

ANALYTICS (DATA)

Visit the [Course Schedule Search website](#) to find out when courses will be offered during the academic year.

Read more about the courses within this subject prefix in the descriptions provided below.

DATA 800 - Introduction to Applied Analytic Statistics

Credits: 3

This course is designed to give students a solid understanding of the experience in probability, and inferential statistics. The course provides a foundational understanding of statistical concepts and tools required for decision making in a data science, business, research or policy setting. The course uses case studies and requires extensive use of statistical software.

Grade Mode: Letter Grading

DATA 820 - Programming for Data Science

Credits: 3

In this class, students will build their foundational toolbox in data science: upon completion, students will be able to use the computer from the command line; practice version control with GIT & GitHub; gain a mastery of programming in Python; data wrangling with Python and perform an exploratory data analysis (EDA) in Python. All learning objectives are achieved through active application of these techniques to real world datasets.

Prerequisite(s): DATA 800 (may be taken concurrently) with a minimum grade of B-.

Grade Mode: Letter Grading

DATA 821 - Data Architecture

Credits: 3

In this class, students will learn the foundations of databases and large datasets: upon completion, students will be able to explore out-of-ram datasets through traditional SQL databases and NoSQL databases. Students will also be introduced to distributed computing. All learning objectives are achieved through active application of these techniques to world datasets.

Prerequisite(s): DATA 800 with a minimum grade of B- and DATA 820 with a minimum grade of B-.

Grade Mode: Letter Grading

DATA 822 - Data Mining and Predictive Modeling

Credits: 3

In this class, students will learn foundations of practical machine learning: upon completion, students will be able to understand and apply supervised and unsupervised learning in Python to build predictive models on real world datasets. Techniques covered include (but not limited to): preprocessing, dimensionality reduction, clustering, feature engineering and model evaluation. Models covered include: generalized linear models, tree-based models, bayesian models, support vector machines, and neural networks. All learning objectives are achieved through active application of these techniques to real world datasets.

Prerequisite(s): DATA 800 with a minimum grade of B- and DATA 820 with a minimum grade of B- and DATA 821 (may be taken concurrently) with a minimum grade of B-.

Mutual Exclusion: No credit for students who have taken ADMN 872.

Grade Mode: Letter Grading