INFORMATION SYSTEMS AND ANALYTICS

Information Systems and Analytics (ISA) is an interdisciplinary department that considers how technology can facilitate business decisions to guide organizations to success.

Our department offers three STEM-designated undergraduate majors: Management Information Systems, Accounting & Information Systems, and newly approved Business Analytics. Our curriculum focuses on the intersection of key areas such as big data and business intelligence, blending theory and strategy with hands-on experience. You will take courses that combine theoretical concepts with real-life applications and participate in labs and projects where you and your peers will collaborate to develop software programs and business applications.

NATIONALLY RANKED

The Leavey School of Business ISA program is consistently ranked among the top in the nation. For 2025, U.S. News and World Report ranked the Management Information Systems (MIS) program #20 nationally in their Best School Specialty Rankings.

CAREERS FOR INFORMATION SYSTEMS & ANALYTICS

Students experience a diverse range of internships, such as risk and financial advisory, data science, assurance and audit analysts, supply chain and operational management. Graduates of the department have pursued a variety of careers after graduation, including management consulting, operations management, technical sales and marketing, and roles as business analysts in public, private, service and non-profit sectors. Some will even continue on to various master's degrees or doctoral programs.

FACULTY RESEARCH

ISA faculty conducts research on information systems, business analytics, and operations management. Their research covers topics ranging from artificial intelligence to operations analytics, from social media to supply chain, from information security and privacy to quantitative modeling. Their research has appeared within leading academic journals, including Management Science, Information Systems Research, Management Information Systems Quarterly, Operations Research, Manufacturing & Service Operations Management, Production and Operations Management, INFORMS Journal on Computing, and IEEE/ACM Transactions.



Requirements for the Business Analytics (BA) Major* Introduction to Programming with Python **OMIS 30 OMIS 109 Prescriptive Analytics**

OMIS Advanced Business Analytics (anticipated in 2026-27) **OMIS** Revenue Management and Analytics (anticipated in 2026-27)

Predictive Analytics

Applied Econometrics

Three courses from:

OMIS 115

ECON 173

Accounting Information Systems ACTG 134 Financial Information Systems ACTG 155

OMIS 105 Database Management Systems

Data Warehousing and Business Intelligence OMIS 113

OMIS 114 Data Science with Python

Applied Time Series Analysis ECON 174

FNCE 146 Introduction to Risk Management

Requirements for the Management Information Systems (MIS) Major*

OMIS 30	Introduction to Programming with Python
OMIS 105	Database Management Systems
OMIS 106	Systems Analysis and Design

OMIS 107 Systems Programming

Three courses from:

OMIS 111	Computer Communications Systems
OMIS 112	Data Visualization

Data Warehousing and Business Intelligence OMIS 113

OMIS 114 Data Science with Python Applied Machine Learning OMIS 116

Software Development Project OMIS 117

OMIS 118 Social Media Analytics OMIS 120 Web Programming

Enterprise Resource Planning Systems OMIS 135

Object-Oriented Programming OMIS 137

OMIS 150 Financial Information Systems

*In addition to University Core Curriculum and Leavey School of Business requirements for B.S. degree in Commerce.

BUSINESS ANALYTICS MINOR

Business Analytics enables students to become adept at scientific, data-driven analysis of all aspects of business operations. Students learn how to use statistics, data management, data mining, and predictive and prescriptive modeling to turn data into information and insights to make business decisions. Open to business students only.

MANAGEMENT INFORMATION SYSTEMS (MIS) MINOR

Management Information Systems enables non-MIS majors to enhance their understanding of the information technology that drives today's business. Students will learn how to create and manage information systems to support business functions.



ISA Department

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^{**}For the Accounting & Information Systems (AIS) Major Requirements, see the Accounting Department sheet or visit our website