DECISION SCIENCES (DS)

DS 101.   Introduction to Business Analytics.   3 Units
Prerequisite(s): MATH 24, STAT 1; must be a business pre-major, business major (any concentration), or business minor, and have at least sophomore standing
Term Typically Offered: Fall, Spring

Introductory course in business analytics that focuses on the application of analytics linking data to business decisions.

DS 102.   Foundation and Tools for Business Analytics.   3 Units
Prerequisite(s): MATH 24, STAT 1; Business, Computer Science, and Mathematics are approved majors to enroll in the course.
Term Typically Offered: Fall, Spring, Summer

The purpose of this course is to introduce Python and R programming languages and other analytics software tools needed in various business analytics courses. Students will learn Python and R programming constructs and data structures. Students will use these analytics tools to retrieve data from various sources, pre-process data, and perform data analysis for business insights and data-driven solutions.

DS 105.   Decision Analytics.   3 Units
Prerequisite(s): MATH 24, STAT 1
Term Typically Offered: Fall, Spring

Introduces students to decision models for the solution and analysis of business problems. Topics include mathematical programming, decision theory, analysis of waiting lines, simulation, and Markov processes.

DS 110.   Data Mining for Business Analytics.   3 Units
Prerequisite(s): DS 101 or STAT 103 or ENGR 115 or equivalent. DS 102 or instructor consent. Business, Computer Science, and Mathematics are approved majors to enroll in the course.
Term Typically Offered: Fall, Spring

Data mining methods including data visualization, classification (logistic regression, discriminant analysis), tree-based methods, cluster analysis, principle components analysis, factor analysis, neural networks, classification and regression trees, and facilitated through software. Focus on applications in the business environment.

DS 115.   Advanced Business Analytics.   3 Units
Prerequisite(s): DS 110.
Term Typically Offered: Fall, Spring

This course introduces students to more advanced topics in business analytics including Neural Networks, Deep Learning, Text Mining, Social Network Analytics, Computer Vision, and their applications in business.