Information Systems and Business Analytics

Courses

ISBA 3301. Intro to Data Process & Prog.

Introduction to the representation, storage, and manipulation of structured data types and file processing techniques. A structured programming language will be used to illustrate the application of these concepts.

3 Credit Hours
3 Total Contact Hours
0 Lab Hours
3 Lecture Hours
0 Other Hours
Major Restrictions:
Restricted to majors of ACCT, CIS, ECON, FIN, GENB, INBU, INFS, IS, ISBA, MGMT, MKT, OSCM

Classification Restrictions:
Restricted to class of JR,SO,SR

ISBA 3305. Foundations of Info Sys & BA.

This is an introduction of the principles and concepts of information systems and business analytics. This course covers the role and impact of modern analytics and information technologies in supporting business processes and major enterprise-wide strategic initiatives. It examines how organizations can use business intelligence and advanced analytics to make data-driven decisions in the digital firm. Students will learn to solve real-world business problems using leading and modern analytic tools.

3 Credit Hours
3 Total Contact Hours
0 Lab Hours
3 Lecture Hours
0 Other Hours
Major Restrictions:
Restricted to majors of ACCT, CIS, ECON, FIN, GENB, INBU, INFS, IS, ISBA, MGMT, OSCM

ISBA 3315. Busi Analytics Applications.

This is a hands-on course that familiarizes students with the process of data analytics. Students will learn to process, manipulate, analyze and visualize data, and make data-driven decisions as they solve real-world problems. Different analytics tools will be used to master skills including data import, retrieval, cleaning, transformation, visualization, data analysis, optimization analysis and building of dashboards.

3 Credit Hours
3 Total Contact Hours
0 Lab Hours
3 Lecture Hours
0 Other Hours
Major Restrictions:
Restricted to majors of ACCT, BSAD, CIS, ECON, FIN, GENB, INBU, INFS, IS, ISBA, MGMT, MKT, OSCM

Prerequisite(s): (ISBA 3305 w/D or better)

ISBA 3325. Adv Microcomp Bus Applications.

The advanced use of popular application software including Excel, Access, and VBA in solving a variety of business problems. The course is designed to provide the students with advanced set of skills on the software and in decision making through the efficient management of information and problem solving. VBA is covered in a way of automating and improving the functionality within the Microsoft Office suite. A term project involves development of application in the student's area of interest that links the power of database, spreadsheet and other such packages.

3 Credit Hours
3 Total Contact Hours
0 Lab Hours
3 Lecture Hours
0 Other Hours
Major Restrictions:
Restricted to majors of ACCT, CIS, ECON, FIN, GENB, INBU, INFS, IS, MGMT, MKT, OSCM

Classification Restrictions:
Restricted to class of JR,SR

ISBA 3330. Analytic Programming Tools.
Introduction to algorithmic problem-solving logic with Python; use of data structures and programming constructs to manipulate data and solve business problems. This course uses Python Language fundamentals including syntax, variables, and types. The ability to analyze data with Python is critical in data analytics. In this course, students will start with basic Python skills and data structures, move on to how to load data from different sources, rearrange and aggregate it, and how to analyze and visualize it to create high-value information for business applications. Machine learning fundamentals and tools are covered.
3 Credit Hours
3 Total Contact Hours
0 Lab Hours
3 Lecture Hours
0 Other Hours
Major Restrictions:
Restricted to majors of ACCT, BSAD, CIS, ECON, FIN, GENB, INBU, INFS, IS, ISBA, MGMT, MKT, OSCM

ISBA 3340. Org Impact-Information Tech.
This course integrates both computer concepts and information systems concepts, and provides a strong managerial emphasis. Impact of information technology as well as organizational, global, strategic, and end-user computing issues will be covered.
3 Credit Hours
3 Total Contact Hours
0 Lab Hours
3 Lecture Hours
0 Other Hours
Major Restrictions:
Restricted to majors of ACCT, BSAD, CIS, ECON, FIN, MGMT, MKT

ISBA 3342. Busi Data Analysis & Visuali.
This course teaches students how to work with different types of data and utilize analytical tools to solve business problems. Students will identify data requirements, utilize statistical techniques to evaluate data quality and completeness, prepare data for analysis, and transform data into useful information. Students use tools like SAS, Tableau and SQL Server for data prep and analysis. Students learn how to analyze and interpret insights through hands-on activities and technology lab exercises.
3 Credit Hours
3 Total Contact Hours
0 Lab Hours
3 Lecture Hours
0 Other Hours
Major Restrictions:
Restricted to majors of ACCT, BSAD, CIS, ECON, FIN, GENB, INBU, INFS, IS, MGMT, MKT, OSCM

