DEPARTMENT OF ANALYTICS, INFORMATION SYSTEMS, AND SUPPLY CHAIN

Chair: Gerald Kohers, Ph.D. (kohers@shsu.edu); (936) 294-1256

Website: Department of Analytics, Information Systems, and Supply Chain Management (https://www.shsu.edu/academics/colleges/business-administration/analytics-information-systems-supply-chain/)

Vision

The Department of Analytics, Information Systems, and Supply Chain aspires to develop professionals to be leaders by offering a high quality education in business analytics by offering undergraduate major degree programs in Information Systems and Supply Chain and a Master of Science degree in Project Management (https://catalog.shsu.edu/archives/2025-2026/graduate-and-professional/college-departments/business-administration/analytics-information-systems-and-supply-chain/project-management-ms/).

Mission

The Analytics, Information Systems, and Supply Chain Department's mission is to equip students with the requisite knowledge and skills in business analytics, information systems, supply chain management, project management, and related careers. The department is committed to excellence in teaching, intellectual contributions, and service.

Academic Programs

The **Management Information Systems degree program (https://catalog.shsu.edu/archives/2025-2026/undergraduate/colleges-academic-departments/business-administration/analytics-information-systems-and-supply-chain/bba-management-information-systems/) (MIS)** is designed to provide students with the business and technical knowledge and skills necessary to function in areas such as database management, software development, information technology (IT) infrastructure management, and IT project management. The MIS program also incorporates SAP and Microsoft certification exams in those areas.

The **Supply Chain Management degree program (https://catalog.shsu.edu/archives/2025-2026/undergraduate/colleges-academic-departments/business-administration/analytics-information-systems-and-supply-chain/bba-supply-chain-management/) (SCMG)** is targeted toward undergraduates pursuing a career in various supply chain related areas in a wide array of industries. Students pursuing the supply chain major will acquire knowledge, analytical skills, tools, and techniques to meet the challenges in supply chain related positions. The major will enable students to develop competencies and prepare them to perform in the supply chain arena, both functionally and strategically.

- Bachelor of Business Administration, Major in Management Information Systems (https://catalog.shsu.edu/archives/2025-2026/undergraduate/colleges-academic-departments/business-administration/analytics-information-systems-and-supply-chain/bba-management-information-systems/)
- Bachelor of Business Administration, Major in Supply Chain Management (https://catalog.shsu.edu/archives/2025-2026/undergraduate/colleges-academic-departments/business-administration/analytics-information-systems-and-supply-chain/bba-supply-chain-management/)
- Minor in Business Data Analytics (https://catalog.shsu.edu/archives/2025-2026/undergraduate/colleges-academic-departments/business-administration/analytics-information-systems-and-supply-chain/minor-data-analytics/)
- Minor in Management Information Systems (https://catalog.shsu.edu/archives/2025-2026/undergraduate/colleges-academic-departments/business-administration/analytics-information-systems-and-supply-chain/minor-management-information-systems/)
- Minor in Supply Chain Management (https://catalog.shsu.edu/archives/2025-2026/undergraduate/colleges-academic-departments/business-administration/analytics-information-systems-and-supply-chain/supply-chain-management/)

Student Organizations

The following student organizations are affiliated with the Department of Analytics, Information Systems, and Supply Chain:

- Information Technology Students Association (ITSA)
- Association for Supply Chain Management (ASCM)

Scholarships

Scholarships are available on a competitive basis. Students are encouraged to apply for scholarships using the Scholarships4Kats (https://shsu.academicworks.com/) program on the Financial Aid (http://www.shsu.edu/dept/financial-aid/) website. The Scholarships4Kats program is a single application that will allow the student to apply for most scholarships available on campus whether at the departmental, college, or university-level. The deadline for applying for College of Business Administration scholarships is December 31. The specific scholarships available in the Department of Management and Marketing vary from year-to-year and may include:

- Ed and Daphne Sower Memorial Scholarship (available to freshmen majoring in Supply Chain Management)
- Lovell Family Endowed Scholarships
- Victor E. and Judith Sower Scholarship

Please see the College of Business Administration section (https://catalog.shsu.edu/archives/2025-2026/undergraduate/colleges-academic-departments/business-administration/) for information on college and university-level scholarships.

