DATA SCIENCE - MASTER OF SCIENCE

Online (Code 181-801)

The multidisciplinary field of data science is one of the fastest growing professions and academic disciplines in the 21st century. The curriculum of this fully online, professional degree program focuses primarily on working adults and nontraditional students who desire to continue their education, primarily to expand their knowledge and specialized skills in this area for career advancement.

The program prepares the student to derive insights from real-world datasets—both structured and unstructured—using the latest data science tools and analytical methods, and to interpret and communicate data science findings effectively. It features a multidisciplinary curriculum that draws primarily from computer science, mathematics and statistics, management, and communication. This program consists of a fixed curriculum comprising 36 online credits that include a required capstone course, which represents the culminating experience.

Requirements for Admission to the Master of Science in Data Science Program:

1. A bachelor’s degree from a regionally accredited college or university;
2. An undergraduate course in elementary statistics;
3. Either undergraduate coursework or prior work experience providing a foundational understanding of both programming concepts and databases.

The 12 three-credit graduate courses required for the program include:

- DS 700 Foundations of Data Science
- DS 705 Statistical Methods
- DS 710 Programming for Data Science
- DS 715 Data Warehousing
- DS 730 Big Data: High Performance Computing
- DS 735 Communicating about Data
- DS 740 Data Mining
- DS 745 Visualization and Unstructured Data Analysis
- DS 760 Ethics of Data Science
- DS 775 Prescriptive Analytics
- DS 780 Data Science and Strategic Decision Making
- DS 785 Data Science Capstone

Graduates will leave the program with expertise in a number of specialized areas, including: data mining and warehousing, predictive analytics, statistical modeling, database infrastructures and data management, machine learning, and analytics-based decision making.