

# Business Systems and Analytics

Combining a strong business component with an in-depth study of state-of-the-art technology and analytics, the Business Systems and Analytics major is designed to prepare students for successful careers as business analysts and managers in any organizational environment. Typically embedded in the business units, analysts possess a thorough understanding of both business processes and the technologies that support them. Business analysts play a unique role, facilitating communication between the traditional IT area and the various business functions. The major is career-oriented as it provides the opportunity for internships and other professional experiences.

More information can be found online at <https://www.stetson.edu/other/academics/undergraduate/business-systems-and-analytics.php>.

## Learning Outcomes

Student learning outcomes describe what students know, understand and are able to do as a result of completing a degree program. The learning outcomes for this program are:

1. Apply problem-solving skills in the context of business systems and analytics through formula and calculation-based exercises
2. Demonstrate usage of tools and techniques relevant to business systems and analytics through application of industry leading software applications
3. Describe, research, and identify a selection of current and emerging technologies
4. Write effectively for a variety of audiences and for a variety of purposes in the context of business systems and analytics through article analysis and interpretation

## Minors

### Minor in Business Systems Analytics - 5 Units

Code	Title	Units
<b>Required Courses</b>		
BSAN 250	Business Systems & Analytics	1
<b>Elective Courses</b>		
Select three of the following:		3
ACCT 440	Data Analytics for Accounting	
BSAN 300	Programming for Analytics	
BSAN 323V	Health Anamatics: Analytics, Informatics and Healthcare	
BSAN 351V	Technology Globalization and Social Justice	
BSAN 360	Project Management	
BSAN 363	Cloud Computing	
BSAN 370	Electronic Commerce	
BSAN 382	Web Development	
BSAN 383	Descriptive Analytics and Visualization	
BSAN 390	Special Topics in Business Systems and Analytics	
BSAN 393	Communications Networks	

BSAN 398	Databases and Big Data
BSAN 461	Business Process Management
BSAN 463	Prescriptive Analytics
BSAN 465	Predictive Analytics
BSAN 481	Social Media Analytics
BSAN 328V	Applications Development for E-Business
BSAN 494	Business Analysis
SPTB 345	Sport Analytics
STAT 440Q	Forecasting
STAT 460Q	Experimental Design and Advanced Data Analysis

**Total Units** 4

## Advising Course Plans

### Advising Course Plans

- Business Systems and Analytics Major (<https://catalog.stetson.edu/undergraduate/business-administration/business-systems-analysis/business-systems-analytics-plan/>)

## Courses

### BSAN 111. Introduction to Business Analytics. 1 Unit.

This course provides an introduction to business analytics and builds quantitative skills using application software. By end of the course students will be able to apply broad statistical concepts and analyze data using Excel.

### BSAN 179. Chess. 0.25 Units.

An introduction to the game of chess. After presenting the basic principles of the game (how the pieces move and capture, checkmate and stalemate, etc.), the class will cover winning chess strategies and tactics. Students should be capable players by the end of the course. The class does not assume any previous knowledge of the game. Chess requires ability in strategic thinking, analytic decision making, and problem-solving - skills that are readily transferable to a variety of real-world contexts.

### BSAN 180. BSAN Elective. 1 Unit.

### BSAN 190. Special Topics in Business Systems and Analytics. 0.5 or 1 Units.

### BSAN 250. Business Systems & Analytics. 1 Unit.

This course provides the student with a thorough understanding of the issues and concerns surrounding the use and development of information systems and analytics. Designed to provide a broad perspective for understanding the nature of the use of business systems and analytics for competitive advantage and the management of information resources in traditional and extended organizations. Prerequisites: Excel Certification or BSAN 111 or Sophomore Standing.

**BSAN 285. Independent Study. 0.5 or 1 Units.****BSAN 290. Special Topics in Business Systems and Analytics. 0.5 or 1 Units.****BSAN 300. Programming for Analytics. 1 Unit.**

This course provides the student with an introduction to programming concepts and structures utilizing an object-oriented programming language. An in-depth coverage of object definitions, object properties, and object behavior is provided. Principles of programming style and good program design techniques are emphasized. Advanced projects cover business applications. Prerequisite: BSAN 111 or BSAN 250, or SOBA 201.

