CLEAR PATH for ADVISING – *Computer Science: STEM Education, B.S.* 2020-2021

Please see the Courses section of this catalog for complete 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* or 3030: *Discrete Structures*	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: *Applied Statistics* or ENCE 2220: *Probability & Stats for Engineering* (Statistics)	3
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 – 33 Hours			
Fall Semester:	**Hrs**	***Spring Semester:***	**Hrs**
STEM 4010: *Project-Based Instruction*	3	STEM 4020: *Apprentice Teaching*	6
CPSC 4100: *Survey of Programming Languages*	3	CPSC 4910r: *Senior Capstone Proejct* or 4995r: *Thesis*	3
CPEN 4700: *Computer Architecture*	3	Behavioral and Social Science	3
CPSC 4900: *Software Engineering*	3	Non-Western Culture	3
MATH 4010: *Basic Concepts of Geometry*	3		
EDUC 4170: *Technology and Learning*	3		
	18		15

*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*		106 Program (Major) Hours	
30 Hours at UTC		Minor *(Not Required)*	
60 Hours at 4-year Institution		Elective Hours *(Not Required)*	
		Foreign Language *(Not Required)*	