full-time mba

BUSINESS ANALYTICS CONCENTRATION

To enact rapid business transformation and create greater competitive advantage, organizations are transforming massive amounts of data into business insights. The business analytics concentration equips you with the quantitative and analytical skills to succeed in this new data-driven economy.

Enhance your knowledge in applied analytics, developing effective problem-framing and problem-solving skills to strategically evaluate and apply descriptive, predictive, and prescriptive models and methods for business decision-making. The business analytics concentration offers flexible, domain-specific business analytics electives in information management, supply chain management, and marketing.

Required Courses

You must complete the following required courses plus at least one course from the list of electives in order to complete the concentration in business analytics.

CIS 505: Introduction to Enterprise Analytics
Ensures the foundational understanding of contextualized analytics within the business enterprise continuum, covering how data flows and is managed across the landscape of business processes.

CIS 508: Data Mining I
Charts a roadmap for data-driven decision making and getting a practical understanding of how IT tools and techniques can allow managers to extract predictive analytics and patterns from numeric data.

SCM 518: Analytical Decision Making Tools I
Focuses on mastering quantitative modeling and optimization techniques for contextual business decision-making. Applies linear, nonlinear, integer programming, and network models to a wide range of business scenarios, including marketing, investment strategy, financial planning, production, and transportation, and also serves as a foundation for stochastic optimization.

SCM 519: Analytical Decision Making Tools II
Addresses the skills and knowledge necessary to model situations where uncertainty is an important factor. Covers models including decision trees, simulation, and stochastic optimization, along with application for solving a wide variety of common business problems. Requires implementation of these models using Excel and stand-alone software.

Electives

CIS 509: Data Mining II
Explores how to support informed decision-making and extract predictive analytics and patterns from nonnumeric data by leveraging tools and techniques to analyze unstructured data.

CIS 540: Enterprise Information Security and Controls
Provides a broad survey of information security and controls, utilizing the COBIT framework to illustrate how information security and controls contribute to effective IT governance. Develops an understanding of the issues associated with information security and effective IT governance, assesses effectiveness of information security alternatives, and designs an organizational information security program.

CIS 545: Managing Enterprise Systems
Investigates major categories of enterprise systems, factors driving software adoption, and keys for successful implementation. Special attention is paid to evaluating the potential impact of emerging technologies on business environments.

Course list subject to change without notice. Some courses have prerequisites and/or an application process. Please contact your program coordinator for information.

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CIS 560: IT Services and Project Management
Focuses on key aspects of commoditization of hardware, software, and business processes. Introduces the IT product development and service delivery processes with sound management principles for on-budget and on-time projects that meet end-user needs.

CIS 575: Emerging Technologies
Explores decision models and frameworks applied to assess, evaluate and implement new technologies. Provides context for applying the decision models and frameworks, including artificial intelligence, Big Data, 3D printing, Internet of Things (IoT), mobile platforms and devices, semantic web, collaboration technologies, and other emerging technologies.

SCM 517: Data-Driven Quality Management
Addresses the use of analytics tools and techniques to enhance the ability of quality management approaches to improve processes. Introduces modern quality management approaches including six sigma and design for six sigma. Covers the Define, Measure, Analyze, Improve and Control (DMAIC) improvement cycle: the core process used to drive Six Sigma projects.

SCM 551: Operations Planning and Execution
Examines operations planning at an aggregate level, yield management, and service capacity management using waiting-line-models, discrete event simulation, and statistical quality control.

SCM 587 Project Management
Emphasizes the fundamental needs of scheduling, team dynamics, risk analysis, and control within projects found in any business context or discipline.

MKT 591: Marketing Analytics
Focuses on developing analytical methods and applying statistical and mathematical tools to predict consumer behavior. Introduces formal models to analyze how and when customers make product purchase decisions, configure new products, develop market segments, forecast market share, and determine optimal pricing strategies.

Career Paths

- Business analyst
- Consultant
- General management
- Decision analyst
- Leadership development and rotational programs
- Marketing and analytics consultant
- Operations analyst

Notable Employers

- Amazon.com, Inc.
- JPMorgan Chase and Co.
- Intel Corporation
- General Motors Company
- A.T. Kearney

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