

BUSINESS ANALYTICS AND INFORMATION SYSTEMS, MINOR

Program Description

(for Business and Nonbusiness Majors)

This minor is designed for students who are interested in supplementing their major with business analytics and applied computer knowledge. Only 6 semester hours counted towards a major (including classes in the Business core) may be applied to a minor or certificate. A minimum of 12 hours must be taken at Texas A&M University-Corpus Christi. For additional information contact the academic advisor in the College of Business.

Program Requirements

Code	Title	Hours
Required Courses		
BAIS 2301	Computer Applications in Business	3
BAIS 3310	Management Information Systems Concepts	3
BAIS 3320	Database Management	3
BAIS 3330	Programing in Business Analytics	3
BAIS 4310	Decision Modeling in Business	3
Approved BAIS elective		3
Total Hours		18

Courses

BAIS 2301 Computer Applications in Business 3 Semester Credit Hours (3 Lecture Hours)

Survey of modern business computer hardware, software, and applications. Opportunities to create programs and use existing application software to solve various management information technology-oriented problems. Emphasizes the end-user's perspective, and interactions with management information technology.

BAIS 3310 Management Information Systems Concepts 3 Semester Credit Hours (3 Lecture Hours)

Provides an understanding of the importance of computer-based information in the success of the firm. Illustrates ways in which companies utilize computer systems to strategically compete within certain industries. Emphasis is on the role of information systems within each of the functional areas of business. Major concepts include data management, decision support, and management information systems. BUSI 0011, BAIS 2301, and Junior standing or above.

Prerequisite: BUSI 0011 and BAIS 2301.

BAIS 3311 Data Analysis and Statistics 3 Semester Credit Hours (3 Lecture Hours)

A study of descriptive statistics, probability distributions, the normal distribution, confidence intervals and hypothesis testing, regression analysis and chi square. BUSI 0011, MATH 1314 and BAIS 2301 or equivalents.

Prerequisite: (MATH 1314, 1324 or 1325) and BAIS 2301.

BAIS 3320 Database Management

3 Semester Credit Hours (3 Lecture Hours)

Concepts and methodology of data base planning, design, development, and management of the computerized data base of a management information system. The emphasis is on logical data base design and a study of hierarchical, network, and relational implementations. Normalization exercises are completed relative to the logical design of relational data bases. Exercises and assignments use a relational DBMS package. Junior standing or above.

BAIS 3330 Programing in Business Analytics

3 Semester Credit Hours (3 Lecture Hours)

This course introduces students to the fundamental techniques used in the development and programming of the software applications. This course is designed for students who have little or no previous computer programming experience. This course will use a scripting and/or visual development programming language. Junior standing or above.

BAIS 3340 Business Intelligence and Analytics

3 Semester Credit Hours (3 Lecture Hours)

Overview of important concepts of business intelligence, and the use of analytics, technologies, applications and processes used by organizations to gain data-driven insights. These insights and predictions can be used to aid decision-making and performance management across functional areas, including marketing, operations, and finance. Students will learn to extract and manipulate data, and create reports, scorecards and dashboards, including mobile apps. ONLY Juniors or Seniors or Post-Baccalaureate for BAIS 3340

BAIS 3350 Systems Analysis and Design

3 Semester Credit Hours (3 Lecture Hours)

Develops ability to analyze an existing information system within an organization, to identify information requirements, and to specify the functions of a new information system. Includes cost/benefit analysis of proposed information systems. Exercises and assignments use a Computer Aided Software Engineering (CASE) tool. Junior standing or above.

BAIS 3360 Business Data Communication and Networking

3 Semester Credit Hours (3 Lecture Hours)

Characteristics of contemporary business data communication components, their configurations, and their impact on management information systems design. Topics include designing, managing, securing, and implementing business data communication networks, and their integration into management information systems. Exercises and assignments use various data communication facilities. Junior standing or above.

BAIS 4310 Decision Modeling in Business

3 Semester Credit Hours (3 Lecture Hours)

Introduction to prescriptive analytic tools and techniques that can be used to analyze business decision problems and create business value. Topics may include linear programming, decision analysis, transportation and network modeling, inventory planning, queuing analysis, and simulation modeling. Students will have a hands-on learning experience with software such as Excel Solver to develop models and solve them. The applications could be from all functional areas.

Prerequisite: BAIS 2301 and 3311.

BAIS 4320 Data Mining for Business Intelligence

3 Semester Credit Hours (3 Lecture Hours)

In the information age, organizations can and do collect massive amounts of data. Yet organizations are often "data rich" but "information and knowledge poor". This course is designed to prepare business professionals who, by using analytical methods and data mining and data visualization tools will be able to harness the potential of data by extracting business intelligence that can be used to improve decisions and operations at various points in the value chain. BAIS 2301, BAIS 3311, BAIS 3320, and Junior standing or above.

Prerequisite: BAIS 2301, 3311 and 3320.

BAIS 4325 Electronic Commerce Management

3 Semester Credit Hours (3 Lecture Hours)

A broad overview of electronic commerce topics as they relate to various users. General coverage includes electronic commerce history, opportunities, limitations, and risks. Technical discussions include the internet, intranets, extranets, firewalls, security, protocols, servers, and browsers. Junior standing or above.

BAIS 4330 Predictive Analytics

3 Semester Credit Hours (3 Lecture Hours)

Predictive analytics involves extracting useful information from historical data to help predict the future outcomes of business decisions. Students will be introduced to the stages of the data analytics lifecycle and the various methods of predictive modeling for business.

Prerequisite: BAIS 3311.

BAIS 4340 Website Development for Business

3 Semester Credit Hours (3 Lecture Hours)

This course provides an understanding of the principles and techniques for client-side web development using HTML and CSS. Text editors and the website development software will be used to create and maintain websites. This course includes designing to meet web standards, including accessibility, usability, and workflow for web design. Junior standing or above.

BAIS 4350 IT Project Management

3 Semester Credit Hours (3 Lecture Hours)

This course covers issues related to managing projects in organizations. The course focuses on the management of projects and working as a team. Students are expected to draw on materials from other management information system courses, especially the System Analysis and Design, and Database Management courses.

Prerequisite: BAIS 3320.

BAIS 4360 Big Data Analytics

3 Semester Credit Hours (3 Lecture Hours)

This course is designed to provide a basic understanding of what big data analysis entails. The course intends to familiarize students with big data analysis as a tool for addressing substantive research questions. The course includes practical exercises to provide students with hands-on experience in handling and analyzing large, complex, and unstructured data.

Prerequisite: BAIS 3311, 3320 and 3340.

BAIS 4390 Current Topics in Business Analytics and Information Systems

1-3 Semester Credit Hours (1-3 Lecture Hours)

Selected topics for special study related to business analytics and information systems. Junior standing or above, and others depending on topic. Contact the Dean's office for information.

BAIS 4396 Directed Individual Study

1-3 Semester Credit Hours

Individual supervised study and a final report. Permission of instructor, Junior standing or above, and others depending on selected topic. Inquire at the Dean's office for information.

BAIS 4398 Internship in Business Analytics and Information Systems

1-3 Semester Credit Hours

Supervised practical experience in business computer systems. BAIS major, Junior standing or above, and others depending on selected internship. Students must be accepted prior to registration. May not be repeated for credit.