Business Analytics Courses

BUSA 1305 - Business Computing Systems
Hours: 3
A study of introductory business computing concepts and the role of information systems, data analysis, developing skills in quantitative literacy, logical reasoning, and interpretation of results.

BUSA 315 - IS Security & Risk Management
Hours: 3
This course provides an introduction to the fundamental principles and topics of Information Systems Security and Risk Management at the organizational level. Students will learn critical security principles that enable them to plan, develop, and perform security tasks. The course will address hardware, software, processes, communications, applications, and policies and procedures with respect to organizational IS Security and Risk Management.

BUSA 326 - Data & Information Management
Hours: 3
This course introduces core concepts in data and information management. The focus of the course is on understanding data characteristics and information transformation, identifying organizational information requirements, developing a conceptual data model based on organizational information requirements, converting the conceptual data models into relational data models, and implementing and utilizing a relational database. The student will become knowledgeable on how to interpret the information in supporting management decisions.

BUSA 379 - Business Process Management & ERP Systems
Hours: 3
In this course students will be introduced to key concepts and approaches to business process management and improvement. The main focus of this course is both understanding and designing business processes. Students will learn how to identify, document, model, assess, and improve core business processes. Students will be introduced to process design principles. The way in which information technology can be used to manage, transform, and improve business processes is discussed. Students will be exposed to challenges and approaches to organizational change, domestic and offshore outsourcing, and inter-organizational processes

BUSA 415 - Principles of Business Process Analysis & Design
Hours: 3
This course discusses the process, methods, techniques and tools that organizations use to determine how they should conduct their business, with a particular focus on how computer-based technologies can most effectively contribute to the way business is organized. The course covers a systematic methodology for analyzing a business problem or opportunity, determining what role, if any, computer-based technologies can play in addressing the business need, and articulating business requirements for the technology solution.

BUSA 416 - Innovative Analytics Technology
Hours: 3
This course teaches students basic knowledge of emerging technology applications in analytics and decision making. Students learn innovative technology design and management from hands-on class projects.

BUSA 421 - Data Mining
Hours: 3
This course provides students with a foundation in basic data mining, data analysis, and predictive modeling concepts. Using practical business cases and projects, students will learn data analysis and data mining implementation techniques for business knowledge insights through a process of inference, model fitting, and learning from examples. The goal of the course is to teach students fundamental data mining techniques that are commonly used in practice. Data mining topics include linear classifiers, clustering, dimension reduction, classification and prediction methods, decision trees, time series analysis, optimization analysis, simulation methods, regression models, and model training/testing/evaluation. Prerequisites: MATH 1325 and ECO 302 or MATH 403 or MATH 453.

BUSA 423 - Business Analytics Programming
Hours: 3
This course introduces applications programming in the large enterprise system environment. The program development and design process is introduced including computer-based concepts of problem-solving, structured programming logic and techniques, algorithm development and program design. Topics include program flowcharting, algorithms, input/output techniques, looping, modules, selection structures, file handling, control breaks, pseudocoding, and user documentation.

BUSA 424 - Business Analytics Modeling
Hours: 3
This is an applied course developing fundamental knowledge and skills for applying management science models to business decision making. Topics include decision analysis, simulation and risk models and optimization models, including the use of software for business applications. Prerequisites: MATH 1325. Crosslisted with: BUSA 542.

BUSA 428 - Project Management

Hours: 3

This course discusses the processes, methods, techniques and tools that organizations use to manage their information systems projects. The course covers a systematic methodology for initiating, planning, executing, controlling, and closing projects. This course assumes that project management in the modern organization is a complex team-based activity, where various types of technologies (including project management software as well as software to support group collaboration) are an inherent part of the project management process. This course also acknowledges that project management involves both the use of resources from within the firm, as well as contracted from outside the organization.

BUSA 431 - Internship

Hours: 3

This course provides an opportunity for selected students to earn elective credits in Business Analytics through supervised work experience with area business firms under the supervision of a faculty member. Prerequisites: 6 hours of BUSA or department approval.

BUSA 432 - Supply Chain Analytics

Hours: 3

This course focuses on sound insights and improved decision-making in supply chain management from rigorous data analysis. Students learn how to provide problem solving and decision-making process by integrating analytical methodologies which include the study of important supply chain functions and solution techniques. Additionally, students will gain valuable analytical insights on major supply chain functions which include: demand forecasting, procurement assessment, inventory analysis, transportation, supply and subcontract pricing, and primary logistics.

BUSA 447 - Data Visualization

Hours: 3

Student will learn the fundamentals of storytelling concepts, narrative theories, methods for research, cleaning and analyzing datasets, and focus on developing stories using Tableau and other creative data tools.

BUSA 489 - Independent Study

Hours: 1-4

Individualized instruction/research at an advance level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisites: Consent of department head.

BUSA 490 - Honors Thesis

Hours: 3

Honors Thesis specified by faculty or department head.

BUSA 491 - Honors Reading

Hours: 3

As specified by Honors or department head.

BUSA 497 - Special Topics

Hours: 1-4

Organized class. May be repeated when topics vary.