B.S. in Data Science 2024-25

For students starting with CS 1400 and Pre-Calculus

Year 1

Fall (15)

CS 1400 Intro to Computer Programming — 4 — FA/SP

MATH 1080 Pre-Calculus — 5 — FA/SP/SU

General Education (AI) ✓ — 3 — FA/SP/SU

General Education (BF) ✓ ◓ — 3 — FA/SP/SU

Spring (17)

CS 1410 Object-Oriented Programming — 4 — FA/SP

co-reqs

MATH 1310 Engineering Calculus 1 ✓ ▪ — 4 — FA/SP

General Education (WRTG 2010) ✓ — 3 — FA/SP/SU

General Education (PS) ✓ ◓ — 3 — FA/SP/SU

General Education (LS) ✓ ◓ — 3 — FA/SP/SU

Year 2

Fall (17)

CS 2420 Algorithms & Data Structures — 4 — FA/SP/SU

co-reqs

MATH 1320 Engineering Calculus 2 ✓ ▪ — 4 — FA/SP/SU

Data Domain Elective ⊙ — 3 — FA/SP/SU

General Education (FF) ✓ ◓ — 3 — FA/SP/SU

WRTG 3014 or 3015 ✓ Scientific or Professional Writing — 3 — FA/SP/SU

pre-req WRTG 2010

Spring (14)

Ready to apply to the program? Access the application link located in the Student Handbook!

MATH 2200 also accepted

CS 2100 Discrete Structures — 3 — FA/SP

CS 3500 Software Practice 1 — 4 — FA/SP

DS 2500 Data Wrangling — 3 — SP

MATH 2270 Linear Algebra — 4 — FA/SP/SU

Year 3

Fall (13)

CS 4150 Algorithms — 3 — FA/SP

DS 3190 Foundations of Data Analysis — 3 — FA

DS 3390 Ethics in Data Science — 3 — FA

MATH 3070 Applied Statistics 1 ✳ — 4 — FA/SP/SU

Spring (13)

DS 4140 Data Mining — 3 — SP

DS 4530 Database Systems — 3 — SP

Data Analysis Breadth Elec. ⊙ — 3 — FA/SP/SU

MATH 3080 Applied Statistics 2 — 4 — SP

Year 4

Fall (13)

DS 4800 Senior Capstone Design ☾ — 3 — FA/SP

OR

DS 4940 Undergraduate Research ☾ — 3 — FA/SP

DS 4630 Visualization of Data Science — 3 — FA

Data Analysis Breadth Elec. ⊙ — 3 — FA/SP/SU

Data Domain Elective ⊙ — 3 — FA/SP/SU

DS 3941 Data Science Seminar — 1 — FA

Spring (15)

DS 4850 Senior Capstone Project ☾ — 3 — FA/SP

OR

DS 4970 Bachelors Thesis ☾ — 3 — FA/SP

DS 4350 Machine Learning — 3 — FA/SP

Data Analysis Breadth Elec. ⊙ — 3 — FA/SP/SU

Data Domain Elective ⊙ — 3 — FA/SP/SU

General Education (HF) ✓ ◓ — 3 — FA/SP/SU

gray = Pre-Major Courses

117 credit hours total

122 credit hours required for graduation

- ▪ MATH 1210 and MATH 1220 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 DS 4970)
- ⊙ For Data Analysis Breadth and Data Domain Electives see https://handbook.cs.utah.edu/2023-2024/DS/
- ✳ CS 3130 or ECE 3530 also accepted
- ◓ DV & IR reqs. can be combined w/HF/FF/BF/LS/PS
- ✓ Honors options available

B.S. in Data Science 2024-25

For students starting with CS 1420 and Calculus 1

Year 1

Fall (17)

CS 1420 Accel Object Oriented Prog — 4 — FA/SP

co-reqs

MATH 1310 ✓▪ Engineering Calculus 1 — 4 — FA/SP

General Education (FF) ✓◓ — 3 — FA/SP/SU

General Education (AI) ✓ — 3 — FA/SP/SU

General Education (LS) ✓◓ — 3 — FA/SP/SU

Spring (14)

CS 2420 Intro Algorithms & Data Structures — 4 — FA/SP/SU

co-reqs

MATH 1320 ✓▪ Engineering Calculus 2 — 4 — FA/SP/SU

General Education (WRTG 2010) ✓ — 3 — FA/SP/SU

General Education (BF) ✓◓ — 3 — FA/SP/SU

Ready to apply to the program? Access the application link located in the Student Handbook!

Year 2

Fall (14)

CS 3500 Software Practice 1 — 4 — FA/SP

MATH 2200 also accepted

CS 2100 Discrete Structures — 3 — FA/SP

MATH 2270 Linear Algebra — 4 — FA/SP/SU

General Education (HF) ✓◓ — 3 — FA/SP/SU

Spring (12)

DS 2500 Data Wrangling — 3 — SP

CS 4150 Algorithms — 3 — FA/SP

DS 4530 Database Systems — 3 — SP

General Education (PS) ✓◓ — 3 — FA/SP/SU

Year 3

Fall (13)

DS 3190 Foundations of Data Analysis — 3 — FA

DS 3390 Ethics in Data Science — 3 — FA

MATH 3070 ✳ Applied Statistics 1 — 4 — FA/SP/SU

WRTG 3014 or 3015 ✓ Scientific or Professional Writing — 3 — FA/SP/SU

pre-req WRTG 2010

Spring (13)

DS 4140 Data Mining — 3 — SP

Data Analysis Breadth Elec. ⊙ — 3 — FA/SP/SU

MATH 3080 Applied Statistics 2 — 4 — SP

Data Domain Elective ⊙ — 3 — FA/SP/SU

Year 4

Fall (13)

DS 4800 ☾ Senior Capstone Design — 3 — FA/SP

OR

DS 4940 ☾ Undergraduate Research — 3 — FA/SP

DS 4630 Visualization for Data Science — 3 — FA

Data Analysis Breadth Elec. ⊙ — 3 — FA/SP/SU

Data Domain Elective ⊙ — 3 — FA/SP/SU

DS 3941 Data Science Seminar — 1 — FA

Spring (12)

DS 4850 ☾ Senior Capstone Project — 3 — FA/SP

OR

DS 4970 ☾ Bachelors Thesis — 3 — FA/SP

DS 4350 Machine Learning — 3 — FA/SP

Data Analysis Breadth Elec. ⊙ — 3 — FA/SP/SU

Data Domain Elective ⊙ — 3 — FA/SP/SU

gray = Pre-Major Courses

108 credit hours total

122 credit hours required for graduation

- ▪ MATH 1210 and MATH 1220 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 DS 4970)
- ⊙ See https://handbook.cs.utah.edu/2023-2024/DS/ for Data Analysis Breadth and Data Domain Elective options
- ✳ CS 3130 or ECE 3530 also accepted
- ◓ DV & IR requirements can be combined with HF/FF/BF/LS/PS electives
- ✓ Honors options available