Bachelor of Science — **Computational Data Science 2021-2022**

Prep Courses	Year 1		Year 2		Year 3		Year 4	
	Fall-18 hrs	Spring-16 hrs	Fall-15 hrs	Spring-16 hrs	Fall-15 hrs	Spring-15 hrs	Fall-15 hrs	Spring-13 hrs
See Advisor for evaluation of English & Math placement scores.	CS 1400 * Fundamentals of Programming	CS 1410 * Object-Oriented Programming	CS 2300 * Discrete Math I	CS 3520 Database Theory	CS 3530 Data Mgmt for Data Sciences	CS 3800 Data Science thru Stat Reasoning	CS 3810 Applied Data Sciences	CS 305G Global Social & Ethical Issues
	ENGL 1010 Introduction to Writing	ENGL 2010 Intermediate Writing	CS 2420 * Intro to Algorithims & Data Structures	ECE 3710 Probability & Stats for Engineers	CS 3270 Python Software Dev	CS 3320 Numerical Software Dev	CS 4700 Machine Learning I	CS 4710 Machine Learning II
See Advisor for to get a class and information on pre-requisite courses required to begin taking CS courses	MATH 1210 * Calculus 1	Math 1220 Calculus II	Math 2210 Calculus III	Math 2270 Linear Algebra	CS 3100 Data Privacy & Security	CS 3820 Visualization Analytics for Data Science	CDS Elective See note below	CS 4800 Data Science Capstone
	STAT 2050 Intro to Statistal Methods	PHYS 2210 & 2215 Physics for Scientist and Engineers and Lab	Biology Gen Ed (See Wolverine Track)	PES 1097 or HLTH 1100 (General Education)	CDS Elective See not below	CDS Elective See note below	Comm 1020 & 1025 (General Education)	EDS Elective See note below
			American Institutions (See Wolverine Track)	Third Science (See Wolverine Track)	COMM 2110 (General Education)	Fine Arts Gen Ed (See Wolverine Track)	PHIL 2050 Ethics & Values	CS 496R Senior Seminar

CS Exit Survey

Notes

CDS Electives: Four courses from another discipline, at least 6 credits of which must be 3000 or 4000 level or higher. Requires department approval.

Third Science: Choose from one of the following combinations: BIOL 1610/1615; CHEM 1210/1215, GEO 1010/1015/202R; PHYS 2020/2025; PHYS 2220/2225

Must have a minimum grade of C- with a combined GPA of 2.5 or higher in all discipline requirements

Complete CS Exit Survey graduating semester