DECISION SCIENCES (DSCI)

DSCI 352 - Analytics I: Predictive Models (3 Credits)
Prerequisite: STAT 180 or equivalent. This course will introduce students to data visualization methods as well as essential predictive modeling approaches widely used in analytics practice today. Beginning with a foundation in inferential statistics, the course will cover regression, classification, time series, and clustering models. The use of visualization both to explore data and to create narratives around data will also be emphasized. Cross-listed with DATA 352.

DSCI 353 - Analytics II: Optimization Models (3 Credits)
Prerequisite: DSCI 352, MIST 201 or equivalent and STAT 180 or similar statistics course; and College of Business major or Data Science minor or permission of the Associate Dean for Faculty. This course introduces a variety of Management Science models for use in analysis of "busi ness" problems. A computer software package provides the computational basics for case analysis of problems in linear programming, inventory, waiting lines, PERT/ CPM, and simulation. Cross-listed with DATA 353.

DSCI 363 - Operations Management (3 Credits)
Prerequisite: DSCI 353 or equivalent; and business administration major or permission of department chair. Operations management is an area of business concerned with the production of goods and services. It involves the study of concepts, theories and techniques relating to the operations functions in both manufacturing and service organizations. Lectures, discussions, and case studies are used to provide a comprehensive knowledge of the theories, current practices, and trends in several topical areas of operations management. Quantitative tools of analysis used to support decision making in the various operations management are surveyed.

DSCI 401 - Applied Machine Learning (3 Credits)
Prerequisite: Grade of C or better in CPSC 220 or DATA 219 or equivalent. This course develops an overview of the challenges of developing and applying analytics for insight and decision making. Examples and cases will come from customer relation management, price modeling, social media analytics, location analysis and other business domains. Cross-listed as DATA 401.

DSCI 402 - Analytics Applications and Development (4 Credits)
Prerequisite: Grade of C or better in CPSC 220 or DATA 219 or equivalent. A course in programming and data manipulation techniques for constructing analytics-based applications. Topics include SQL or no-SQL databases, using web service API's to acquire data, introduction to Hadoop and MapReduce, and use of third-party analytic component API's. Course previously taught as BUAD 400. Cross-listed as DATA 402.