# 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  
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  
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  
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  
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  
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  
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  
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  
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  
Grading Basis: A-F Grades Only  
Lecture/Discussion Hours: 3  
Lab/Studio Hours: 0

**DS 770 Prescriptive Analytics (3 crs)**  
Prerequisite: Limited to Data Science master's degree students.  
Topics include optimization, decision analysis, game theory, and simulation.  

Grading Basis: A-F Grades Only  
Lecture/Discussion Hours: 3  
Lab/Studio Hours: 0

**DS 780 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  
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
Grading Basis: A-F Grades Only
Lecture/Discussion Hours: 3
Lab/Studio Hours: 0