

BUSINESS ANALYTICS

The Business Analytics minor offers business majors the opportunity to master the ever-growing fields of data analytics, data mining, and database management systems. This minor provides experience in business processes through simulations, preparing students for jobs in information security, computer systems analysis, management analysis, and financial analysis. Students learn underlying trends in Big Data to improve organizations' growth and profitability.

MINOR

A minor must contain 15-18 semester hours of coursework, including at least 9 hours of upper-division courses at the 3000-4000 level. Courses taken to satisfy Core IMPACTS may not be counted toward completion of the minor. Courses taken in the Field of Study may sometimes be used to fulfill minor requirements.

Required Courses*

BUSA 3532	Bus Analytics/Data Mining	3
MGIS 3356	Database Management Systems **	3
or MGIS 4360	Databases: Big Data & Analyt	

**Non-MGIS Majors should take MGIS 3356. MGIS Majors are required to take MGIS 4360.

Elective Courses*

Select three elective courses the student is qualified to take chosen in consultation with WSOB faculty advisor. 9

ACCT 3600	Accounting Information Systems
ECON 4101	Applied Econometrics
FTA 4005	Intro Financial Data Analytics
LSCM 4253	Integrated Material/Supply Chn
MGIS 3352	Management Application Prog I
MGIS 3353	Management Applications Programming II
MGIS 4360	Databases: Big Data & Analyt ***

* Grade of C or higher required in 3000-4000 level courses.

***For Non-MGIS majors only.

Total Hours 15

Accounting Courses

ACCT 2101. Principles of Accounting I. 3-0-3 Units.

Examines the underlying theory and application of accounting concepts for reporting financial information to outside users. Stresses the relationship between the rules by which financial statements are prepared and the use of financial information for decision making.(F, S, M)

Prerequisites: MATH 1101 or 1111 with a "C" or better.

ACCT 2102. Principles of Accounting II. 3-0-3 Units.

Examines the underlying theory and application of managerial accounting concepts. Stresses the study of financial and non-financial information for use by internal decision makers and the role of managerial accounting in a business environment.(F, S, M)

Prerequisites: ACCT 2101 with a "C" or better.

ACCT 3100. Intermediate Accounting I. 3-0-3 Units.

Studies the concepts and standards for presentation and disclosure of general purpose financial statements in accordance with GAAP. The focus is on financial statement analysis and the theory and issues related to measurement of assets.(F)

Prerequisites: ACCT 2101, ACCT 2102, both with a "C" or better.

ACCT 3200. Intermediate Accounting II. 3-0-3 Units.

Focuses on theory and issues related to recognition and measurement of liabilities, stockholders' equity, and other issues related to financial reporting.(S)

Prerequisites: ACCT 3100 with a "C" or better.

ACCT 3300. Tax Accounting & Reporting I. 3-0-3 Units.

Examines the federal taxation of individuals and taxation of property transactions. Tax research and ethics and responsibilities for accounting professionals are also introduced.(F)

Prerequisites: ACCT 2101, ACCT 2102, both with a "C" or better.

ACCT 3500. Forensic Accounting. 3-0-3 Units.

A study of the various techniques for preventing, detecting, investigating and resolving occupational fraud.(M)

Prerequisites: ACCT 2101 with a "C" or better.

ACCT 3600. Accounting Information Systems. 3-0-3 Units.

The course will also introduce students to computerized accounting information systems such as SAP. Other major topics covered will include internal controls, enterprise risk management, big data in accounting, forensic techniques, and auditing through an AIS. Students will learn to solve accounting problems and perform data analytics using spreadsheet, database, and visualization applications such as Excel, Access, and Power BI.(S)

Prerequisites: ACCT 2101, ACCT 2102, both with a C or better.

ACCT 3800. Understanding Financial Statement. 3-0-3 Units.

This course focuses on the understanding, interpreting, and analyzing of financial statements for corporations, local governments, and nonprofit organizations.(F, S)

Prerequisites: ACCT 2102 with a "C" or better.

ACCT 4100. Intermediate Accounting III. 3-0-3 Units.

Examines the theoretical foundation and structure of accounting as they relate to the presentation of the financial statements. Emphasis will be placed on the analysis of consolidations, statements of cash flows, deferred taxes, earnings per share, and other financial reporting considerations.(F)

Prerequisites: ACCT 3200 with a "C" or better.

ACCT 4300. Tax Accounting & Reporting II. 3-0-3 Units.

Explores the federal taxation of business entities, including C corporations, partnerships, S corporations, estates, and trusts. Analyzes the treatment of property transactions within these entities.(S)

Prerequisites: ACCT 3300 with a "C" or better.

