DATA SCIENCE, MS TECHNOLOGY ENTREPRENEURSHIP SPECIALIZATION

Entrepreneurship involves creating a new business or business function where one did not exist before. Advances in science and technology spur innovation, giving existing, resource-rich companies a chance to reinvent themselves, often moving into new markets. These advances, many of them emerging from data science, machine learning, and artificial intelligence, provide an opportunity for individuals and firms to build new organizations or startups. The technology entrepreneurship specialization shows students the path to building a successful, innovation-driven startup.

Curriculum

Core Courses (8 units)

Course	Title
MSDS 400-DL	Math for Modelers
MSDS 401-DL	Applied Statistics with R
MSDS 420-DL	Database Systems
MSDS 422-DL	Practical Machine Learning
MSDS 460-DL	Decision Analytics
MSDS 485-DL	Data Governance, Ethics, and Law
MSDS 498-DL	Capstone Class
or MSDS 590-DL	Thesis Research
Any one of the following: [1]	
MSDS 402-DL	Research Design for Data Science
MSDS 403-DL	Data Science and Digital Transformation
MSDS 470-DL	Technology Entrepreneurship
MSDS 472-DL	Management Consulting
MSDS 474-DL	Accounting and Finance for Technology Managers
MSDS 475-DL	Project Management
MSDS 476-DL	Business Process Analytics
MSDS 480-DL	Business Leadership and Communications

[1] Students need to choose one of these eight course options to fulfill the business, leadership, communication requirement.

Specialization Courses (4 units)

Course	Title
MSDS 470-DL	Technology Entrepreneurship
MSDS 474-DL	Accounting and Finance for Technology Managers
Any two electives	
MSDS 402-DL	Research Design for Data Science
MSDS 403-DL	Data Science and Digital Transformation
MSDS 410-DL	Supervised Learning Methods
MSDS 411-DL	Unsupervised Learning Methods
MSDS 413-DL	Times Series Analysis and Forecasting
MSDS 430-DL	Python for Data Analysis
MSDS 431-DL	Data Engineering with Go
MSDS 432-DL	Foundations of Data Engineering
MSDS 434-DL	Analytics Application Engineering
MSDS 436-DL	Analytics Systems Engineering
MSDS 440-DL	Full-Stack Data Engineering
MSDS 442-DL	Data Pipelines and Stream Processing
MSDS 450-DL	Marketing Analytics
MSDS 451-DL	Financial Machine Learning
MSDS 452-DL	Web and Network Data Science
MSDS 453-DL	Natural Language Processing
MSDS 454-DL	Applied Probability and Simulation Modeling
MSDS 455-DL	Data Visualization
MSDS 456-DL	Sports Performance Analytics
MSDS 457-DL	Sports Management Analytics
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
MSDS 472-DL	Management Consulting
MSDS 476-DL	Business Process Analytics
MSDS 480-DL	Business Leadership and Communications
MSDS 490-DL	Special Topics in Data Science

About the Final Project

As their final course in the program, students take either a master's thesis project in an independent study format or a classroom final project class in which students integrate the knowledge they have gained in the core curriculum in a team project approved by the instructor. In both cases, students are guided by faculty in exploring the body of knowledge of data science. The master's thesis or capstone class project count as one unit of credit.

Course	Title
Choose one	
MSDS 498-DL	Capstone Class
MSDS 590-DL	Thesis Research