

Data Science

BS Data Science program mission

The mission of the program for a BS in Data Science is to equip our students with the necessary digital skills of gathering, analyzing, visualizing, and utilizing data for decision making by providing multidisciplinary, collaborative, active experiences to undergraduate students and professionals.

Bachelor of Science with a Major in Data Science

Data science is its own integrated, multidisciplinary, professional field. The Data Science Major is an effort to equip our students with the necessary digital skills of gathering, analyzing, modeling, visualizing, and utilizing data that can enhance not only traditional students' careers, but careers of professionals who want to update or move into this vital and growing area of knowledge. Our program offers a cross-disciplined approach, meeting industry demand with program flexibility. By working with other departments to develop a complementary program, the Data Science Major provides opportunities to gain marketable skills in other areas of industry.

Required Core

CSCI 111 or CSCI 160	Introductory Programming and Big Data Computer Science I	4
MATH 146 or MATH 165 & MATH 166	Applied Calculus Calculus I and Calculus II	3
MATH 208	Discrete Mathematics I	4
DATA 211 or MATH 210	Applied Statistics and Data Visualization Elementary Statistics	4
DATA 347	Data Analytics and Visualization	3
DATA 240	Programming for Data Science	4
MATH 305	Linear Algebra	4
CSCI 356 or CIS 454	Database Management Data and Information Management	4
CIS 453 or CSCI 497	Systems Analysis Internship	3
SOC 278 or DATA 350	Social Research Methods Project Design and Techniques	3
MATH 445	Probability and Statistics	4
MATH 446	Applied Statistics	4
CSCI 456	Machine Learning, Data Mining, and Artificial Intelligence	4
DATA 491	Data Science Capstone I	2
DATA 494	Data Science Capstone II	2

General Education and Electives**

68

Complete your major with general education courses and combinations of minors, certificates, and/or concentrations. **Up to 69 hours may be needed to reach the 120 total hours required to earn a degree.

Total Hours

120

Data Science Minor

Data science is its own integrated, multidisciplinary, professional field. The Data Science Minor program is an effort to equip our students with the necessary digital skills of gathering, analyzing, visualizing, and utilizing data that can enhance not only traditional students' careers, but careers of professionals who want to update or move into this vital and growing area of knowledge.

CSCI 111 or CSCI 160	Introductory Programming and Big Data Computer Science I	4
DATA 211 or MATH 210	Applied Statistics and Data Visualization Elementary Statistics	4
DATA 240	Programming for Data Science	4
DATA 347	Data Analytics and Visualization	3

CSCI 356	Database Management	4
or CIS 454	Data and Information Management	
Total		18-19

Applied Artificial Intelligence Minor

The undergraduate minor in Applied Artificial Intelligence provides students with the knowledge, tools and ethical awareness necessary to understand and responsibly apply AI in academic, professional, and personal context.

This minor is designed to be accessible to students of any major, with no prior AI or programming experience required. It will explore the fundamentals of AI, its diverse applications, and its implications across disciplines. Students will gain hands on experience with online tools, investigate its role in career and academic pathways, and develop a project tailored to their interests and career aspirations. Additionally, it augments student skills in programming and modeling in relation to artificial intelligence.

Required Course

AI 101	AI Everywhere & For Everyone	3
AI 201	AI for Personal and Professional Use	3
AI 301	Projects in AI	3
CSCI 111	Introductory Programming and Big Data	4
DATA 240	Programming for Data Science	4
Total Hours		17