

# INFORMATION SYSTEMS, MS ARTIFICIAL INTELLIGENCE SPECIALIZATION

Recent advances in machine learning and artificial intelligence are affecting the work of data scientists and information systems professionals. Key applications involve computer vision and natural language processing. Advances are possible due to increased storage, faster computers, and better algorithms. Students in this specialization utilize contemporary deep learning methods as they work on research and programming assignments.

## Curriculum

### Core Courses (4 units)

Course	Title
CIS 413-DL	Telecommunications and Computer Networks
CIS 417-DL	Database Systems Design & Implementation
MSDS 430-DL	Python for Data Analysis
CIS 498-DL or CIS 590-DL	Computer Information Systems Capstone Project 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
<b>Any four of the following</b>	
MSDS 453-DL	Natural Language Processing
MSDS 458-DL	Artificial Intelligence and Deep Learning
MSDS 459-DL	Knowledge Engineering
MSDS 462-DL	Computer Vision
MSDS 464-DL	Intelligent Systems and Robotics

## 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
<b>Choose one</b>	
CIS 498-DL	Computer Information Systems Capstone Project
CIS 590-DL	Capstone Research