MANAGEMENT SCIENCE (MGSC)

MGSC 6506 Business Statistics
3 credit hours
Students build on their existing analytical foundation to develop an in-depth understanding of statistical techniques used in business. The focus is on statistical analysis of real business problems in their full complexity. Topics include descriptive and inferential statistics including nonparametric techniques, ANOVA, multiple regression, practical significance, and various statistical software packages.
Note: Students cannot receive credit for this course if they have credit for MGSC5506.

MGSC 6515 Strategic Operations Management
3 credit hours
Students consider the critical role of operations in both service and production environments, and build capacity for managing operations activities using the necessary tools to leverage the strategic value of operations. Topics may include: project, quality, supply chain management; forecasting; design; and environmental sustainability.
Note: Students cannot receive credit for this course if they have credit for MGSC5515.

MGSC 6603 Statistical Applications in Management Science
3 credit hours
This course brings together many of the theories and skills which the student has learned and uses them in designing, conducting, analyzing, and reporting the results of research designs. Statistical techniques used are: chi-square, analysis of variance, and multiple regression. Extensive use is made of computer-oriented statistical packages.

MGSC 6604 Statistical Applications in Management Science II
3 credit hours

MGSC 6616 Project Management
3 credit hours
This course introduces students to fundamental issues in managing projects: project definition and scope, networks, risk management, scheduling, monitoring, organizational structure and leadership, and professional requirements. Students are exposed to project management software.

MGSC 6618 Total Quality Management
3 credit hours
This course introduces the student to the concepts of total quality management, quality improvement, and statistical quality control as key ingredients of a quality strategy. The role of a quality strategy in improving the competitiveness of the firm in both local and international markets is emphasized. Using a case-oriented approach, students will be introduced to the philosophies of Deming, Juran and Crosby, the dimensions of product and service quality, modern statistical improvement tools, and the relationship between quality strategy and the functional areas of the firm.

MGSC 6619 Design and Management of Supply Chains
3 credit hours
This course provides students with the fundamental tools to understand, analyze, and design the supply chain. The supply chain is a strategic driver that has enabled many well-known companies to gain and sustain competitive markets. Heightened customer expectations around product and service quality, speed of delivery, operating costs, and innovation require the careful design and management of a firm's supply chain processes. The course also emphasizes the supply chain as a strategic asset that must be aligned with the firm's corporate strategy.

MGSC 6690 Seminar in Management Science
3 credit hours
This course deals with selected topics in management science. It is offered when in sufficient demand, and specific topics covered may vary depending on the interests of students and instructor.

MGSC 6692 - 6699 Directed Study in Management Science
3 credit hours
Intended to supplement or provide an alternative to the regular management science courses in order to meet the special needs and interests of students, these courses provides an opportunity to study a particular subject in detail and requires from the student some measure of independence and initiative.

MGSC 6800 – 6825 Special Topics in Management Science
6 credit hours
Course content varies from year to year.

MGSC 6826 – 6849 Special Topics in Management Science
3 credit hours
Course content varies from year to year.