**BSAN 323V. Health Anamatics: Analytics, Informatics and Healthcare. 1 Unit.**

This course focuses on Stetson's Health and Wellness Value. This course in an interdisciplinary and integrative field involving the data, systems, technologies, analytics, and delivery to inform decision makers and improve the value-based delivery of healthcare. In addition, political, economic, social, technical, ethical, and legal implications of data-driven healthcare decision-making are explored from a global perspective. The healthcare industry generates nearly 1/3 of the world's data and healthcare will be the largest employment sector within the next decade. This course provides real-world rigor, reinforces principles of excellence in writing, and enables hands-on learning with enterprise leading SAS analytics global software, used at over 80,000 customer sites in approximately 150 countries. Junior Seminar.

**BSAN 328V. Applications Development for E-Business. 1 Unit.**

This course focuses on Stetson's Human Diversity Value. This course examines the design and implementation of web-based applications systems using an event-driven/object oriented development platform. Included is in-depth coverage of the technologies required for the implementation of E-Business web sites. Topics include E-Business web site design, Server-side development technologies, Cascading Style Sheets, Web Data Access, XML, and Ajax Web Development. A web application development project is used as a medium to allow students to practice their implementation skills as well as design side skills in the areas of database design and normalization, user interface design, program usability considerations, and the system development life cycle. Junior Seminar.

**BSAN 351V. Technology Globalization and Social Justice. 1 Unit.**

This course focuses on Stetson's Social Justice Value. This course is intended to enable students to understand and to respond to contemporary social issues that arise from the use of information technology. Students will explore cultural, economical, global, and ethical considerations arising from computerization. The primary focus of the course will be the determination of the weight that these social issues should have in the design, implementation, and uses of present and anticipated applications of information and communication technology on individuals, industry, government, and society. Prerequisite: SOBA 203.

**BSAN 360. Project Management. 1 Unit.**

This course focuses on the fundamental knowledge essential to managing, planning, scheduling and controlling projects in the information technology field with emphasis placed upon the understanding of the project environment, the phased approach to managing projects, critical path analysis, and the tools used to manage projects. The concepts and techniques covered are appropriate for all types of 254 projects, ranging from small to large, and from highly technological to administrative in nature. Prerequisite: BSAN 250 or SOBA 203.

**BSAN 363. Cloud Computing. 1 Unit.**

This course introduces students to the essential concepts and technologies of cloud computing, its history, innovation, and business rationale. This project-based course focuses on skill building across various aspects of cloud computing. We cover conceptual topics and provide hands-on experience through projects utilizing public cloud infrastructures, specifically Amazon Web Services (AWS). Topics include: Cloud computing overview, Public cloud infrastructures, Virtualization, Cloud storage, cloud computing deployment models, basic issues in cloud security and an introduction to AWS services. Prerequisite, SOBA 203.

**BSAN 370. Electronic Commerce. 1 Unit.**

This course provides an introduction to the concept and application of E-Business and E-Commerce from a business perspective. Topics include, infrastructure for E-Commerce, E-Commerce business models, and the use of E-Commerce in organizations for competitive advantage. Prerequisite: BSAN 250 or SOBA 203.

**BSAN 382. Web Development. 1 Unit.**

This is an applied course in the design and development of high quality web sites. Students will learn basic HTML, webpage development software, and graphic/photo editing software. An emphasis is placed on creating, managing and maintaining an entire web site. The goal of this course is to give the student the ability to integrate design principles and practical software skills in the web environment. Prerequisite: BSAN 250 or SOBA 203.

**BSAN 383. Descriptive Analytics and Visualization. 1 Unit.**

This course introduces the concept of Business Intelligence (BI). Students will learn how BI is used by organizations to make better business decisions, use fewer resources, and improve the bottom line. This course provides an overview of business intelligence topics as well as hands-on experiences. Topics include business analytics, data visualization, data mining, data warehousing and business performance management. Prerequisite: BSAN 250 or SOBA 203.

