

# BMSO - ONLINE BUSINESS MS PROGRAMS

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## **BMSO600 Data, Models and Decisions (3 Credits)**

The field of data analytics is a very vibrant and broad field. The amount of data available and computing power have exploded in recent years. There is an increasing demand for business analysts who can select and apply the appropriate methods and interpret the results within the context of the problem. The goal of this course is to learn methods for exploring data and building models with the purpose of supporting data-driven decision making. The content of the course can be grouped as follows: Data Exploration, Probability, Confidence Interval Estimation, Hypothesis Testing and Regression Analysis. The focus will be on exploring realistic business scenarios, analyzing datasets using the appropriate analytical techniques, interpreting the analytic output within the context of the business scenario and translating the statistical results into actionable insights.

**Prerequisite:** Permission of BMGT-Robert H. Smith School of Business.

**Restriction:** Must be in an online Business Master of Science program; or permission of BMGT-Robert H. Smith School of Business.

## **BMSO601 Database Management Systems (3 Credits)**

The fundamentals of managing data and information within an organization, including enterprise level platforms and tools for data driven analytics. Includes processes for acquiring and cleaning data, storing data, making it available for analytics, visualizing output, and archiving the data for long term use. Involves computational thinking, covers significant theoretical material on data models and queries, and teaches several different analytics and programming tools.

**Prerequisite:** Permission of BMGT-Robert H. Smith School of Business.

**Restriction:** Must be in an online Business Master of Science program; or permission of BMGT-Robert H. Smith School of Business.

## **BMSO602 Decision Analytics (3 Credits)**

Difficult decisions require spending scarce resources. A 'resource' is any asset used to leverage business objectives, such as time and money. Tradeoffs are involved in allocating resources to one objective as opposed to another. This course develops a quantitative framework for studying resource allocation problems that arise in many industries and areas such as transportation, advertising, finance, and healthcare. The focus will be on translating verbal descriptions into quantitative optimization models, whereby standard tools (such as Microsoft Excel) can be applied to obtain solutions. The course also covers the role of uncertainty and risk in the decision-making process by using Monte-Carlo simulation models.

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**Restriction:** Must be in an online Business Master of Science program; or permission of BMGT-Robert H. Smith School of Business.

## **BMSO603 Data Mining and Predictive Analytics (3 Credits)**

In the business press, on TV, and in board rooms, 'machine learning,' 'AI,' 'big data' and 'data analytics' are now hot topics. Vast quantities of data are being generated these days, including new types of data such as web traffic, social network data, and reviews and comments on websites. This data is a valuable resource that, when used correctly, can create a competitive edge for companies. Advances in computing hardware and algorithms have significantly improved the quality of predictions and effectiveness of business applications based on them. Expertise in working with data, and a sound knowledge of data mining/machine learning methods, is a much sought after skill. The course provides an introduction to the key tools and techniques of data mining/machine learning, including classification, prediction, cluster analysis, association rules, and text mining. The methods covered are Linear Regression, Logistic Regression, K-nearest neighbors, Naive Bayes, Classification and Regression Trees, Ensemble methods, Neural Networks, K-Means and Hierarchical Clustering, and Association Rules. The focus throughout will be on business applications. Examples from Marketing, Finance, Healthcare, and Operations will be used to illustrate the breadth of applications.

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**Restriction:** Must be in an online Business Master of Science program; or permission of BMGT-Robert H. Smith School of Business.

## **BMSO610 Financial Management (2 Credits)**

This is an introductory course in corporate financial management. The course outlines the financial concepts and techniques used to evaluate corporate decisions. The topics include the time value of money, valuation of common securities, and discounted cash flow. The objectives are to introduce the language and structure of finance and to develop the ability to analyze financial decisions.

**Restriction:** Must be in an Online Business and Management (Master's) program; or permission of BMGT-Robert H Smith School of Business.

## **BMSO612 Marketing Management (2 Credits)**

This is a hands-on and application-orientated course. It not only introduces students to a variety of marketing decision models, but also teaches them how to estimate these models using statistical software (SAS and GLIMMIX) and how to apply them for decision recommendations. Students will "get their hands dirty" working on five case projects, each of which requires them to analyze the business problem, select and estimate relevant models, interpret estimation results, and make decision recommendations.

