Department of Electrical Engineering and Computer Science
Electrical- Power & Energy Systems Concentration Catalog 2024

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 EF 105 or COSC 101 or CS 102	**COSC 101* (3) FA, SP**	**English 101 or 131 (3) FA, SP, SU** 101 Regular; 118 Honors; 198 Chancellor Honors Only; 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 with C or higher	**CS 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 a grade of C or better	**ECE 255 (3) FA, SP** Prereq- COSC 102 with a grade of C or better	**Physics 231 (3) FA, SP, SU** Prereq- Phys 135 or EF151&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 with C or better, 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** 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 a grade of C or better	**ECE 202 FA,SP, SU** Prereq- ECE 201 with a 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 a grade of C or better	**ECE 335 (3) FA, SP** Prereq- ECE 202 with a 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	**ECE 395 (1) (WC) FA, SP** Prereq- ECE 202 with grades of C or better and English 102, 112, 132, or 298	**Vol Core (3) FA, SP, SU** Expanded Perspectives- choose from AH, AAH, GCUS, GCI, or SS
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** Senior Elective	**ECE Sr. Elective (3) FA, SP** Senior Elective	**Power Elective(3) FA, SP**	**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	**Vol Core (3) FA, SP, SU** Expanded Perspectives- choose from AH, AAH, GCUS, GCI, or SS
Spring 17 hours	**Economic, Entrepeneurship** **Innovation Elective (3) FA, SP**	**Tech. Elective(3) FA, SP**	**Power Elective(3) FA, SP**	**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	**Vol Core (0-3) (EI)*** FA, SP, SU** Engaged Inquiry (EI) students will try to overlap with Expanded Perspectives AND Engaged Inquiry	**ECE 496 (1) SP** Prereq- ECE 325 with grades of C or better

Senior ECE electives: Choose 6 credit hours of ECE senior elective with Advisor's consent. Up to 2 COSC 5XX or ECE 5XX courses may count as upper division electives. Acceptable senior electives
are ECE 4XX courses that are not otherwise required for the degree.

Power & Engergy System Electives: ECE 415, ECE 421, ECE 422, ECE 481, ECE 482, ECE 521, ECE 522, ECE 523, ECE 525.

Technical Electives: COSC 202, COSC 311 or MATH 300/307, COSC 370/377; COSC 422, COSC 423, COSC 424, COSC 425, COSC 426, COSC 429; CHEM 132&133/138; ECE 256; ECE 351, ECE 414; EF 203, 303; IE 405; MSE 201/207, MSE 410, MSE 460; ME 231, ME 321, ME 331; NE 342 or NE 347, Physics 250.

Economic, Entrepreneurship, and Innovation Elective: Choose from IE 405, IE 457 (or ME 457), IE 518, IE 557 (or ME 519) MGT 552 or MGT 560.

*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) are invited to apply during the summer to the
head of the EECS department for permission to take a proficiency exam for COSC 101. 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.

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.