MASTER OF BUSINESS ANALYTICS (MBAN)

MBAN 5501 Business Fundamentals
3 credit hours
Students are introduced to the nature, organizational structure, aims and objectives of a range of business models and entities, and their role in society. Students develop literacy and competence in aspects of marketing, operations, finance, management and leadership as they relate to the operations of a business.

MBAN 5502 Fundamentals of Programming and Database Management
3 credit hours
Students learn programming languages, database management, data warehousing, big data management, and data analytics software packages. Topics may include, but are not limited to Python, R, SQL, Power BI and Tableau.

MBAN 5510 Foundation of Professional Analytics
3 credit hours
Students focus on the foundations of data analytics, follows the curriculum of Certificate of Professional Analytics (CAP®) and prepare to write the CAP® exam. Topics include business problem framing, analytics problem framing, data collection and preparation, methodology selection, model building, and model deployment and lifecycle management.

MBAN 5520 Statistics and Predictive Modeling
3 credit hours
Students are provided with an overview of how to manage real-world data and convert business problems into statistical models. Excel and its add-ins are used to implement a variety of analyses. Students explore business issues using predictive analysis, especially those associated with big data.

MBAN 5530 Ethics and Governance for Analytics
3 credit hours
Students are provided with a framework to examine the ethical and governance implications of collecting, managing, and using big data for business decision-making. Students acquire the knowledge and skills necessary to assess the impact of the business analytics field on modern society, applying principles such as fairness, accountability and transparency.

MBAN 5540 Prescriptive Analytics and Optimization
3 credit hours
A key element of decision-making is to identify the best course of action. Since businesses problems often have many alternative solutions, students learn how optimization can help businesses identify the best decision option. Students are also introduced to applied topics include computer modeling and data visualization.

MBAN 5550 Enterprise Data Management and Strategy
3 credit hours
Students are introduced to organizational information systems and business processes and workflows. Students identify where business data come from, its inherent strengths and weaknesses, and how it can be best organized to generate appropriate information for business analytics models that support operational and strategic decisions effectively and efficiently.

MBAN 5560 Machine Learning and Artificial Intelligence
3 credit hours
Prerequisite: MBAN 5501, MBAN 5520, MBAN 5530

Students are introduced to effective machine learning techniques and the fundamentals of artificial intelligence. Using tools in statistical learning, students focus on major supervised and unsupervised machine learning methods. Students study systems that require learning algorithms built in penalized linear and logistic regressions and non-parametric learning techniques.

MBAN 5570 Accounting and Financial Analytics
3 credit hours
Prerequisite: MBAN 5501, MBAN 5520, and MBAN 5530

Students are introduced to various accounting and financial decision-making tools and their applications in business practices. Excel-based modelling and dedicated statistical packages are used to delve into some of the industry best practices of financial analytics. In essence, this course is a gateway for students, pursuing careers in business analytics, to conduit their accounting and financial knowledge to actual enterprise applications.

MBAN 5580 Marketing Analytics
3 credit hours
Prerequisite: MBAN 5520

Students are prepared to be effective marketing leaders in a landscape that involves digital initiatives and data. The course is designed to help students develop a working knowledge of the current digital marketing ecosystem, common strategic goals of digital marketing, and types of data typically available for analysis.

MBAN 5610 People Analytics and Leadership
3 credit hours
Prerequisite: MBAN 5520

Students cover a variety of topics related to effective use of analytics for strategically advancing people management decisions regarding issues such as recruitment, evaluation, diversity, compensation, and training. The ethical, legal, and practical implications of such decisions will be discussed.

MBAN 5620 Operations and Supply Chain Analytics
3 credit hours
Prerequisite: MBAN 5520, MBAN 5530 and MBAN 5540

Students learn how to make effective decisions in operations and supply chain management using data tools. Students are introduced to frameworks and ideas that provide insights into a spectrum of real-world business challenges.

MBAN 5892 Special Topics in MBAN
3 credit hours

MBAN 6010 Professional Development
0 credit hours
Through a series of workshops led by internal and external experts, students work through a detailed process to create a customized professional development plan. Supported with personal coaching and engagement with business professionals, students work to enhance targeted competencies and create their own professional development plan to achieve future goals.
Note: Successful completion of this course will result in an "S" (satisfactory) grade on the student's transcript; and this will not be counted into grade point averages.

MBAN 6600 Analytics in Action
3 credit hours
In this capstone experience, students from all three experiential streams will come together on campus to engage in hands-on learning opportunities, applying concepts learned in courses and drawing on work-integrated learning experiences. These immersive learning activities will vary annually and could include hackathons, case competitions, and/or service-learning projects.

MBAN 6610 Major Consulting Project
6 credit hours
This option provides students with an opportunity to apply course concepts and theories while working as a consultant. Students are assigned individually or in teams to a client of the University's entrepreneurship centre and work with a faculty supervisor to develop a detailed consulting report in four months.

MBAN 6620 Work-integrated Learning Project
6 credit hours
This option provides students with an opportunity to apply concepts and theories learned in the program in an organizational setting. Students are assigned individually or in teams to a business or non-profit to apply their knowledge and skills on real world data and analytics projects over four months.

MBAN 6630 Major Research Project (MRP)
6 credit hours
Students complete a four-month project involving the practical application of research concepts and techniques used in a particular discipline, under the supervision of a faculty member or group. Emphasis in this option is on developing research experience using skills and knowledge gained through MBAN program. Interdisciplinary projects are acceptable.