B.S. in Data Science 2022-23

For students starting with CS 1400 and Pre-Calculus

Year 1		Year 2		Year 3		Year 4	
Fall (18)	Spring (17)	Fall (17)	Spring (14)	Fall (13)	Spring (13)	Fall (15)	Spring (12)

Year 1 — Fall (18)

- **CS 1400** — Intro to Computer Programming — 4 — FA/SP *(Pre-Major)*
- **MATH 1080** — Pre-Calculus — 5 — FA/SP/SU
- **General Education (AI)** ✓ — 3 — FA/SP/SU
- **General Education (BF)** ✓☛ — 3 — FA/SP/SU
- **General Education (HF)** ✓☛ — 3 — FA/SP/SU

Year 1 — Spring (17)

- **CS 1410** — Object-Oriented Programming — 4 — FA/SP *(Pre-Major)*
- **MATH 1310** — Engineering Calculus 1 — 4 — FA/SP ✓■ *(Pre-Major)*
- **General Education (WRTG 2010)** ✓ — 3 — FA/SP/SU
- **General Education (FF)** ✓☛ — 3 — FA/SP/SU
- **General Education (HF)** ✓☛ — 3 — FA/SP/SU

co-reqs (between CS 1410 and MATH 1310)

Year 2 — Fall (17)

- **CS 2420** — Algorithms & Data Structures — 4 — FA/SP/SU *(Pre-Major)*
- **MATH 1320** — Engineering Calculus 2 — 4 — FA/SP/SU ✓■ *(Pre-Major)*
- **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*

co-reqs (between CS 2420 and MATH 1320)

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

Year 2 — Spring (14)

- **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 ✳

Year 3 — 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 (15)

- **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
- **General Education (BF)** ✓☛ — 3 — FA/SP/SU

Year 4 — 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

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gray = Pre-Major Courses

119 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 CS 4970)
- ⊙ For Data Analysis Breadth and Data Domain Electives see https://www.cs.utah.edu/datascience/bs-in-data-science/
- ✳ CS 3130 or ECE 3530 also accepted
- ☛ DV and IR requirements can be combined with HF/FF/BF
- ✓ Honors options available