as Second Language	
Spring 15 hours	Math 142 or 148 (4) (QR) FA, SP, SU Prereq: Math 132 or 141 or 147 with C or better	EF 152 or 158 (4) (EI and NS) FA, SP, SU Prereq: EF 142/151/157 with C or higher Coreq: Math 142 or 148 and EF 105 or COSC 101 or 102	COSC 102 (4) FA, SP, SU Prereq: COSC 101 with C or better Coreq: Math 132 or 141 or 147 with C or better	English 102 or 112 or 298 or 132 (3) FA, SP, SU 102 Prereq: 101; 112 Prereq is AP 101 and Test Scores; 298 Prereq University Honors only; 132 Prereq 131 ESL	
Fall 16 hours	Math 231 or 237 (3) FA, SP, SU Prereq: Math 142 or 148 with grade of C or better	ECE 255 (3) FA, SP Prereq: COSC 102 with grade of C or better	Physics 231 (3) FA, SP, SU Prereq: Phys 135 or EF 151 and 152 Coreq: Math 142 or 148	Chem 122(3) and 123(1) or 128 (4) (NS) FA, SP, SU Prereq: Math 119; recommended background in Math 131	ECE 201 (3) FA, SP Prereq: EF 152/158 and Math 142/148 with C or better Coreq: Math 231/237; consent of Associate Dept Head
Spring 17 hours	Math 241 or 247 (4) FA, SP, SU Prereq: Math 142 or 148 with grade of C or better	Math 251 or 257 (3) FA, SP, SU Prereq: Math 142 or 148 with grade of C or better	Physics 251 (4) FA, SP Prereq: Physics 136 or 138 or 231 with C or better Coreq: Math 142 or 148	ECE 313 or 317 (3) FA, SP Prereq: Math 142 or 148 with grade of C or higher	ECE 202 (3) FA, SP, SU Prereq: ECE 201 with grade of C or better
Fall 16 hours	ECE 315 (3) FA, SP Prereq: ECE 202 with grade of C or better	ECE 325 (3) FA, SP Prereq: ECE 202 with grade of C or better	ECE 335 (3) FA, SP Prereq: ECE 202 with grade of C or better	ECE 341 or 347 (3) FA, SP Prereq: ECE 202, Math 241 or 247 and Physics 251 (formerly 232); C or better grades	ECE 395 (1) (WC) FA, SP Prereq: ECE 202 with grades of C or better and English 102, 112, 132, or 298
Spring 15 hours	ECE 316 (3) FA, SP Prereq: ECE 315 with grade of C or better	ECE 336 (3) FA, SP Prereq: ECE 335 with C or better Coreq: ECE 315 with C or better	ECE 342 (3) FA, SP Prereq: ECE 313 or 317 and 315 with grades of C or better	Vol Core (3) FA, SP, SU Social Science (SS)	Vol Core (3) FA, SP, SU Arts and Humanities (AH)
Fall 17 hours	ECE Sr. Elective *(3) FA, SP, SU Senior Elective	ECE Sr. Elective *(3) FA, SP, SU Senior Elective	ECE Sr. Elective*(3) FA, SP, SU Senior Elective	Vol Core (3) FA, SP, SU Global Citizenship United States (GCUS)	ECE 401 (2) (OC) FA Prereq: ECE 315 or 351 with C or better
Spring 15-18 hours	ECE Sr. Elective *(3) FA, SP, SU Senior Elective	Tech. Elective*(3) FA, SP, SU Petition required in advance	Tech. Elective *(3) FA, SP, SU Petition required in advance	Vol Core (3) FA, SP, SU Global Citizenship International (GCI)	ECE 402 (3) (AOC) SP Prereq: ECE 401 and ENGL 102, 132, 290, or 298 with C or better

*Acceptable Senior Electrical and Computer Engineering courses: Choose 12 credit hours of ECE senior electives with Advisor's consent. Up to 2 COSC 50X or ECE 50X courses may count as upper division electives. Acceptable ECE senior electives are ECE 4XX courses that are not otherwise required for the degree.

**Technical Electives: Chem 132&133/136; COSC 311, 370/377, 422 or 325; ECE 256, 351, 356/358, 414; EF 203, 303, Industrial 405, 457; Materials Science 201/207, 410, 460; Math 300/307; Mechanical Engineering 231, 321, 331, 363/367; Nuclear Engineering 342/347; Physics 250.

*Beginning students who have had high school computer science and/or who have had significant programming experience (e.g. summer institute study, special research projects, home laboratory) should apply during the summer to the head of the EECS department for permission to take a proficiency exam for COSC 101. If satisfactory grade is earned, credit will be allowed for COSC 101 allowing the student to begin in COSC 102 their first term. The EECS department also gives credit in COSC 101 to students who receive a score of 3 or better on the Computer Science A AP Exam. For student who lack these experiences, they should take COSC 101 first term, pushing back courses indicated.

Progression

The department requires at least a C in every computer engineering, computer science, electrical engineering, and mathematics course used for the undergraduate degrees. ECE 201 requires a C or better in EF 152/158 and Math 142/148.

Progression of departmental undergraduate students to the upper-division programs of the department is competitive and is based on the space available in the department. Factors considered in the decision include overall grade point average, grades earned in courses required in the lower division curricula of the department and College of Engineering, and seriousness of purpose and interest in departmental programs as exemplified by regular and orderly progress through the prescribed curriculum without abuse of withdrawal and course repeat privileges.

Students also have opportunities for an Honors Concentration and/or a five year BS/MS program. See the Undergraduate Catalog for details and requirements.

Volunteer Core courses highlighted in light orange.