

**Department of Electrical Engineering and Computer Science  
Computer Science Catalog 2017**

Fall 15-16 hours	<b>CS 102 (4) FA, SP, SU</b> Coreq- Math 141 or 147	<b>Math 141 or 147 (4) FA, SP, SU</b> Prereq- Math 130 or Math ACT 28 or Math SAT 630	<b>Physics 135/137 or EF 151/158 (4) FA</b> Coreq- Math 141 or 147	<b>English 101 or 118 (3) FA, SP, SU</b>		
Spring 15-16 hours	<b>CS 130 (4) FA, SP (formerly CS 160)</b> Prereq- CS 102	<b>Math 142 or 148 (4) FA, SP, SU</b> Prereq- Math 141 or 147	<b>Physics 136/138 or EF 152/158 (4) SP</b> Coreq- Math 142 or 148	<b>English 102 (3) FA, SP, SU</b> Prereq- English 101 or 118		
Fall 14-15 hours	<b>CS 140 (4) FA, SP</b> Prereq- CS 130 (formerly CS 160)	<b>Gen. Ed. (3) FA, SP, SU</b> Cultures and Civilizations	<b>Math 241 or 247 (4) FA, SP, SU</b> Prereq- Math 142 or 148	<b>Biology 101 or 150/158 FA,SP (3- 4)</b> <b>Chemistry 100 or 120/128 FA, SP, SU</b> <b>or Physics 231 FA, SP, SU</b>		
Spring 13 hours	<b>CS 302 or 307 (4) FA, SP</b> Prereq- CS 140	<b>CS 311 or 317 (3) FA, SP</b> Prereq- CS 140 and Math 142 or 148	<b>Math 251 or 257 (3) FA, SP, SU</b> Prereq- Math 142 or 148	<b>Gen. Ed. (3) FA, SP, SU</b> Arts and Humanities		
Fall 16 hours	<b>CS 360 or 367 (4) FA, SP</b> Prereq- CS 130 and 302 or 307	<b>CS 312 (3) FA, SP</b> Prereq- CS 311	<b>CS Upper Division Elective** (3) FA, SP, SU</b>	<b>ECE 313 (3) FA, SP</b> Prereq - Math 142 or 148	<b>Gen. Ed. (3) FA, SP, SU</b> Social Science	
Spring 15 hours	<b>CS 340 (3) SP</b> Prereq- CS 302 or 307	<b>CS 361 (3) SP</b> Prereq- CS 130 and 302 or 307	<b>CS Upper Division Elective** (3) FA, SP, SU</b>	<b>Gen. Ed. (3) FA, SP, SU</b> Cultures and Civilizations	<b>General Elective (3) FA, SP, SU</b> Any course on the transcript not already used in the DARS audit.	
Fall 17 hours	<b>CS 401 (2)</b> Prereq- CS 360	<b>CS Upper Division Elective ** (3) FA, SP, SU</b>	<b>CS Upper Division Elective ** (3) FA, SP, SU</b>	<b>CS Upper Division Elective ** (3) FA, SP, SU</b>	<b>English 355 or 360 (WC) (3) FA, SP, SU</b> Prereq- ENGL 102 or 118 For ENGL 360- Minimum student level junior	<b>Gen. Ed. (3) FA, SP, SU</b> Arts and Humanities
Spring 15 hours	<b>CS 402 (3) SP (OC &amp; WC)</b> Prereq- CS 401	<b>CS Upper Division Elective ** (3) FA, SP, SU</b>	<b>CS Upper Division Elective ** (3) FA, SP, SU</b>	<b>Gen. Ed. (3) FA, SP, SU</b> Social Science	<b>General Elective (3) FA, SP, SU</b> Any course not being used in DARS	

The following list shows an acceptable set of electives that may be taken to satisfy 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 456, 462, ECE 453, 461, 462, 463; **Software:** CS 365, 461, 465; **Hardware:** ECE 451, 455; **Scientific Computing:** CS 370 or 377, 471, 472, Math 231 or 237; **Artificial Intelligence:** CS 420 or 427, 425, ECE 471  
**Cybersecurity:** CS 425/528, 434/534, 445/545, 466/566, 483/583, ECE 459/559, 461/462, 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.

**UTRACK Milestones:**

Term 1	Term 2	Term 3	Term 4	Term 5	Term 6 through 8
Math 130 or higher or one SS or one AH or one CC	Math 130 or higher	EF 151/157 or Physics 135/137	EF 152/158 or Physics 136/138	ME 202 or CS 102 or MSE 201 or CBE 201	No Milestones