ACCT 4400. Cost Accounting. 3-0-3 Units.

Focuses on planning, budgeting, performance measures and cost measures in the corporate environment.(S)

Prerequisites: ACCT 2101, ACCT 2102, both with a "C" or better.

ACCT 4501. Auditing. 3-0-3 Units.

Students taking this course will learn about planning, designing, performing, and completing financial statement audits. Student will also learn about the professional standards guiding the conduct of audits and the legal, regulatory, and ethical environment affecting them.(F)

Prerequisites: ACCT 3200 with a C or better.

ACCT 4700. Independent Study in Acct. 0-0-3 Units.

Supervised in-depth individual research and study of one or more current topics in Accounting in conjunction with an associated major project. Students will be required to prepare a formal report and presentation of the research topic and project. (F, S, (only available with coordination with accounting faculty))

Prerequisites: ACCT 3200 with a "C" or better.

ACCT 4701. Auditing. 3-0-3 Units.

Students taking this course will learn about planning, designing, performing, and completing financial statement audits. Student will also learn about the professional standards guiding the conduct of audits and the legal, regulatory, and ethical environment affecting them.(F)

Prerequisites: ACCT 3200 with a "C" or better.

ACCT 4800. Special Topics in Accounting. 3-0-3 Units.

Examines current, relevant topics in the field of Accounting. Each special topic course will cover a new current topic.

Prerequisites: ACCT 3100 with a "C" or better.

ACCT 4900. Accounting Internship. 0-0-3 Units.

Provides students with on-site work experience in Accounting through a coordinated academic internship experience with a pre-approved employer. A portfolio chronicling the work experience, a project relating relevant academic literature to the Accounting internship experience, and a final presentation encompassing the entire internship experience are required to receive academic credit. By permission of the Internship Coordinator.

Prerequisites: ACCT 3100, plus an additional 3 credit hours of upper division ACCT, and 3 credit hours of any upper division business course, all with a "C" or better.

Business Administration Courses

BUSA 2106. The Environment of Business. 3-0-3 Units.

Introduces the political, social, legal, ethical, environmental, and technological issues that affect or are affected by business decisions. Topics include stakeholder analysis, social responsibility, ethics, globalization, business-government relations, and fair trade. (F, S, and Mountain Campus (Fall))

BUSA 2201. Fundamentals of Computer Appli. 3-0-3 Units.

Assures a basic level of computer applications literacy to include spreadsheet, database, word processing, and presentation software. (F, S, M, and Mountain Campus (S))

Prerequisites: MATH 1101 or higher.

BUSA 2850. Business Statistics. 3-0-3 Units.

Emphasizes applications of statistics in business. Topics include methods of presenting data, numerical measures and correlation, probability theory and probability distributions, sampling distributions, estimation, hypothesis testing, and linear regression. Microsoft Excel is an integral part of the course and is used in all aforementioned topics. (F, S, M) Prerequisite: BUSA 2201

BUSA 3055. Quantitative Analysis Bus Prob. 3-0-3 Units.

Develops analytical skills for business decision making using Microsoft Excel. Topics include time-series forecasting, profit models, optimization, simulation and decision analysis. Excel is used in all of the aforementioned topics extensively.(S)

Prerequisites: ACCT 2102, BUSA 2201, BUSA 2850, and ECON 2106, all with a "C" or better.

BUSA 3060. Business Law. 3-0-3 Units.

Covers the source of law and courts, and introduces tort law along with the historical, economic, political and ethical considerations in business and the impact of regulatory and administrative law on business. Topics include property law, contracts, and environmental issues.(F, S) Prerequisites: BUSA 2106, ECON 2105, ECON 2106, all with a "C" or better.

BUSA 3070. Business Ethics. 3-0-3 Units.

Defines ethics, explores models of personal ethics, and reviews ethics in a variety of professional fields. In addition the course examines the relationship between business ethics and corporate social responsibility. Topics include corporate governance, trust and honesty in business, the role of ethics in managerial decision-making and behavior, the ethical use of information, and international ethics.(F, S)

Prerequisites: BUSA 2106, ECON 2105, ECON 2106, all with a "C" or better.

BUSA 3301. Business Communications. 3-0-3 Units.

This course is designed to prepare students to write and speak in a variety of business settings; to communicate effectively with business audiences by addressing strategic issues such as crisis communication, management of communication programs in a social media environment; communication skills with new technologies; and building key strategic and interpersonal relationships in business. The course also emphasizes basic skills in report writing and researching for sources, as well as writing effective business memos.(F, S, M)

Prerequisites: BUSA 2106, COMM 1110, and ENGL 1102, all with a "C" or better.

