CLEAR PATH for ADVISING – *Computer Science: Data Science, B.S.* 2021-2022

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

First Year – 31-32 Hours			
Fall Semester:	Hrs	*Spring Semester:*	Hrs
CPSC 1000: *Intro to Computing*	3	CPSC 1110: *Data Structures and Program Design*	4
CPSC 1100: *Fundamentals of Computer Science*	4	MATH 1960: *Calculus w Analytic Geometry II*	4
MATH 1950: *Calculus w Analytic Geometry I* (Math)	4	Behavioral and Social Science	3
ENGL 1010 or 1011 (Rhetoric and Writing I)	3-4	ENGL 1020 or HIST 2100 (Rhetoric and Writing II)	3
Behavioral and Social Science (ECON 1020 recommended)	3	FAH: Visual and Performing Arts	3
	17-18		14
Second Year – 32 Hours			
Fall Semester:	Hrs	*Spring Semester:*	Hrs
CPSC 2800: *Intro to Operating Systems*	3	CPSC 2100: *Software Design and Development*	3
MATH 3100: *Applied Statistics* (Statistics)	3	Approved CPSC or Tech Elective (3000-4000 Level)	3
Natural Science with Lab Sequence	4	MGT 2140: Data Modeling for Business	3
FAH: Historical Understanding	3	Natural Science with Lab Sequence	4
FAH: Literature	3	MATH 2030: *Discrete Math for Comp. Science,* 3030: *Discrete Structures,* or 3000: *Intro to Logic & Proof*	3
	16		16
Third Year – 32 Hours			
Fall Semester:	Hrs	*Spring Semester:*	Hrs
CPEN 3700: *Digital Logic & Intro to Comp. Hardware*	4	CPSC 3610: *Ethical & Social Issues in Computing* (FAH: Thought, Values and Beliefs)	3
MGT 3110: *Operations Mgmt,* 3560: *Mgmt Science,* or 4280: *Supply Chain Mgmt*	3	MGT 3110: *Operations Mgmt,* 3560: *Mgmt Science,* or 4280: *Supply Chain Mgmt*	3
CPSC 3220: *File & Data Processing*	3	CPSC 4240: *Principles of Data Analytics*	3
CPSC 3200: *Algorithm Analysis & Advanced Data Structure*	3	Natural Science with Lab	4
MATH 2200: *Elementary Linear Algebra*	3	CPSC 4430: *Intro to Machine Learning*	3
	16		16
Fourth Year – 27 Hours			
Fall Semester:	Hrs	*Spring Semester:*	Hrs
CPSC 4900: *Software Engineering*	3	CPSC 4910r: *Senior Capstone* or 4995r: *Thesis*	3
CPEN 4700: *Computer Architecture*	3	Approved CPSC or Tech Elective (3000-4000 Level)	3
CPSC 4180: *Programming Languages for Adv. Data*	3	CPSC 4530: *Data Visualization and Exploration*	3
Natural Science	3	CPSC 4100: *Survey of Programming Languages*	3
Non-Western Culture	3		
	12		15

Completed:			
Graduation Requirements:	Hrs	Degree Requirements:	Hrs
122 Total Hours		24-25 General Education Hours	
39 Upper Division (3000-4000) Hours		98 Program (Major) Hours	
30 Hours at UTC		Minor *(Not Required)*	
60 Hours at 4-year Institution		Elective Hours *(Not Required)*	
		Foreign Language *(Not Required)*	