CLEAR PATH for ADVISING – Computer Science: STEM Education, B.S.

Please refer to the Undergraduate Catalog for further program requirements and course descriptions.

First Year – 32-33 Hours			
Fall Semester:	Hrs	Spring Semester:	Hrs
CPSC 1100: Fundamentals of Computer Science	4	CPSC 1110: Data Structures and Program Design	4
MATH 1950: Calculus w Analytic Geometry I (Math)	4	MATH 1960: Calculus w Analytic Geometry II	4
Natural Science with Lab Sequence*	4	Natural Science with Lab Sequence*	4
ENGL 1010 or 1011 (Rhetoric and Writing I)	3-4	ENGL 1020 or HIST 2100 (Rhetoric and Writing II)	3
STEM 1030: Step One/Two: Inquiry-Based Math & Science Teaching	2		
	17-18		15
Second Year – 31 Hours			
Fall Semester:	Hrs	Spring Semester:	Hrs
STEM 2010: Knowing and Learning	3	STEM 2020: Classroom Interactions	3
CPSC 2800: Intro to Operating Systems	3	CPSC 2100: Software Design and Development	3
MATH 2200: Elementary Linear Algebra	3	MATH 2030: Discrete Math for Computer Science	3
Natural Science	3	Natural Science with Lab	4
FAH: Historical Understanding	3	FAH: Literature	3
	15		16
Third Year – 34 Hours			
Fall Semester:	Hrs	Spring Semester:	Hrs
STEM 3010: Perspectives on Science & Math	3	STEM 3020: Research Methods in Science	3
CPEN 3700: Digital Logic & Intro to Comp. Hardware	4	CPSC 3200: Algorithm Analysis & Adv. Data Structure	3
CPSC 3610: Ethical & Social Issues in Computing (FAH: Thought, Values and Beliefs)	3	MATH 3100: <i>Applied Statistics</i> or ENCE 2220: <i>Probability & Stats for Engineering</i> (Statistics)	
MATH 3000: Intro to Logic & Proof	3	Approved CPSC or Tech Elective (3000-4000 Level)	3
Approved CPSC or Tech Elective (3000-4000 Level)	3	FAH: Visual and Performing Arts	3
		Behavioral and Social Science	3
	16		18
Fourth Year – 31-39 Hours			
Fall Semester:	Hrs	Spring Semester:	Hrs
STEM 4010: Project-Based Instruction	3	STEM 4020r: Apprentice Teaching	6-12
CPSC 4100: Survey of Programming Languages	3	CPSC 4910r: Senior Capstone Proejct or 4995r: Thesis	1-3
CPEN 4700: Computer Architecture	3	Behavioral and Social Science	3
	1	Non-Western Culture	3
CPSC 4900: Software Engineering	3	Non-western Culture	
	3 3		
CPSC 4900: Software Engineering MATH 4010: Basic Concepts of Geometry EDUC 4170: Technology and Learning	-		

*Lab Science Sequence from: BIOL 1110/1110L and BIOL 1120/1120L; CHEM 1110/1110L and CHEM 1120/1120L; or GEOL 1110/1110L and GEOL 1120/1120L or PHYS 1030/1030L and PHYS 1040/1040L.

Completed:				
Graduation Requirements:	Hrs	Degree Requirements:	Hrs	
130 Total Hours		24-25 General Education Hours		
39 Upper Division (3000-4000) Hours*		104-112 Program (Major) Hours		
30 Hours at UTC		Minor (Not Required)		
60 Hours at 4-year Institution		Elective Hours (Not Required)		
		Foreign Language (Not Required)		