Business Analysis (BANA)

BANA 2372. Business Analysis. 3 Hours. [TCCN: BUSI 2305]
An introduction to the use of business statistics. Topics include: data visualization, descriptive statistics, probability, discrete and continuous distributions, statistical modeling, sampling distributions, and statistical inference.
Prerequisite: MATH 1314 or MATH 1324 or MATH 1410 or MATH 1420.

BANA 3363. Inter Business Analysis. 3 Hours.
This course is a continuation of BANA 2372 and is designed to introduce the use of statistics as a business tool in the face of incomplete knowledge. Students will learn the following topics in this course: estimation, hypothesis testing, analysis of variance, goodness-of-fit measures, correlation, simple and multiple regression.
Prerequisite: BANA 2372 or MATH 1342.

BANA 4080. Independent Study. 3 Hours.
The credit in this course varies according to the work performed. The student may pursue special studies for which a special course is not organized. Variable Credit (1 to 3).
Prerequisite: Departmental approval.

BANA 4365. Introduction To Business Forecasting & Economics. 3 Hours.
Students apply descriptive statistical methods and inferential principles of estimation and hypothesis testing to create and evacuate forecast of business and economic data. Course Equivalents: ECON 4365
Prerequisite: 42 completed hours and ECON 2301 and ECON 2302 and BANA 3363 or MATH/STAT 3379.

BANA 4373. Advanced Business Analytics for Economics and Business. 3 Hours.
Students learn how to analyze data using advanced statistical methods, tools and software including those used in economic research and policy analysis. Topics include data preparation, data visualization, and deployment of automated analytics pipelines using the appropriate computer software.
Prerequisite: BANA 2372 or MATH 1342.

Management Information Systems (MGIS)

MGIS 1301. Introduction to Information Systems. 3 Hours.
Students are provided with the knowledge and skills necessary to succeed in today's computing society. Students make use of hardware and software to efficiently and effectively solve problems and make better decisions.

MGIS 1305. Business Computer Applications. 3 Hours. [TCCN: BCIS 1305]
This course is designed to develop student proficiency with business software. These skills include producing properly formatted business documents and reports, creating computerized spreadsheets for problem-solving and decision-making, and as a tool for preparing effective presentations. Course Equivalents: BUAD 1305 .

MGIS 3310. Principles of Management Information Systems (MIS). 3 Hours.
Students are introduced to the management and use of information systems in organizations. Material presented is selected to increase the student's literacy in this rapidly changing field, including commonly used acronyms and emerging technologies. Organizational applications of information systems are discussed for the functional areas of the firm.
Prerequisite: 42 hours.

MGIS 3315. Programming for Business. 3 Hours.
Students are introduced to the implementation of common business applications using current visual application development platforms. Basic structured and object-oriented computer programming techniques are covered in the context of the creation of business-oriented systems. Course Equivalents: MGIS 2320
Prerequisite: CSTE 1330 or BUAD 1305 or MGIS 1301 and MATH 1324 or 1314 or MATH 1420.

MGIS 3320. E-Commerce Implementation. 3 Hours.
Students are introduced to the implementation of common business applications for e-commerce using Internet related technologies. Hypertext Markup Language (HTML), Cascading Style Sheets (CSS), scripting language(s), and other current technologies are covered in the context of e-commerce. Course Equivalents: MGIS 4320
Prerequisite: MGIS 3310 and 42 credit hours.

MGIS 3330. Business Database Management. 3 Hours.
Students are introduced to databases. Design and implementation principles, including entity-relationship modeling and normalization are studied and applied in order to create an organizational database. Students become better computer users, who are more knowledgeable about the uses of databases in solving business problems, and learning a new way to think about business and its information needs.
Prerequisite: MGIS 3310.

