Data Science B.S. Degree — Suggested 4.5-year Plans

Track A: Students who start with CS 1420 and Calculus I.

	FALL semester		SPRING semester	
Freshman year **(28 credits)**	CS 1420: Accelerated Object-Oriented Prog MATH 1210: Calculus I† WRTG 2010: Intermediate Writing† Gen Ed†	4 4 3 3	CS 2420: Intro to Algs & Data Structures MATH 1220: Calculus II† American Institutions (AI)† Gen Ed†	4 4 3 3
Sophomore year **(26 credits)**	CS 2100: Discrete Mathematics CS 3500: Software Practice I MATH 2270: Linear Algebra Gen Ed†	3 4 4 3	CS 4150: Algorithms DS 2500: Data Wrangling Data Domain Elective Gen Ed (DV)†	3 3 3 3
Junior year **(26 credits)**	DS 3190: Foundations of Data Analysis DS 3390: Ethics in Data Science Math 3070: Applied Statistics I Gen Ed (IR)†	3 3 4 3	DS 4140: Data Mining DS 3941: Data Science Seminar MATH 3080: Applied Statistics II Data Domain Free Elective, if needed	3 1 3 3 3
Senior year **(27 credits)**	WRTG 3014 or 3015† DS 4350: Machine Learning DS 4630: Visualization for Data Science Data Domain Free Elective, if needed	3 3 3 3 3	DS 4800 (Project)‡ or DS 4940 (Thesis) DS 4530: Database Systems Data Analysis Free Elective, if needed	3 3 3 3
Fifth year **(15 credits)** **122 credits total**	DS 4850 (Project)‡ or DS 4970 (Thesis)◁ Data Analysis Data Analysis Free Elective, if needed Free Elective, if needed	3 3 3 3 3		

Track B: Students who start with CS 1400.

	FALL semester		SPRING semester	
Freshman year **(27 credits)**	CS 1400: Intro to Computer Programming MATH 1050: College Algebra WRTG 2010: Intermediate Writing† Gen Ed†	4 4 3 3	CS 1410: Intro to Object-Oriented Prog MATH 1060: Trigonometry American Institutions (AI)† Gen Ed†	4 3 3 3
Sophomore year **(28 credits)**	CS 2420: Intro to Algs & Data Structures MATH 1210: Calculus I† Gen Ed† Gen Ed (DV)†	4 4 3 3	DS 2500: Data Wrangling CS 3500: Software Practice I MATH 1220: Calculus II† Gen Ed (IR)†	3 4 4 3
Junior year **(24 credits)**	CS 2100: Discrete Mathematics MATH 2270: Linear Algebra DS 3390: Ethics in Data Science Data Domain	3 3 3 3	CS 4150: Algorithms DS 4530: Database Systems Data Analysis Elective WRTG 3014 or 3015†	3 3 3 3
Senior year **(28 credits)**	MATH 3070: Applied Statistics I DS 3190: Foundations of Data Analysis DS 4630: Visualization for Data Science DS 3941: Data Science Seminar Free Elective, if needed	3 3 3 1 3	MATH 3080: Applied Statistics II DS 4800 (Project)‡ or DS 4940 (Thesis) DS 4140: Data Mining Data Analysis Free Elective, if needed	3 3 3 3 3
Fifth year **(16 credits)** **123 credits total**	DS 4850 (Project)‡ or DS 4970 (Thesis)◁ DS 4350: Machine Learning Data Analysis Data Domain Free Elective, if needed	3 3 3 3 3		

† Honors options available, see https://honors.utah.edu/ for details.

‡ Project Students pursuing the Honors degree must take DS 4998 concurrently with DS 4800 to satisfy the Honors Thesis Work.

◁ Thesis Students pursuing the Honors degree must take DS 4999 (instead of DS 4970) to satisfy the Honors Thesis Work.