BUSA 3351. International Business. 3-0-3 Units.

This course provides a broad overview of international business and trade, and the impact of the international business environment on management decisions. Topics of the course include international business basics such as trade, barriers to trade, and the relationship between international business and international relations; effects of international business decisions of culture, political, legal, and economic forces; effects of government intervention and the role of social and economic aid organizations.(F, S, M)

Prerequisites: BUSA 2106, ECON 2105, ECON 2106, all with a "C" or better.

BUSA 3531. Data Cleaning & Visualization. 3-0-3 Units.

The course introduces skills for cleaning and restructuring data suitable for visualization using Excel functions and Power Query; for analyzing the data using Pivot Table and Power Pivot; and for visualizing the data using Power BI. A Windows PC is required.(F,S, M)

Prerequisites: ACCT 2102, BUSA 2850, and ECON 2106, all with a C or better.

BUSA 3532. Bus Analytics/Data Mining. 3-0-3 Units.

The course introduces students to business analytics and data mining. Topics include introduction to business analytics, data visualization, data transformation, cluster analysis, association analysis, decision trees, logistics regression, neural network and model performance evaluation. (F)

Prerequisites: BUSA 2850 and BUSA 3531, both with a "C" or better.

BUSA 3701. Prof Development Seminar. 1-0-1 Unit.

This class is designed to aid students in transitioning from the academic world to a professional business work environment. It will provide students with experience in applying for jobs, interviewing, networking, and business etiquette as well as expose them to other relevant and timely topics for advancing in the business world.(F, S)

Prerequisites: BUSA 3301 with a "C" or better.

BUSA 4900. Business Internships. 0-0-3 Units.

Provides students with on-site work experience in Business through a coordinated academic internship experience with a pre-approved employer. A portfolio chronicling the work experience, a project relating relevant academic literature to the Business internship experience, and a final presentation encompassing the entire internship experience are required to receive academic credit. By permission of the Internship Coordinator. (F, S) Prerequisite (s): 9 credit hours of upper division in ACCT, BUSA, MARK, MGIS, MNGT, or OPMT of which 3 credit hours must be in BUSA; and all with a "C" or better.

Economics Courses**ECON 2105. Principles of Macroeconomics. 3-0-3 Units.**

Describes and analyzes macroeconomic principles. Topics covered include the scope and method of economics, national income/output analysis, employment/ unemployment, inflation, fiscal policy, monetary policy, and international finance. (F, S)

Prerequisites: MATH 1101 or 1111 with a grade of "C" or better.

ECON 2106. Principles of Microeconomics. 3-0-3 Units.

Describes and analyzes microeconomic principles. Topics covered include demand and supply theory, output and price determination, market structure, income distribution, government regulation of business, labor organizations, and international trade. (F, S)

Prerequisites: MATH 1101 or 1111 with a grade of "C" or better.

ECON 3109. Managerial Economics. 3-0-3 Units.

Economics is frequently described as the science of decision-making under scarcity (at any given time we want more things than we can obtain, given available resources) and this is a good description of the subject of this course. Students will apply economic tools and basic statistics to solve managerial problems faced by entrepreneurs, managers and government regulators. Typical topics include demand analysis and estimation, consumer theory, cost functions, market structures and other microeconomics subject. (S) Co-requisite: FINC 3056.

Prerequisites: ECON 2105, ECON 2106, both with a "C" or better.

ECON 3110. International Trade. 3-0-3 Units.

An introduction to international trade, with a focus on comparative advantage and gains from trade. Covers conventional trade models, trade policy with a focus on tariffs and quotas, measurement of a nation's balance of payments, foreign exchange rate determination, and operation of the international monetary system, and global organizations such as the World Trade Organization (WTO) and trade agreements such as the North American Free Trade Agreement (NAFTA). (M)

Prerequisites: ECON 2105 (concurrent), ECON 2106 with a "C" or better.

ECON 3112. Money and Banking. 3-0-3 Units.

Presents a comprehensive upper-level course in financial institutions, financial markets, bank management, and money and banking. This introduction to the operation of the US financial system describes the US financial institutions, instruments and markets; explains how the financial system interacts with the rest of the economy; and considers how the system changes through time. (F)

Prerequisites: FINC 3056 with a "C" or better.

ECON 4101. Applied Econometrics. 3-0-3 Units.

Standard econometric techniques are applied to various topics in economics. Techniques include models for cross-section data, such as limited dependent variable models, selectivity techniques, count data models, and models for panel data. Students will conduct statistical analyses and model evaluation. (S)

Prerequisites: Statistics (one of the following: BUSA 2050, BUSA 2850, BUSA 3050, MATH 1401, or MATH 2200, all with a "C" or better.

