QM-Quantitative Methods Courses

Courses

QM 101. Introduction to Analytics Tools. 3 Hours.
This course explores analytics tools for data preprocessing, exploration, and visualization, and presenting and reporting results. Topics include data manipulation and transformation for conducting basic exploratory data analytics and visual analytics. The skills learned will be applicable across a wide range of domains and industries. No prior knowledge of data analytics is required.

QM 214. Introduction to Business Statistics. 3 Hours.
This course provides an overview of data, probability, sampling, and its application to decision making in business. Upon successful completion of this courses, students will be able to summarize data graphically and numerically, understand sources of variation in data, and be able to conduct one-sample statistical inference.
Prerequisites: (MA 105 [Min Grade: C] or MA 106 [Min Grade: C] or MA 109 [Min Grade: C] or MA 125 [Min Grade: C]) and BUS 110 [Min Grade: C]

QM 215. Foundations in Business Analytics. 3 Hours.
This course provides a foundation for the use of data for analytical decision making in business. Topics include comparison of independent samples, linear regression, business forecasting and data mining. Emphasis is on analysis of real data with computer implementation and communication of results.
Prerequisites: QM 214 [Min Grade: C] or MA 180 [Min Grade: C]

QM 350. Quantitative Methods for Finance. 3 Hours.
Development of the mathematical foundations of undergraduate level financial modeling and analysis, including applications of calculus, probability theory, linear algebra and Monte Carlo simulation to the measurement of asset returns and the assessment of risk, to the pricing of options and other financial derivatives, and to the solution of important financial optimization problems.
Prerequisites: (QM 215 [Min Grade: C] and CS 101 [Min Grade: C])

QM 420. Applied Forecasting. 3 Hours.
Practical use of various forecasting techniques on business and economic data. Topics include dynamic regression models, exponential smoothing, forecast criteria, moving averages, seasonality, and univariate Box Jenkins ARIMA modeling. Completion of all pre-business requirements required.
Prerequisites: (AC 201 [Min Grade: C] and EC 210 [Min Grade: C] and EC 211 [Min Grade: C] and LS 246 [Min Grade: C] and QM 215 [Min Grade: C] and CS 101 [Min Grade: C])

QM 490. Advanced Topics in Statistics/Management Science. 3 Hours.
Statistics/management science application to problems in business and economics.

QM 499. Directed Readings in Quantitative Methods. 1-3 Hour.
Readings and independent study in selected areas.
Prerequisites: EC 211 [Min Grade: C] and QM 215 [Min Grade: C] and EC 210 [Min Grade: C]