MGIS 4080. Independent Study. 1-3 Hours.
The student may pursue studies for which a special course is not organized. The credit in this course varies according to the work performed. Variable Credit (1 to 3). Course Equivalents: MGIS 4380 .

MGIS 4085. Special Topic. 1-3 Hours.
Students study emerging information technologies. Class participants learn about the technical fundamentals and business applications associated with information technologies. Variable Credit (1 to 3). Course Equivalents: MGIS 4385
Prerequisite: MGIS 3310.

MGIS 4315. Decision Analysis & Analytics. 3 Hours.
Students apply topics related to business analytics. A major focus is placed on the importance of collecting and analyzing data by creating models for making better decisions and improving business practices and strategies. Topics covered include descriptive analytics, predictive analytics, and prescriptive analytics. Students learn to apply business analytic tools, and to communicate the results. Emphasis is placed on applications, concepts and interpretation of results.
Prerequisite: BANA 2372 or MATH 1342.

MGIS 4330. Business Database Management II. 3 Hours.
Students are provided knowledge and skills for database design, development, and implementation in a multi-user business environment, using a database management system (DBMS). Structured Query Language (SQL), a database procedural language, and other current technologies are covered in the context of DBMS.
Prerequisite: MGIS 3330.

MGIS 4340. Systems Analysis & Design. 3 Hours.
Students acquire knowledge and skills for analyzing an organization's information needs and designing, evaluating, and implementing computer-based information systems using a structured approach. Special attention is given to understanding the needs of an organization and translating those needs into a solution recommendation following project management best practices and a structured methodology. Course Equivalents: MGIS 3360
Prerequisite: MGIS 3310.

MGIS 4350. Business Network Management. 3 Hours.
Students learn the current and emerging telecommunications services and networking technologies with emphasis on their strengths, limitations, and business applications. In addition, students investigate aspects of installing and managing networks within business organizations. Covered topics may include commonly used network media, operating systems, LAN and WAN technologies, inter-networking approaches, and media.
Prerequisite: MGIS 3310.

MGIS 4360. Design and Implementation of Enterprise Resource Planning. 3 Hours.
Students study the types of issues that managers need to consider in implementing cross-functional integrated systems. Students learn the general nature of enterprise computing, re-engineering principles, and the technical foundations of client/server systems and enterprise information architectures. Topics may include the tools and methodology, modules, processes, industry initiatives, and different types of enterprise information systems, primarily SAP ERP.
Prerequisite: MGIS 3310.

MGIS 4365. Business Process Integration Using ERP System Configuration. 3 Hours.
Students gain an understanding and appreciation of the role that Enterprise Resource Planning (ERP) systems play in today's business environment. Students use an ERP system to gain an understanding of Business Process Implementation and how an entity's different functions are integrated and focused on accomplishing a common goal. Practical aspects of configuring an ERP system will also be explored.
Prerequisite: MGIS 3310 or ACCT 3324.

MGIS 4389. Internship. 3 Hours.
Students are provided with an opportunity to apply academic skills in a practical work environment. (See Internship Coordinator prior to enrolling.) All internships must be approved in advance in order to receive credit.
Prerequisite: Department approval and minimum overall and COBA GPA of 2.5.

Supply Chain Management (SCMG)

SCMG 1301. Project Management Essentials and Components. 3 Hours.
Students explore the essential concepts of project management and learn to apply this knowledge using various applications. Students gain knowledge of project fundamentals including an understanding of the difference between predictive and adaptive project methodologies. Pre-req: None.

SCMG 3370. Operations Management. 3 Hours.
Students address issues pertaining to the operations function within manufacturing and service firms competing in a global environment. The relationship of operations to other organizational functions are investigated. Topics may include decision making, project management, forecasting, capacity planning, facilities design and location, process and product design, inventory management, and quality assurance. Course Equivalents: MGMT 3370, MGMT 4370
Prerequisite: 42 credit hours, MGMT 3310, and BANA 2372 or MATH 1342.

