Data Science, B.S.

Program Learning Outcomes for B.S. in Data Science.

Students pursuing the B.S. in Data Science are required to:

- Earn an overall GPA of 2.500 for all required lower-division major courses.
- Earn an overall GPA of 2.000 for all required major courses.
- Complete all courses in the major for a letter grade of "C-" or higher, except those where the default grading option is P/NP.
- Complete a minimum of 21 credits from upper division courses in the major.

Majors are required to enroll in FFC 100B - First Year Foundations: Grand Challenges in Science and Engineering to satisfy their General Education requirement.

Grand Challenges Initiative (3 credits)

- GCI 150 - Grand Challenges in Science and Engineering I **1 credit**
- GCI 200 - Grand Challenges in Science and Engineering II **1 credit**
- GCI 250 - Grand Challenges in Science and Engineering III **1 credit**

lower-division requirements (27 credits)

- ENGR 101 - Foundations of Design and Fabrication **3 credits**
- MATH 110 - Single Variable Calculus I **3 credits**
- ECON 200 - Principles of Microeconomics **3 credits**
- MATH 203 - Introduction to Statistics **3 credits**
- MGSC 220 - Foundations of Business Analytics **3 credits**
- CPSC 230 - Computer Science I **3 credits**
- CPSC 231 - Computer Science II **3 credits**
- CPSC 285 - Social and Ethical Issues in Computing **3 credits**
- CPSC 293 - Mathematical Foundations of Machine Learning **3 credits**

colloquium requirement (6 credits)

Students must complete six 1-credit sections of CPSC 298 - Computer Science Colloquium.

upper-division requirements (30 credits)

- MGSC 310 - Statistical Models in Business Analytics **3 credits**
- CPSC 349 - Human Factors **3 credits**
- CPSC 350 - Data Structures and Algorithms **3 credits**
- CPSC 353 - Data Communications and Computer Networks **3 credits**
- CPSC 355 - Human Computer Interaction **3 credits**
- CPSC 390 - Artificial Intelligence **3 credits**
- CPSC 392 - Introduction to Data Science **3 credits**
- CPSC 393 - Machine Learning **3 credits**
- CPSC 408 - Database Management **3 credits**
- MGSC 410 - Applied Business Analytics **3 credits**

electives (9 credits)

three of the following

- MATH 303 - Biostatistics **3 credits**
- ENV 310 - Geographic Information Systems, Lecture and Laboratory **4 credits**
- CPSC 358 - Assistive Technology **3 credits**
- CPSC 359 - Computer-Supported Cooperative Work **3 credits**
- MATH 360 - Probability Theory **3 credits**
- MATH 361 - Mathematical Statistics **3 credits**
- ISP 363 - Cybersecurity 1 **3 credits**
- MGSC 406 - Advanced Experimental Design and Statistics **3 credits**
- CPSC 430 - Computational Economics **4 credits**
- CPSC 435 - BioMedical Informatics **3 credits**
- CPSC 445 - High Performance Computing **3 credits**
- ECON 452 - Econometrics **3 credits**
- CPSC 458 - Web Engineering **3 credits**
- MGSC 496 - Special Topics in Management Science **3 credits** (Applied Analytics and Decision Making)

total credits 75

Data Science, B.S. Suggested 4-year Plan

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