

QM - QUANTITATIVE METHODS (QM)

QM 199. Service Learning. (3 Credits)

This course is designed to introduce students to Service Learning through the integration of academic learning about local, national, and global issues with service work addressing those concerns. Approval of supervising department required. (Offered upon sufficient demand.)

QM 291. Statistical Process Control. (3 Credits)

Theory and application of statistical process control including experimental design, X-Bar, R and P charts, and acceptance sampling. Prerequisite: MA 112 or any Area III math included in the General Education Component listed under Requirements for the Bachelor of Business Administration Degree. (Fall, Spring, Summer)

QM 292. Statistical Analysis for Business. (3 Credits)

Application of statistical analysis to problems in business and economics. Simple and multiple regression and correlation analysis, decision making under uncertainty, time series, and nonparametric statistics. Prerequisite: QM 291. (Fall, Spring, Summer)

QM 295. Quantitative Methods in Business and Economics. (3 Credits)

A survey of mathematical tools used in business and economics, including calculus, matrix algebra, and linear programming. Prerequisites: EC 251, 252; MA 112 or any Area III math included in the General Education Component listed under Bachelor of Business Administration Degree. (Fall)

QM 359. Special Course. (1-6 Credits)

Course number reserved for special courses offered from time to time in response to special circumstances. The courses are discipline specific with variable credit and when offered, they are identified by department content and credit.

QM 369. Special Course. (1-6 Credits)

Course number reserved for special courses offered from time to time in response to special circumstances. The courses are discipline specific with variable credit and when offered, they are identified by department content and credit.

QM 389. On-Campus Internship. (3 Credits)

QM 395. Decision-Making Techniques for Business. (3 Credits)
Decision-making techniques available to management, including linear programming, integer programming, game theory, simulation, Markovian Chains, and queuing theory. Prerequisite: QM 292. (Offered on sufficient demand)

QM 399. Departmental Service Learning. (1-6 Credits)

This course is designed to provide students the opportunity to integrate academic learning about vital service issues within a specific discipline with service work addressing those issues. This course may be repeated for a maximum of six credits. Approval of supervising department required. (Offered upon sufficient demand.)

QM 460. Techniques in Data Mining. (3 Credits)

Data mining involves a collection of techniques for extracting patterns and trends in large databases. As more of our everyday life is recorded and quantified, these techniques are quickly becoming a standard analytical tool in a number of fields, including information technology, banking, retail marketing, and consulting. This course offers a hands-on introduction to methods used in this new and exciting field. Prerequisites: QM 291 or equivalent, QM 292 or equivalent, and CS 135 or CIS 125 or equivalent.

QM 480. Regression and Time-Series Analysis. (3 Credits)

Extensive analysis of simple and multiple regression in both linear and nonlinear forms. Techniques of instrumental variables and model building. Extensions of regression to time-series and econometrics. Emphasis is on application of models to actual business problems. Prerequisite: QM 292. (Offered on sufficient demand)

QM 490. Experimental Design and Advanced Statistical Process Control. (3 Credits)

Basic experimental design and statistical process control methods, including randomized block, factorial, nested, repeated measures, and alias structure designs, and Shewhart, CUSUM, EWMA, and retrospective control charts. Emphasis is placed on techniques commonly used in industrial data analysis. Prerequisite: QM 292. (Offered on sufficient demand)

QM 495. Mathematical Economics. (3 Credits)

Applications of calculus and matrix theory in economics, including elasticity optimization, equilibrium, and linear models. Prerequisites: QM 292 or equivalent; QM 295 or equivalent.

QM 499. Independent Study-Practicum. (3 Credits)

Open to senior majors on approval of the department chair. Provides for study, research, or special field experience under departmental determination, supervision, and evaluation.