DATA SCIENCE (DS)

DS 700 Foundations of Data Science (3 crs)
Prerequisite: Limited to Data Science master's degree students.
Introduction to data science and its importance in business decision making.
Attributes: Data Science MS OL Flat Rate Tuition, Special Course Fee Required
Grading Basis: A-F Grades Only
Lecture/Discussion Hours: 3
Lab/Studio Hours: 0

DS 705 Statistical Methods (3 crs)
Prerequisite: Limited to Data Science master’s degree students.
Statistical methods and inference procedures presented with an emphasis on applications, computer implementation, and interpretation of results.
Attributes: Data Science MS OL Flat Rate Tuition, Special Course Fee Required
Grading Basis: A-F Grades Only
Lecture/Discussion Hours: 3
Lab/Studio Hours: 0

DS 710 Programming for Data Science (3 crs)
Prerequisite: Limited to Data Science master’s degree students.
Introduction to programming languages and packages used in data science.
Attributes: Data Science MS OL Flat Rate Tuition, Special Course Fee Required
Grading Basis: A-F Grades Only
Lecture/Discussion Hours: 3
Lab/Studio Hours: 0

DS 715 Data Warehousing (3 crs)
Prerequisite: Limited to Data Science master’s degree students.
Introduction to the concepts and techniques to work with and reason about subject-oriented, integrated, time-variant, and nonvolatile collections of data in support of management’s decision-making process.
Attributes: Data Science MS OL Flat Rate Tuition, Special Course Fee Required
Grading Basis: A-F Grades Only
Lecture/Discussion Hours: 3
Lab/Studio Hours: 0

DS 730 Big Data: High Performance Computing (3 crs)
Prerequisite: Limited to Data Science master’s degree students.
Overview of how to process large datasets efficiently, including introduction of non-relational databases.
Attributes: Data Science MS OL Flat Rate Tuition, Special Course Fee Required
Grading Basis: A-F Grades Only
Lecture/Discussion Hours: 3
Lab/Studio Hours: 0

DS 735 Communicating about Data (3 crs)
Prerequisite: Limited to Data Science master’s degree students.
Prepares students to master technical, informational, and persuasive communication to meet organizational goals.
Attributes: Data Science MS OL Flat Rate Tuition, Special Course Fee Required
Grading Basis: A-F Grades Only
Lecture/Discussion Hours: 3
Lab/Studio Hours: 0

DS 740 Data Mining & Machine Learning (3 crs)
Prerequisite: Limited to Data Science master’s degree students.
Data mining methods and procedures for diagnostic and predictive analytics.
Attributes: Data Science MS OL Flat Rate Tuition, Special Course Fee Required
Grading Basis: A-F Grades Only
Lecture/Discussion Hours: 3
Lab/Studio Hours: 0

DS 745 Visualization and Unstructured Data Analysis (3 crs)
Prerequisite: Limited to Data Science master’s degree students.
Covers various aspects of data analytics including visualization and analysis of unstructured data such as social networks.
Attributes: Data Science MS OL Flat Rate Tuition, Special Course Fee Required
Grading Basis: A-F Grades Only
Lecture/Discussion Hours: 3
Lab/Studio Hours: 0

DS 760 Ethics of Data Science (3 crs)
Prerequisite: Limited to Data Science master’s degree students.
Ethical issues related to data science, including privacy, intellectual property, security, and the moral integrity of inferences based on data.
Attributes: Data Science MS OL Flat Rate Tuition, Special Course Fee Required
Grading Basis: A-F Grades Only
Lecture/Discussion Hours: 3
Lab/Studio Hours: 0

DS 770 Data Science and Strategic Decision Making (3 crs)
Prerequisite: Limited to Data Science master’s degree students.
The interaction between data science and strategic decision making.
Leveraging data resources for competitive advantage in the marketplace.
Attributes: Data Science MS OL Flat Rate Tuition, Special Course Fee Required
Grading Basis: A-F Grades Only
Lecture/Discussion Hours: 3
Lab/Studio Hours: 0

DS 775 Prescriptive Analytics (3 crs)
Prerequisite: Limited to Data Science master’s degree students.
Procedures and techniques for using data to inform decision making. Topics include optimization, decision analysis, game theory, and simulation.
Attributes: Special Course Fee Required
Grading Basis: A-F Grades Only
Lecture/Discussion Hours: 3
Lab/Studio Hours: 0
DS 785 Data Science Capstone (3 crs)
Prerequisite: Limited to Data Science master’s degree students.
• Full-time equivalent.

Capstone course; students will develop and execute a data science project using real-world data and communicate results to a non-technical audience.

Attributes: Data Science MS OL Flat Rate Tuition, Special Course Fee Required
Grading Basis: A-F Grades Only
Lecture/Discussion Hours: 3
Lab/Studio Hours: 0