INFORMATION SYSTEMS, MS DATA SCIENCE SPECIALIZATION

This specialization provides technical and leadership training required for key positions in information technology, data science and analytics. It provides an understanding of how to work in professional roles in today's data-intensive and data-driven world. It reviews key technologies in analytics and business intelligence drawing from both traditional statistics and machine learning.

Curriculum

Core Courses (4 units)

Course	Title
CIS 413-DL/413-0	Telecommunications and Computer Networks
CIS 417-DL/417-0	Database Systems Design & Implementation
MSDS 430-DL/430-0	Python for Data Analysis
CIS 498-DL/498-0	Computer Information Systems Capstone Project
or CIS 590-DL	Capstone Research

Specialization Courses (7 units)

Course	Title
CIS 435-DL	Practical Data Science Using Machine Learning
MSDS 400-DL	Math for Modelers
MSDS 401-DL	Applied Statistics with R
Any four of the following	
MSDS 410-DL	Supervised Learning Methods
MSDS 411-DL	Unsupervised Learning Methods
MSDS 453-DL	Natural Language Processing
MSDS 455-DL	Data Visualization
MSDS 458-DL	Artificial Intelligence and Deep Learning
MSDS 460-DL	Decision Analytics

About the Final Project

Students may pursue their capstone experience independently or as part of a team. As their final course, students take either the individual research project in an independent study format or the classroom final project class in which students integrate the knowledge they have gained in the core curriculum in a project presented by the instructor. In both cases, students are guided by faculty in exploring the body of knowledge on information systems while contributing research of practical value to the field. The capstone independent project and capstone class project count as one unit of credit.

Course	Title
Choose one	
CIS 498-DL/498-0	Computer Information Systems Capstone Project
CIS 590-DL	Capstone Research