

DATA SCIENCE (DS)

Data Science (DS) Courses

DS 4003. Introduction to Data Science. (3-0) 3 Credit Hours.

Prerequisite: MAT 1073 or the equivalent. An introduction to foundational data science knowledge and life cycle. Focus areas on data visualization, data curation, ethics, and tools available for analysis will be covered.

DS 4013. Programming for Data Science. (3-0) 3 Credit Hours.

Prerequisite: MAT 1073 or the equivalent. An introduction to data-driven programming emphasizing problem solving and critical thinking. Topics will focus on foundational computer programming concepts and skills.

DS 4023. Data Organization and Visualization. (3-0) 3 Credit Hours.

Prerequisites: DS 4003 and DS 4013 or the equivalents. This course focuses on programming concepts, file input/output, and recursion that are involved in integrating, loading, processing, and transforming data from external sources for exploratory data analysis and visualization using data science software packages and APIs.

DS 4033. Data Mining and Machine Learning. (3-0) 3 Credit Hours.

Prerequisites: DS 4003 and DS 4013 or the equivalents. This course utilizes fundamental data science concepts to introduce in-depth analysis, data mining, machine learning, and artificial intelligence. Topics may include clustering, classification, evaluation metrics, supervised and unsupervised learning, search algorithms, intelligent agents, and AI applications in select areas.