**Restriction:** Must be in an Online Business and Management (Master's) program; or permission of BMGT-Robert H Smith School of Business.

## **BMSO614 Strategic Management (2 Credits)**

The fundamental question that this course addresses is "why are some firms more successful and more profitable than others?" This is both a static and dynamic question, in that we can ask why a given firm is competitively stronger and more profitable at a moment in time, as well as how a firm can sustain competitive advantage and grow profitably over a period of time. This course aims to give you the tools, frameworks, and ideas necessary to develop business strategies, both in the short and the long run. We focus on how best to analyze the structure and dynamics of the external industry environment; how best to analyze and identify a firm's valuable assets, resources and capabilities and how they might be protected, leveraged, and extended in the market; how to respond to environment changes; and how to design strategies for profitable growth and diversification over time.

**Restriction:** Must be in an Online Business and Management (Master's) program; or permission of BMGT-Robert H Smith School of Business.

**BMSO620 Financial Accounting (2 Credits)**

Overview of financial accounting, periodic financial statements and the financial reporting process. Importance of financial statements as information source for creditors and investors and as a means by which managers can communicate information about their firms.

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**BMSO622 Leadership and Teamwork (2 Credits)**

In this course, we lay the foundation for the core capability of leaders: influence. The ultimate outcome of this course is maximizing your capacity to influence people toward a shared goal. The course is also built around the premise that influence isn't a one-size-fits-all approach. The most effective leaders match their approach to the challenge at hand. In other words, the most effective leaders are adaptive; they diagnose the situation and choose the behavior best suited for it. This course gives you a greater awareness of your readiness to influence others and create a high-impact plan for continuing your development.

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**BMSO624 Managerial Economics and Public Policy (2 Credits)**

In this short course we will study managerial economics at the firm level through the lens of a global company. We will mix classic theory, drawn from renowned experts and case studies, then also put those theories to the test through a competitive online and interactive simulation set within the pharmacology industry. The course will focus on understanding critical aspects of economics that influence firm decisions and behavior. This includes basic microeconomic principles used by firms, including supply and demand, elasticities, costs, productivity, pricing, market structure and the competitive implications of alternative market structures, market failures, and government intervention. Throughout the course we will also discuss public policy processes affecting business operations.

**Restriction:** Must be in an Online Business and Management (Master's) program; or permission of BMGT-Robert H Smith School of Business.

**BMSO630 Statistical Modeling and Data Analytics (2 Credits)**

Data analytics is extensively employed in practical settings to gain comprehensive insights into data, extract actionable information, and facilitate strategic decision-making. This course is designed to introduce essential statistical techniques tailored for data analytics. Topics covered include data summarization and presentation, confidence intervals, hypothesis testing, and regression analysis. Additionally, the course places a strong emphasis on the practical application of these techniques and encourages students to actively engage with data analysis exercises to enhance their managerial decision-making capabilities.

**Restriction:** Must be in an Online Business and Management (Master's) program; or permission of BMGT-Robert H Smith School of Business.

**BMSO710 Financial Accounting (2 Credits)**

Overview of financial accounting, periodic financial statements and the financial reporting process. Importance of financial statements as information source for creditors and investors and as a means by which managers can communicate information about their firms.

**Restriction:** Must be admitted to the appropriate graduate business program; or permission of the Masters Programs Office at the Robert H. Smith School of Business.

**BMSO723 Strategy Analytics (2 Credits)**

The goal of the course is to provide students with a toolkit for making strategic decisions that improve firm and individual performance. In other words, based on your analysis, you will make predictions about how and when policy decisions will influence performance outcomes. Making predictions effectively requires a) a nuanced understanding of the limits of statistical analysis as applied to causal reasoning, b) awareness of common inferential pitfalls, and c) an ability to communicate reports effectively to co-workers and managers.

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**BMSO727 Data Visualization (3 Credits)**

"A picture speaks more than a thousand words." Welcome to BMSO712! This course focuses on communicating business insights and information by creating advanced visualizations and interactive dashboards using Tableau and Power BI (Business Intelligence Tool). A 100% practical-oriented course and learning-by-doing approach will help the students to solve problems from business domains like marketing, operations, human resources, finance, and so forth.