**BSAN 385. Independent Study. 0.25 or 1 Units.****BSAN 390. Special Topics in Business Systems and Analytics. 0.5 or 1 Units.**

This course is designed to acquaint students with current trends and issues in information technology by focusing on one of a number of information technology topics. Topics currently addressed in this course are Database Applications, Advanced Spreadsheet Analysis, or Open-Source Web Site Development. Prerequisite: BSAN 250 or SOBA 203.

**BSAN 393. Communications Networks. 1 Unit.**

This course provides an in-depth examination of data communication processes and structure. Central focus is on LAN, WAN, and Intranet technologies, as well as design and implementation of networking applications within the organization. Prerequisite: BSAN 250 or SOBA 203.

**BSAN 395. Teaching Apprenticeship. 0.5 Units.****BSAN 397. Internship. 0.5 or 1 Units.**

Students will complete an internship in business systems and analytics at a business, overnmental or not-for-profit organization. Emphasis is on a relevant learning environment and acquisition of appropriate career skills at a suitable level of authority and responsibility.

Internships require 200 hours (1-unit) or 100 hours (0.5 unit) within a semester time frame. A maximum of one unit of internship credit can be used as an elective towards the major. Prerequisites: Permission of Faculty Instructor and Department Chair; BSAN 250 or SOBA 203; 2.5 GPA; Business Systems and Analytics Major. Enrollment in an internship course requires students to attend an orientation prior to beginning work at their internship site. For more information regarding internship orientations, please contact Career & Professional Development at [career@stetson.edu](mailto:career@stetson.edu) or 386-822-7315.

**BSAN 398. Databases and Big Data. 1 Unit.**

This course provides in-depth coverage of enterprise level database technology issues including data modeling, logical and physical table design, and implementation in a relational DBMS environment. Students gain hands-on experience in the use of enterprise-level development techniques such as CASE tools and advanced SQL. Prerequisite: BSAN 250 or SOBA 203.

**BSAN 461. Business Process Management. 1 Unit.**

This course provides an extensive investigation of a company's core business processes and the interactions within and between them. The primary focus of this course is the application of information technologies to transform organizations and improve their performance. Students will gain in-depth knowledge of enterprise systems, to include hands-on experience with SAP ERD software, and the role they play in changing organizations. Prerequisite: BSAN 250 or SOBA 203.

**BSAN 463. Prescriptive Analytics. 1 Unit.**

Prescriptive analytics includes methodologies for determining the best course of action for managerial decision problems. The goal is to identify the best or optimal alternative(s) in situations with a large number of alternatives with specific financial or other characteristics and limitations. Topics include linear, integer and goal programming, decision analysis, and other optimization models. Business applications of these methodologies to production planning, location analysis, personnel planning, transportation, capital budgeting, financial portfolio analysis and other areas will be discussed. Spreadsheet based software will be used. Prerequisite: STAT 301Q.

**BSAN 465. Predictive Analytics. 1 Unit.**

This course provides an introduction to predictive analytics techniques used in business and social science research. Using enterprise-class analytic software, students will learn how to build predictive models using techniques such as logistic regression, discriminant analysis, cluster analysis, and decision trees. Prerequisite: STAT 301Q or equivalent.

**BSAN 481. Social Media Analytics. 1 Unit.**

This course introduces technologies and managerial issues related to social media analytics (SMA). Students will learn the importance of social media in influencing the reputation of contemporary businesses, examine text mining, sentiment analysis, and social network analysis, and apply the concepts, techniques, and tools to analyzing social media data. Real-world data such as online reviews, microblog postings, human interaction networks, and business networks will be studied. Hands-on training will be provided using a variety of software tools. Prerequisites: STAT 301Q (or equivalent) and junior/senior standing, or permission of instructor.

**BSAN 485. Independent Study. 0.5 or 1 Units.****BSAN 490. Special Topics in Business Systems and Analytics. 0.5 or 1 Units.****BSAN 494. Business Analysis. 1 Unit.**

This course will provide instruction and educational content to students in each of the 53 Performance Competencies outlined in the IIBA Business Analysis Competency Model. Student will gain knowledge essential to planning, analysis, design, and implementation. Upon successful completion of the course, students will have the knowledge to perform effectively as an entry-level business analyst and be eligible for an Academic Certificate in Business Analysis. Prerequisite: BSAN 398, BSAN 300 and BSAN 383.