SCMG 3372. Supply Chain Management. 3 Hours.
This course is a study of how different organizations can effectively coordinate to form the supply chain of a product or a service in order to deliver it to end consumers at the lowest cost possible while optimizing customer service levels. Students will learn the managerial principles and methods used to efficiently perform the sourcing, production, and distribution of products and services in a global environment. Topics include purchasing, supplier selection/development, materials handling, demand planning, risk management, transportation, warehousing, inventory management, and channel relationships. Course Equivalents: MGMT 3372, MGMT 4360
Prerequisite: 42 credit hours, SCMG 3370 (concurrent enrollment allowed), MKTG 3310.

SCMG 3374. Strategic Sourcing/Procurement. 3 Hours.
Students gain in-depth knowledge of the concepts, methods, and responsibilities of the purchasing function for manufacturing and service organizations. Topics may include the organizational role of strategic sourcing, procurement, contract and pricing practices, negotiation, quality assurance and reliability, inventory management, make-or-buy decisions, material management, and the acquisition of transportation and other services. Course Equivalents: MGMT 3374
Prerequisite: 42 credit hours and SCMG 3370.

SCMG 3376. Global Supply Chain Logistics. 3 Hours.
Students focus on the basic concepts and techniques of domestic and international logistics in the context of supply chain management. Topics may include the efficient flow and storage of both raw materials and finished goods, and the associated managerial activities needed for effective control of materials from their initial point of origin to their final point of consumption. Emphasis is placed on the strategic importance and competitive advantage logistics provides in a global marketplace, providing students the tools and methods necessary to analyze business logistics problems. Course Equivalents: MGMT 3376
Prerequisite: 42 credit hours and SCMG 3370.

SCMG 4350. Project Management. 3 Hours.
Students focus on the planning, implementation, and control of projects. Coverage includes the project management knowledge areas and lifecycle of projects. The appropriate intellectual foundation is established so that students can work, individually and in teams to solve project related problems. Course Equivalents: MGMT 4350
Prerequisite: 42 credit hours and BANA 2372 or MATH 1342.

SCMG 4365. Service Operations Management. 3 Hours.
Students address issues pertaining to the operations function within service organizations competing in a global environment. The relationship of operations to other organizational functions are investigated. Topics may include understanding services, new service development, service quality, process improvement, location decisions, capacity planning, waiting lines, forecasting, inventory management, and service supply relationships. Course Equivalents: MGMT 4365
Prerequisite: 42 credit hours, BANA 2372 or MATH 1342, and MGMT 3310.

SCMG 4375. Quality Management. 3 Hours.
Students study current topics in quality assurance management to include total quality control, statistical quality control, statistical process control, quality circles, and Deming's methods. An emphasis is placed on the systems approach to quality assurance. Course Equivalences: MGMT 4375
Prerequisite: 42 credit hours and BANA 2372 or MATH 1342.

SCMG 4376. Management Science. 3 Hours.
In this course, students will learn quantitative methods used in the analysis of business problems. Topics include: decision theory, linear programming, transportation and inventory models, Bayesian probability, and queuing theory. Course Equivalents: BANA 3364, MGMT 4376
Prerequisite: 42 credit hours and BANA 2372 or MATH 1342.

SCMG 4378. Supply Chain ERP. 3 Hours.
Students examine the tactical and operational management of supply chains using enterprise resource planning (ERP) systems. Topics focus on issues related to the creation of end-user value through supply chain cost reductions and/or service improvements. Students gain hands-on experience with software used by organizations to manage and improve the efficiency of their supply chains.
Prerequisite: 42 credit hours and SCMG 3372 (formerly MGMT 3372) Course Equivalents: MGMT 4378 .

Information forthcoming.