ECON 4700. Independent Study Economics. 0-0-3 Units.

Supervised, in-depth individual research and study of one or more current topics in economics in conjunction with an associated major project. Students will be required to prepare a formal report and presentation of the research topic and project. Only available with coordination with economic faculty.

Prerequisites: ECON 2105, ECON 2106, and FINC 3056, all with a "C" or better.

ECON 4800. Special Topics in Economics. 3-0-3 Units.

Examines current, relevant topics in field of Economics. Each special topics course will cover a new current topic. Co-requisite: FINC 3056

ECON 4900. Economics Internships. 0-0-3 Units.

Provides students with on-site work experience in economics through a coordinated academic internship experience with a pre-approved employer. A portfolio chronicling the work experience, a project relating relevant academic literature to the economic internship experience, and a final presentation encompassing the entire internship experience are required to receive academic credit. By permission of the Internship Coordinator. (F, S)

Prerequisites: FINC 3056 (Grade "B" or Better), plus an additional 3 credit hours of upper division FINC or ECON, and 3 credit hours of any upper division business course, all with a "C" or better.

Logistics Supply Chain Mngt Courses**LSCM 3251. Principles of Supply Chain Mng. 3-0-3 Units.**

Introduces students to an organization's resources and processes in its efforts to create products or services. The set of resources planned and managed includes the work force, equipment, materials and information. Topics include coverage of operations strategy and managing change, product design, process selection and planning, and controlling the supply chain. (F, S)

Prerequisites: BUSA 2850, COMM 1110, ENGL 1102, all with a "C" or better.

LSCM 3252. Strategic Supply Management. 3-0-3 Units.

This course reviews the major theories and concepts underlying upstream supply chain tiers and processes, and how they strategically contribute to the movement of goods, services, and finances through the organization's overall supply chain management function, including how this contributes to overall organizational competitive advantage in the marketplace. (F)

Prerequisites: FINC 3056, LSCM 3251, MNGT 3051, MARK 3010, all with a C or better.

LSCM 3360. Business Negotiations. 3-0-3 Units.

Students will develop the negotiation skills needed to produce more creative and satisfying agreements and avoid the worst kind of compromises. The class will focus on using theory and negotiation simulation exercises as the primary pedagogical tool. (S)

Prerequisites: BUSA 3301 with a C or better.

LSCM 4253. Integrated Material/Supply Chn. 3-0-3 Units.

Examines the technology, tools, and practices of modern integrated materials sourcing and logistics. Topics include distribution requirements planning, continuous replenishment, just-in-time, and efficient replenishment.(S)

Prerequisites: LSCM 3251 with a "C" or better.

LSCM 4288. Logistics. 3-0-3 Units.

Examines the fundamental elements of channel systems and various institutions that utilize such systems. Distribution models that describe different industries will be investigated. These models will include ways to assess the legal environment and how price is impacted by channel relationships.(F)

Prerequisites: LSCM 3251 with a "C" or better.

LSCM 4503. Quality Management Systems. 3-0-3 Units.

Examines the continuous quality management and improvement philosophy. Topics include strategic management, quality assessment, teams, the role of leadership, lean manufacturing, tools for improving, quality processes, techniques for charting attribute and variable data, Statistical Process Control, Six-Sigma, and lean manufacturing. (Occasionally)

Prerequisites: MNGT 3051 and LSCM 3251, both with a "C" or better.

LSCM 4700. Independent Study LSCM. 0-0-3 Units.

Supervised, in-depth individual research and study of one or more current topics in Logistics and Supply Chain Management in conjunction with an associated major project. Students will be required to prepare a formal report and presentation of the research topic and project. Only available with coordination with Logistics faculty. (F, S) Available with coordination with Logistics faculty.

Prerequisites: LSCM 3251 with a "C" or better.

LSCM 4800. Special Topics LSCM. 3-0-3 Units.

Examines current, relevant topics in the field of Logistics and Supply Chain Management. Each special topics course will cover a new current topic.

Prerequisites: LSCM 3251 with a "C" or better.

LSCM 4900. LSCM Internship. 0-0-3 Units.

Provides students with on-site work experience in Logistics and Supply Chain Management through a coordinated academic internship experience with a pre-approved employer. A portfolio chronicling the work experience, a project relating relevant academic literature to the Operations Management internship experience, and a final presentation encompassing the entire internship experience are required to receive academic credit. By permission of the Internship Coordinator.(F,S)

Prerequisites: LSCM 3251 (Grade of "B" or Better), plus an additional 3 credit hours of upper division MNGT or LSCM, and 3 credit hours of any upper division business course, all with a "C" or better.

