# 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 (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 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: Data Science MS OL Flat Rate Tuition  
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.
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