MANAGEMENT SCIENCE (MGSC)

MGSC 1205 Quantitative Methods I
3 credit hours
Prerequisite: Nova Scotia Pre-Calculus Mathematics or Mathematics 12 Academic; or equivalent

This course illustrates applications of basic mathematical techniques in decision-making such as break-even analysis, data manipulation, aggregate planning and financial planning. Topics include linear functions and equations, linear programming and the simplex method, compound interest and annuities.

MGSC 1207 Introduction to Data Analytics for Business
3 credit hours
Students are introduced to the Cross-Industry Standard Process for Data Mining (CRISP-DM) for data analysis: business and data understanding, data exploration and preparation, modelling, evaluation and deployment. Students will use Excel to analyze datasets and build models. Methods for value estimation, classification and probability analysis are introduced.
Note: Students cannot receive credit for MGSC 1207 if they also have credit for MGSC 1206.

MGSC 1800 – 1825 Special Topics in Management Science
6 credit hours
Course content varies from year to year.

MGSC 1826 – 1849 Special Topics in Management Science
3 credit hours
Course content varies from year to year.

MGSC 2207 Introductory Statistics
3 credit hours
Prerequisite: MGSC 1206 or MGSC 1207

This course is designed to introduce some common decision aids for coping with uncertainty. Topics include: data collection, summarization and presentation, reporting and interpreting the accuracy of results, evaluating the effectiveness of a decision and determining relationships among factors for the purpose of prediction. Examples will be drawn from a variety of fields and disciplines. Since the analysis of data will involve the use of a computer, it is strongly recommended that a course such as CISY 1225 be completed beforehand.
Note: Students may receive credit for only one of the following towards the Bachelor of Commerce: MGSC 2207, PSYC 2020 (formerly PSYC 2350), SOCI 2365, GEOG 3326, BIOL 3308, EGNE 2309, or MATH 1216.

MGSC 2217 Operations Management
3 credit hours
Prerequisite: MGSC 1205 and MGMT 1281

Students are introduced to the role that operations play in enabling organizations to create value in alignment with their mission and vision. Students explore the interdependence between operations and other core business functions. Topics include operations strategy, product/service design, and management of project, process, quality and supply chain.

MGSC 2800 – 2825 Special Topics in Management Science
6 credit hours
Course content varies from year to year.

MGSC 2826 – 2849 Special Topics in Management Science
3 credit hours
Course content varies from year to year.

MGSC 3317 Operations Management
3 credit hours
Prerequisite: MGMT 1281, MGSC 1205 and MGSC 2207

This course addresses operations issues that contribute to how firms compete with respect to cost, quality, time and flexibility. Topics include project management, product/service and process design, process flows, quality, and supply chain management (including forecasting, inventory management, JIT, and supplier relations). Examples will be drawn from both service and manufacturing sectors.
Note: Students may substitute one of BIOL 3308, EGNE 2309, GEOG 3326, MATH 1216, PSYC 2020 (formerly PSYC 2350), or CRIM 3102 in lieu of MGSC 2207.

MGSC 3361 Supply Chain Management
3 credit hours
Prerequisite: MGSC 1205, MGSC 1206 or MGSC 1207, and MGSC 2207

Students are introduced to supply chain management and key considerations for design and operation of a supply chain. Students examine the key drivers of supply chain performance and methodologies for supply chain analysis. The impact of digitization on supply chain will also be discussed.

MGSC 3800 – 3825 Special Topics in Management Science
6 credit hours
Course content varies from year to year.

MGSC 3826 – 3849 Special Topics in Management Science
3 credit hours
Course content varies from year to year.

MGSC 4400 Data Analytics in Sports
3 credit hours
Prerequisite: MGSC 1205, MGSC 1207, and MGSC 2207

Students will be offered a broad perspective of the sports world's transition to digital transformation and the different benefits that data brings to this industry. Students will learn how to use data to make objective and measured decisions when managing athletes, fans, or entire organizations. Students will explore best practices in sports business analytics, including data visualization, applying predictive modeling techniques, and constructing decision modeling and optimization frameworks in sports.

MGSC 4748 Sustainability Management
3 credit hours
Prerequisite: Completion of at least sixty (60) credit hours

Students explore how environmental and social sustainability concerns arise as constraints or opportunities in businesses and other organizations, and how these concerns can be best addressed through the strategic and operational decisions made by these organizations.

MGSC 4826 – 4849 Special Topics/Seminars in Management Science
3 credit hours
Prerequisite: COMM 2293 and permission of Chairperson
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 4876 – 4899 Directed Study
3 credit hours
Prerequisite: COMM 2293 and permission of Chairperson
Intended to supplement or provide an alternative to the regular management science courses in order to meet the special needs and interests of students, the course provides an opportunity to study a particular subject in detail and requires from the student some measure of independence and initiative.