
Fall 2026

Registration Opens: April 13, 2026

Course Preview Week: September 01 - September 07, 2026

Semester Dates: September 08 - December 18, 2026

DS 701: Exploratory Data Analysis

This course introduces data science and highlights its importance in decision making. Students will learn how to analyze data using the R programming language. During the course, students will learn how to import data into R, tidy it, conduct exploratory data analysis, develop visualizations, and draw statistical inferences. The course aims to teach data wrangling, visualization and exploration with R.

[DS701 Course Syllabus](#)

3
Credits

DS 705: Statistical Methods

This course will present statistical methods and inference procedures with an emphasis on applications, computer implementation, and interpretation of results. Familiarity with the R programming language is highly recommended. Topics include simple and multiple regression, model selection, correlation, moderation/interaction analysis, logistic regression, the chi-square test, the Kruskal-Wallis test, analysis of variance (ANOVA), multivariate analysis of variance (MANOVA), factor analysis, and canonical correlation analysis.

Prerequisite: DS 700 or 701.

[DS 705 Course Syllabus](#)

3
Credits

DS 710: Programming for Data Science

Introduction to programming languages and packages used in data science.

[DS 710 Syllabus](#)

3
Credits

DS 716: Data Management for Data Science

This course explores the various approaches for data management used in data science. We present how data is collected, transformed, stored, and delivered for use in data science projects.

[DS 716 Course Syllabus](#)

3
Credits

DS 730: Big Data: High-Performance Computing

This course prepares you to process large data sets efficiently. You will be introduced to nonrelational databases and algorithms that allow for the distributed processing of large data sets across clusters.

Prerequisite: DS 710

[DS 730 Syllabus](#)

3
Credits

DS 740: Data Mining & Machine Learning

Explore data mining methods and procedures for diagnostic and predictive analytics. Topics include association rules, clustering algorithms, tools for classification, and ensemble methods. Computer implementation and applications will be emphasized.

Prerequisites: DS 705 or DS 710. (Starting in Fall 2026, DS 705 will be the required prerequisite).

[DS 740 Syllabus](#)

3
Credits

DS 770: Ethical Decision-Making Using Data

This course examines how data science relates to developing strategies for organizations. The emphasis is on using an organization's data assets to inform better decisions. The course investigates the use of data science findings to develop solutions to competitive organizational challenges. Special attention is given to critically examining decisions to ensure that they are ethical and avoid unfair bias. Professional codes of conduct as well as local and international regulations are also considered.

Prerequisites: DS 740 suggested but not required.

[DS770 Course Syllabus](#)

3
Credits