

**Computer Science: Software Systems, B.S. (with Minor)**

[Please refer to the Undergraduate Catalog for further program requirements and course descriptions.](#)

<b>First Year – 29-34 Hours</b>			
<b>Fall Semester:</b>	<b>Hrs</b>	<b>Spring Semester:</b>	<b>Hrs</b>
CPSC 1100: <i>Fundamentals of Computer Science</i>	4	CPSC 1110: <i>Data Structures and Program Design</i>	4
MATH 1830: <i>Calculus for Mgmt, Life, and Social Sciences</i> or MATH 1950: <i>Calculus w/ Analytic Geometry I</i> (Quantitative Reasoning)	3-4	ENCE 2220: <i>Probability and Statistics for Engineering</i> , MATH 2100: <i>Introductory Statistics</i> , or MGT 2130: <i>Statistics for Business</i> (Quantitative Reasoning)	3
Writing and Communciation (ENGL 1010 or 1011)	3-4	Writing and Communciation (ENGL 1020)	3
Humanities and Fine Arts	3-4	Humanities and Fine Arts	3-4
Elective	0-1	Behavioral and Social Science	3
	13-17		16-17
<b>Second Year – 32 Hours</b>			
<b>Fall Semester:</b>	<b>Hrs</b>	<b>Spring Semester:</b>	<b>Hrs</b>
CPSC 2800: <i>Introduction to Operating Systems</i>	3	CPSC 2100: <i>Software Design and Development</i>	3
MATH 2030: <i>Discrete Math for Computer Science</i> or MATH 3000: <i>Introduction to Logic and Proof</i>	3	MATH 2200: <i>Elementary Linear Algebra</i>	3
Natural Science with Lab Sequence	4	Natural Science with Lab Sequence	4
Minor Course	3	Minor Course	3
Behavioral and Social Science	3	Minor Course	3
	16		16
<b>Third Year – 32-34 Hours</b>			
<b>Fall Semester:</b>	<b>Hrs</b>	<b>Spring Semester:</b>	<b>Hrs</b>
CPEN 3700: <i>Digital Logic and Introduction to Computer Hardware</i>	4	CPSC 3200: <i>Algorithm Analysis and Advanced Data Structure</i>	3
CPSC 3610: <i>Ethical and Social Issues in Computing</i> (Humanities and Fine Arts)	3	Approved CPSC or Technical Elective (3000-4000 Level)**	3
MGT 2140: <i>Data Modeling for Business</i> , or Math elective above MATH 1830/1950, or Statistics Elective above MATH 2100)*	3	Natural Science with Lab	4
Approved CPSC or Technical Elective (3000-4000 Level)**	3	Humanities and Fine Arts	3-4
Minor Course (3000-4000 Level)	3	Individual and Global Citizenship	3-4
	16		16-18
<b>Fourth Year – 24-26 Hours</b>			
<b>Fall Semester:</b>	<b>Hrs</b>	<b>Spring Semester:</b>	<b>Hrs</b>
CPEN 4700: <i>Computer Architecture</i>	3	CPSC 4100: <i>Survey of Programming Languages</i>	3
CPSC 4900: <i>Software Engineering</i>	3	CPSC 4910: <i>Senior Capstone</i> or CPSC 4995r: <i>Thesis</i>	3
Approved CPSC or Technical Elective (3000-4000 Level)**	3	Minor Course (3000-4000 Level)	3
Minor Course (3000-4000 Level)	3	Natural Science without Lab	3
Elective	0-2		
	12-14		12

\*Additional courses may be required to meet prerequisite course selected. Consult Catalog and advisor.

\*\*If Business Administration Minor, then CPSC 1000, CPSC 3220 and CPSC 4270 are required.

<b>Completed:</b>	<b>Hrs</b>	<b>Degree Requirements:</b>	<b>Hrs</b>
120 Total Hours		31-36 General Education Hours	
39 Upper Division (3000-4000) Hours		68-69 Program (Major) Hours	
30 Hours at UTC		18 Minor Hours	
45 Hours at 4-year Institution		0-3 Elective Hours	
		Foreign Language ( <i>Not Required</i> )	