Management Information Systems Courses**MGIS 3351. Principles Mgmt Info Systems. 3-0-3 Units.**

Covers essential business aspects of information systems such as networks, databases, the Internet, management reporting, software development, computer hardware, and information ethics. The course also examines the use of information systems for managerial decision-making and for gaining strategic advantage. Students will experience hands-on system activities associated with course concepts.(F, S)

Prerequisites: BUSA 2201, COMM 1110, ENGL 1102, all with a "C" or better.

MGIS 3352. Management Application Prog I. 3-0-3 Units.

Develops a knowledge of language and file structures for computer-based business applications using a major business procedural-oriented programming language. Students will write computer programs on individual and/or team projects.(F)

Prerequisites: BUSA 2201 with a "C" or better.

MGIS 3353. Management Applications Programming II. 3-0-3 Units.

Emphasizes top-down design, structured techniques, testing and modularity. Emphasis placed on development of correct efficient programs that are easy to maintain. Includes problem analysis, problem design, documentation, testing and debugging. Introduces application development using an object-oriented language.(S)

Prerequisites: BUSA 2201 and MGIS 3352, both with a "C" or better.

MGIS 3356. Database Management Systems. 3-0-3 Units.

Focuses on the use of database systems in business to support information systems and decision-making. Topics include database concepts, data modeling, database design and development, administration of database systems, and database technologies. Students will have hands-on experience developing a database application.(F)

Corequisites: MGIS 3351 with a "C" or better.

MGIS 4358. Web-based MIS. 3-0-3 Units.

Examines the process of developing business information systems with a significant web component. Topics include organizational considerations involved in developing and maintaining a web-enhanced MIS, and system considerations such as usability and other human-computer-interaction (HCI) issues, general and database web-design principles, and programming of web-enhanced systems. Students will develop a web site for a real or hypothetical organization. (As needed) ;

Prerequisites: MGIS 3356 with a "C" or better.

Corequisites: MGIS 3353.

MGIS 4360. Databases: Big Data & Analyt. 3-0-3 Units.

Provides an overview of database management systems for big data and analytics. Topics include an overview of analytics and related data requirements, data modeling, data management and an introduction to prominent types of database systems designed to support big data and analytics. Students will have hands-on experience with various database technologies.(S)

Prerequisites: MGIS 3356 with a "C" or better.

MGIS 4580. Enterprise Management Systems. 3-0-3 Units.

Covers the major components of enterprise management systems that support core business and supply chain management functions such as accounting, planning, sourcing, production, material flow, inventory management, warehouse management, sales and transportation. Students will have hands-on experience with a commercial-grade enterprise management system.(F)

Prerequisites: LSCM 3251 and MGIS 3351, all with a "C" or better.

MGIS 4700. Independent Study MGIS. 0-0-3 Units.

Supervised, in-depth individual research and study of one or more current topics in MIS in conjunction with an associated major project. Students will be required to prepare a formal report and presentation of the topic research and project. Only available with coordination with MIS faculty.

Prerequisites: MGIS 3351 with a "C" or better.

MGIS 4701. Systems Analysis & Design. 3-0-3 Units.

Examines the process of developing business information systems.

Topics include requirements analysis and specification, systems modeling, and systems design techniques. Structured and object-oriented tools and techniques are introduced. A major component of the course is the analysis, design and development of a business system as a term project.(S)

Prerequisites: MGIS 3352 and MGIS 3356 (formerly MGIS 4356), and all with a "C" or better.

MGIS 4800. Special Topics in MIS. 3-0-3 Units.

This special topics course provides an overview of database management systems for big data and analytics. Topics include an overview of analytics and related data requirements, data modeling, data management and an introduction to prominent types of database systems designed to support big data and analytics. Students with hands-on experience with various database technologies.

Prerequisites: MGIS 3351 with a "C" or better.

MGIS 4900. Mgmt Info System Internships. 0-0-3 Units.

Provides students with on-site work experience in Management Information Systems through a coordinated academic internship with a pre-approved employer. A portfolio chronicling the work experience, a project relating relevant academic literature to the Information Systems internship experience, and a final presentation encompassing the entire internship experience are required to receive academic credit. By permission of the Internship Coordinator.(F,S)

Prerequisites: MGIS 3351 (Grade of "B" or Better), plus an additional 3 credit hours of upper division MGIS, and 3 credit hours of any upper division business course, all with a "C" or better.