

Data Science B.S Degree -- Suggested 4-year Plans

Track A: Students who start with CS 1400 and Pre-Calculus

	FALL Semester		SPRING Semester	
Freshman Year (35 credits)	CS 1400: Intro to Comp Programming	4	CS 1410: Intro to Object-Oriented Prog	4
	MATH 1080: Pre-Calculus	5	MATH 1310: Engineering Calculus 1 ■ Gen Ed	4
	Gen Ed	3	Ed	3
	Gen Ed	3	Gen Ed	3
Sophomore Year (28 credits)	CS 2420: Intro to Algs & Data Structures	4	DS 2500: Data Wrangling	3
	MATH 1320: Engineering Calculus 2 ■ Data	4	CS 3500: Software Practice 1	4
	Domain Elective ◉	3	CS 2100: Discrete Structures	3
	WRTG 3014 or 3015	3	MATH 2270: Linear Algebra	4
Junior Year (25 credits)	CS 4150: Algorithms	3	DS 4140: Data Mining	3
	DS 3190: Foundations of Data Analysis	3	DS 4530: Database Systems	3
	DS 3390: Ethics in Data Science	3	Data Analysis Breadth Elective ◉	3
	MATH 3070: Applied Statistics 1	4	MATH 3080: Applied Statistics 2	3
Senior Year (30 credits)	DS 4800: Senior Capstone Design ••	3	DS 4850: Senior Capstone Project ••	3
	DS 4630: Visualization for Data Science	3	DS 4350: Machine Learning Data	3
	Data Analysis Breadth Elective ◉	3	Analysis Breadth Elective ◉ Data	3
	Data Domain Elective ◉ Gen Ed	3	Domain Elective ◉	3
118 credits total	Ed		Gen Ed	

Track B: Students who start with CS 1420 and Calculus 1

	FALL Semester		SPRING Semester	
Freshman Year (34 credits)	CS 1420: Accel Object Oriented Prog	4	CS 2420: Intro to Algs & Data Structures	4
	MATH 1310: Engineering Calculus 1 ■	4	MATH 1320: Engineering Calculus 2 ■	4
	Gen Ed	3	Gen Ed	3
	Gen Ed	3	Gen Ed	3
	Gen Ed	3	Gen Ed	3
Sophomore Year (26 credits)	CS 3500: Software Practice 1	4	DS 2500: Data Wrangling	3
	CS 2100: Discrete Structures	3	CS 4140: Data Mining	3
	MATH 2270: Linear Algebra	4	CS 4150: Algorithms	3
	Gen Ed	3	Gen Ed	3
Junior Year (25 credits)	DS 3190: Foundations of Data Analysis	3	DS 4530: Database Systems	3
	DS 3390: Ethics in Data Science	3	MATH 3080: Applied Statistics 2	3
	MATH 3070: Applied Statistics 1	4	Data Analysis Breadth Elective ◉	3
	WRTG 3014 or 3015	3	Data Domain Elective ◉	3
Senior Year (24 credits)	DS 4800: Senior Capstone Design ••	3	DS 4850: Senior Capstone Project ••	3
	DS 4630: Visualization for Data Science	3	DS 4350: Machine Learning	3
	Data Analysis Breadth Elective ◉	3	Data Analysis Breadth Elective ◉	3
	Data Domain Elective ◉	3	Data Domain Elective ◉	3
109 credits total				

■ MATH 1210 and MATH 1220 also accepted

• DS 4940 and 4970 (thesis) also accepted

• Students pursuing Honors and choosing the project must take CS 4998 concurrently with DS 4850 to satisfy the Honors Thesis Work. Honors students pursuing the thesis must take CS 4999 (instead of CS 4970). Updated Summer 2023.