Department of Electrical Engineering and Computer Science
Computer Science Catalog 2019

Fall 15 hours	**CS 102 (4) FA, SP, SU*** Coreq- Math 141 or 147	**Math 141 or 147 (4) FA, SP, SU** Prereq- Math 130 or Math ACT 28 or Math SAT 630	**EF 151 or 157 (4) FA, SP** Coreq- Math 141 or 147	**English 101/118 or 198 or 131 (3) FA, SP, SU** 101 Regular; 118 Honors; 198 Chancellor Honors Only; 131 English as Second Language		
Spring 15 hours	**CS 130 (4) FA, SP, SU** (formerly CS 160) Prereq- CS 102	**Math 142 or 148 (4) FA, SP, SU** Prereq- Math 141 or 147	**EF 152 or 158 (4) FA, SP, SU** Coreq- Math 142 or 148	**English 102 or 290 or 298 or 132 (3) FA, SP, SU** 102 Prereq 101 or 118; 290 Prereq AP 101 credit 298 Prereq Chancellor Honors only & 198; 132 Prereq 131 ESL		
Fall 13-14 hours	**CS 140 (4) FA, SP** Prereq- CS 130 (formerly CS 160)	**Gen. Ed. (3) FA, SP, SU** Cultures and Civilizations	**Math 251 or 257 (3) FA, SP, SU** Prereq- Math 142 or 148	**Biology 101 or 150/158 (3-4) FA,SP** **Chemistry 100 or 120/128 (4) FA, SP, SU** **or Physics 231 (3) FA, SP, SU**		
Spring 16 hours	**CS 302 or 307 (4) FA, SP** Prereq- CS 140	**CS 311 or 317 (3) FA, SP** Prereq- CS 140 and Math 142 or 148	**ECE 313 or 317 (3) FA, SP** Prereq - Math 142 or 148	**Gen. Ed. (3) FA, SP, SU** Arts and Humanities	**Gen. Ed. (3) FA, SP, SU** Social Science	
Fall 16 hours	**CS 360 or 367 (4) FA, SP** Prereq- CS 130 and 302 or 307	**CS 312 (3) FA, SP** Prereq- CS 311	**CS 340 (3) FA, SP** Prereq- CS 302 or 307	**CS Upper Division Elective** (3) FA, SP, SU**	**General Elective (3) FA, SP, SU** Any course on the transcript not already used in the DARS audit.	
Spring 16 hours	**CS 361 (3) SP** Prereq- CS 360 or 367	**CS 365 (3) SP**	**CS 366 (3) SP** Prereq- CS 360 or 367	**CS 395 (1) SP** Prereq- CS 302 or 307	**CS Upper Division Elective** (3) FA, SP, SU**	**Gen. Ed. (3) FA, SP, SU** Cultures and Civilizations
Fall 14 hours	**CS 401 (2) FA** Prereq- CS 360	**CS Upper Division Elective **(3) FA, SP, SU**	**CS Upper Division Elective **(3) FA, SP, SU**	**English 355 or 360 (WC) (3) FA, SP, SU** Prereq- ENGL 102 or 118 For ENGL 360- Minimum student level junior	**Gen. Ed. (3) FA, SP, SU** Arts and Humanities	
Spring 15 hours	**CS 402 (3) (OC & WC) SP** Prereq- CS 401; English 102, 132, 290 or 298	**CS Upper Division Elective **(3) FA, SP, SU**	**CS Upper Division Elective **(3) FA, SP, SU**	**Gen. Ed. (3) FA, SP, SU** Social Science	**General Elective (3) FA, SP, SU** Any course not being used in DARS	

*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 102. The EECS department also gives credit in COSC 102 to students who receive a score of 5 on the computer science AP Exam.

The following list shows an acceptable set of electives that may be taken to statisfy the upper division electives for the CS major. The electives have been grouped into 7 suggested tracks. The tracks group related electives that a student may wish to take in order to achieve a level of expertise in the indicated area. However, it is not mandatory to take any track and students are free to mix and match courses from different tracks to fit their specific interests:
Theory: CS 440, 482; **Systems:** CS 452, 462, ECE 453, 462, 463**; Software:** CS 453, 461, 465; **Hardware:** ECE 256, 356, 455; **Scientific Computing:** CS 370/ 377, 471, 472, Math 231/237, 241/247; **Artificial Intelligence:** CS 420 or 427, 421, 425, ECE 471 **Cybersecurity:** CS 425/528, 434/534, 445/545, 466/566, 483/583, ECE 459/559, 462, 469/569, 471/571,
Computer Science 493 and 494 may be taken to satisfy the upper division electives. Up to two (2) Computer Science 5xx or Electrical Computer Engineering 5xx courses may count as upper division electives.

Progression
The department requires at least a C in every computer engineering, computer science, electrical engineering, and mathematics course used for the undergraduate degrees.

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.