## CLEAR PATH for ADVISING – Computer Science: Data Science, B.S.

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

First Year – 34-35 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		17
Second Year – 29 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	Natural Science with Lab Sequence	3
FAH: Historical Understanding	3	MATH 2030: Discrete Math for Comp. Science or 3000: Intro to Logic & Proof	4
FAH: Literature	3		
	16		13
Third Year – 32 Hours	-		
Fall Semester:	Hrs	Spring Semester:	Hrs
CPEN 3700: Digital Logic & Intro to Comp. Hardware	4	CPSC 3610: <i>Ethical &amp; Social Issues in Computing</i> (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 4910: 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		
	15		12

Completed:				
Graduation Requirements:	Hrs	Degree Requirements:	Hrs	
122 Total Hours		31-32 General Education Hours		
39 Upper Division (3000-4000) Hours		91 Program (Major) Hours		
30 Hours at UTC		Minor (Not Required)		
60 Hours at 4-year Institution		Elective Hours (Not Required)		
		Foreign Language (Not Required)		