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**BMSO730 Introduction to Supply Chain Analytics (3 Credits)**

The intent of this course is to provide students with an overall understanding of the fundamentals of supply chain analytics. Students will be introduced to analytical models and techniques that underlie modern supply chain planning and control systems. The primary supply chain activities of interest will be inventory and transportation.

**Restriction:** Must be admitted to the appropriate graduate business program; or permission of the Masters Programs Office at the Robert H. Smith School of Business.

**BMSO754 Negotiation and Conflict Management (2 Credits)**

The course is designed to complement other skills you have developed in different courses at the Smith School of Business, with the basic premise that negotiation skills are needed to implement any technical or analytical solution to different problems at the workplace.

**Restriction:** Must be in an Online Business and Management (Master's) program; or permission of BMGT-Robert H Smith School of Business.

**BMSO755 Organizational Change (2 Credits)**

This course aims to provide useful diagnostic tools, intervention strategies, and change models to understand and manage organizational change and its core processes, as well as critical knowledge and skills to initiate and facilitate an organizational change as effective change agent.

**Restriction:** Must be in an Online Business and Management (Master's) program; or permission of BMGT-Robert H Smith School of Business.

**BMSO758 Special Topics in Business (1-4 Credits)**

Selected advanced topics in the various fields of graduate study in business.

**Prerequisite:** Permission of BMGT-Robert H. Smith School of Business.

**Restriction:** Must be in an online Business Master of Science program; or permission of BMGT-Robert H. Smith School of Business.

**Repeatable to:** 9 credits if content differs.

**BMS0761 Digital Transformation in Business (2 Credits)**

Information technology has enabled the transformation of firms, markets, and industries. Amazon is in the process of transforming the publishing industry and has been highly disruptive for booksellers and increasingly for publishers. The digital camera transformed the process of capturing and sharing images. Kodak invented the digital camera, but how did the managers at Kodak respond to digital photography? What is the smartphone doing to low-end digital camera manufacturers? This course examines how to identify transformational technologies and develop strategies to take advantage of them through a set of videos, readings, individual, and team assignments.

**Restriction:** Must be in an Online Business and Management (Master's) program; or permission of BMGT-Robert H Smith School of Business.

**BMS0778 Special Topics in Business (1-4 Credits)**

Selected advanced topics in the various fields of graduate study in business.

**Prerequisite:** Permission of BMGT-Robert H. Smith School of Business.

**Restriction:** Must be in an online Business Master of Science program; or permission of BMGT-Robert H. Smith School of Business.

**Repeatable to:** 9 credits if content differs.

**BMS0780 Business Ethics (2 Credits)**

This class is designed to help you reflect about your own values, to give you a substantive background about ethical pitfalls, and to specifically highlight the unexpected ways in which the work context that we operate in can affect our decisions and behaviors in ways that sometimes detach us from our own values

**Restriction:** Must be in an Online Business and Management (Master's) program; or permission of BMGT-Robert H Smith School of Business.

**BMS0788 Experiential Learning I (2 Credits)**

The first part of the class will consist of meeting industry experts in sports management, arts management, consulting, strategy, and more while engaging in weekly individual reflections. This aspect of the class (which spans over 7 weeks Term B) will culminate into a choice of industry to partner with for a consulting capstone project.

**Restriction:** Must be in an Online Business and Management (Master's) program; or permission of BMGT-Robert H Smith School of Business.

**Repeatable to:** 4 credits.

**BMS0789 Experiential Learning II (2 Credits)**

The second part of the class will be dedicated to a consulting project with a client. In this part of the class, students will examine consulting processes, tools, and theories they have acquired throughout their studies in the Master of Science in Business and Management, and apply them to a client project, culminating in a realistic solution deliverable to the client as well as students' reflections and synthesis of their learning.

**Prerequisite:** BMS0788.

**Restriction:** Must be in an Online Business and Management (Master's) program; or permission of BMGT-Robert H Smith School of Business.

**Repeatable to:** 4 credits.