

# MASTER OF SCIENCE IN BUSINESS ANALYTIC (MSBA)

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## **MSBA 515. Preparing for MSBA Success. 1 Credit Hour.**

This course is designed to provide entering MSBA students with the skills necessary to be successful in a graduate business analytics program. Spanning two full days, it focuses on foundational knowledge in statistics, programming, data visualization, and communication. Moreover, the course offers insights into program expectations and introduces students to the available computing resources.

## **MSBA 610. Time Series Analysis and Optimization for Business Decisions. 3 Credit Hours.**

In this course, students will become familiar with modern data analytics methods to understand, analyze, and suggest solutions to business problems. Specifically, this course will provide an overview of time series, forecasting, and optimization techniques. This course will introduce students to a general class of models that can be used to represent time series data and investigate common time series modeling and forecasting methodologies. In addition, students will be introduced to optimization techniques including linear and non-linear programming methods. The course will equip students with a sound foundation in model building for a variety of business decision-making applications. In particular, this hands-on-the-data course offers an introduction to quantitative methods and prepares students to turn real-world problems into mathematical models. The application areas are diverse and originate from problems in finance, government, marketing, transportation, management, accounting, human resources, and healthcare.

Session Cycle: Summer Term 1

Yearly Cycle: Yearly.

## **MSBA 620. Marketing Analytics. 3 Credit Hours.**

This course will provide students with an introduction to marketing analytics. Students will study various tools for generating marketing insights from empirical data in such areas as segmentation, targeting and positioning, satisfaction management, customer lifetime analysis, customer choice, and product and price decisions using conjoint analysis. Students will apply the tools such as Excel, R, and Tableau studied to actual marketing business situations. Students will have hands-on experience of data analysis.

Pre/Corequisites: ISA 510

Session Cycle: Spring

Yearly Cycle: Yearly.

## **MSBA 630. Business Strategy and Analysis. 3 Credit Hours.**

This course explores the role of analytics and business intelligence in an organization's evaluation of the strategic environment, the application of strategic frameworks to formulate a strategy, and the implementation of that strategy. The course will give students a thorough understanding of the interplay between analytics and strategic considerations in an organization. More specifically, students will learn the practical application of analytics to formulate an organization's strategy and reversely the influence of the organization's strategy to the nature of the analytics within the organization.

## **MSBA 640. Business Analytics Capstone. 3 Credit Hours.**

The Analytics Capstone course provides students with the opportunity to apply the knowledge and skills that they have acquired to realistic problems that involve large data sets. The course will revolve around a project based on a data set from a business partner of Bryant University that will provide real data and define a typical decision set that can be solved using the data. Students will present the results of their analysis and recommendations to other students in the class and if appropriate to the client. Students are expected to create a professional presentation of their work and to deliver it confidently. The project will consist of multiple predictive models to assist the client that will be developed using Python. Multiple predictive modeling techniques learned in prior classes will be used. The class will review those techniques prior to beginning model development.

Prerequisites: ISA 530

Session Cycle: Summer Term 2

Yearly Cycle: Yearly.