

Masters Degree – Analytics Progressive Degree Option

The Master of Science in Analytics is designed to satisfy the growing demand for professionals equipped with significant technical and quantitative training in the fundamentals of analytics for solving engineering and management problems in today's data-extensive digital world.

Analytics is a multidisciplinary field that relates the application of engineering approaches and methods to the analysis and management of engineering and enterprise processes based on data. Learning objectives of this program involve data collection, cleansing, fusing and curating, for the purpose of analyzing trends, discovering patterns and building decision models for well-reasoned decision support. Rigorous mathematical modeling and computational methods tools are at the heart of the program.

Graduates of this program will be prepared to convert data into meaningful information, embedded in decision support systems that can help organizations make important operational decisions and help set strategic direction and policy.

Required Courses (12 units)

DSCI 559 Introduction to Data Management Units: 3 (Sp)

ISE 529 Predictive Analytics Units: 3 (Fa, Sp)

ISE 530 Optimization Methods for Analytics Units: 3 (Fa, Sp)

ISE 535 Data Mining Units: 3 (Fa, Sp)

Project (3 units) Select one course.

ISE 533 Integrative Analytics Units: 3 (Sp) (ISE529 & ISE530 pre-requisites)

ISE 534 Data Analytics Consulting Units: 3 (Fa) (ISE529 & ISE530 pre-requisites)

ISE 580 Performance Analysis with Simulation Units: 3 (Fa, Sp)

Methodology (6 units) Select two courses.

ISE 533 Integrative Analytics Units: 3 (Sp) (ISE529 & ISE530 pre-requisites)

ISE 537 Financial Analytics Units: 3 (Fa)

ISE 538 Performance Analysis Using Markov Models Units: 3 (Fa)

ISE 540 Text Analytics Units: 3 (Fa)

ISE 543 Enterprise Business Intelligence & Systems Analytics

ISE 562 Decision Analysis Units: 3 (Fa, Sp)

ISE 580 Performance Analysis with Simulation Units: 3 (Fa, Sp)

***Total Units Required for the PDP degree: 21**