ISBA 3345. Management Information Systems.
This course integrates both computer concepts and information systems concepts, and provides a strong managerial emphasis focusing on the impact of technologies in different environments. The course provides the fundamentals of management of information systems including organizational, global and strategic issues.
3 Credit Hours
3 Total Contact Hours
0 Lab Hours
3 Lecture Hours
0 Other Hours
Major Restrictions:
Restricted to majors of ACCT, BSAD, CIS, ECON, FIN, GENB, INBU, INFS, IS, MGMT, MKT, OSCM

ISBA 3350. Sys. Anal. & Des. for Bus. Ana.
This course uses the concepts of System Theory to teach the would-be analysts how to analyze, design and implement information systems to solve business problems. Topics include analyzing the business systems, requirements modeling, data and process modeling, security, and development strategies, with an increased focus on object modeling project management.
3 Credit Hours
3 Total Contact Hours
0 Lab Hours
3 Lecture Hours
0 Other Hours
Major Restrictions:
Restricted to majors of ACCT, BSAD, CIS, ECON, FIN, GENB, INBU, INFS, IS, ISBA, MGMT, MKT, OSCM

ISBA 3390. Business Analysis Tools.
This course will be an introduction to business intelligence and will include such topics as data warehousing, business performance management, data mining for business intelligence, text and web mining, business intelligence implementation integration and emerging trends, relevant statistical methods and applicable CASESs.
3 Credit Hours
3 Total Contact Hours
0 Lab Hours
3 Lecture Hours
0 Other Hours
Major Restrictions:
Restricted to majors of ACCT, BSAD, CIS, ECON, FIN, GENB, INBU, INFS, IS, MGMT, MKT, OSCM

ISBA 4301. Busi Intel and Decis Modeling.
The focus of this course is on popular analytics models (predictive, optimization, prescriptive) used in different industries and functional areas. Students will learn how to formulate, solve, and interpret different optimization and simulation models. Decision modeling processes will be covered, which will enable students to translate practical decision problems into quantitative models; analyze the properties of decision models; apply appropriate decision models; execute models with software tools; and interpret the model outputs for intelligent decisions.
3 Credit Hours
3 Total Contact Hours
0 Lab Hours
3 Lecture Hours
0 Other Hours
Major Restrictions:
Restricted to majors of ACCT, BSAD, CIS, ECON, FIN, GENB, INBU, INFS, IS, ISBA, MGMT, MKT, OSCM

Prerequisite(s): (ACCT 2301 w/C or better AND QMB 2301 w/C or better)

ISBA 4310. Health Care Comp Info Systems.
Since the enactment of the Health Maintenance Organization Act of 1973, health care providers (HCPs) have been developing techniques to reduce the cost of providing health benefits and improve the quality of care. More recently, given the rapid advances in Computer Information Systems (IT), HCPs have attempted to further integrate IT into their day to day operations, as well their strategic plans. As a consequence, there is now a great demand for skilled individuals who can manage and integrate medical information systems in such applications as Medical Imaging, electronic data interchange, integrated delivery systems, computerized patient records, artificial intelligence and expert medical systems, decision support systems and internet based applications.
3 Credit Hours
3 Total Contact Hours
0 Lab Hours
3 Lecture Hours
0 Other Hours
Major Restrictions:
Restricted to majors of ACCT, BSAD, CIS, ECON, FIN, GENB, INBU, INFS, IS, MGMT, MKT, OSCM

ISBA 4320. Advanced Programming.
This course will use structured object-oriented programming algorithms for software development to solve real world business problems. Concepts to be covered include basic data structures, objects, classes, functions, encapsulation, arrays, and inheritance. The course will offer in-class hands-on instruction of programming techniques.
3 Credit Hours
3 Total Contact Hours
0 Lab Hours
3 Lecture Hours
0 Other Hours
Major Restrictions:
Restricted to majors of ACCT, BSAD, CIS, ECON, FIN, GENB, INBU, INFS, IS, MGMT, MKT, OSCM

Prerequisite(s): (ISBA 3301 w/C or better)

ISBA 4325. Enterprise Process Mgmt & Cont.
Business professionals are frequently responsible for designing, implementing, supporting, and managing technology -based business processes in organizations. In order to accomplish those tasks, these professionals must understand the businesses processes that support an organization and how they are controlled. This course contributes to the student's understanding of how key businesses processes are managed, controlled and integrated in enterprise resource planning systems. SAP will be used to illustrate the concepts discussed in the class. Upon completion, the student will have a better understanding of Enterprise resources planning systems.
3 Credit Hours
3 Total Contact Hours
0 Lab Hours
3 Lecture Hours
0 Other Hours
Major Restrictions:
Restricted to majors of ACCT, BSAD, CIS, ECON, FIN, GENB, INBU, INFS, IS, MGMT, MKT, OSCM

ISBA 4330. Expert Sys & Decision Sup Sys.
A study of artificial Intelligence, expert systems, and the decision support systems concepts and technologies applied to cover development, implementation, and management of expert systems and decision support systems for business organizations. Tools such as languages, shells, and hardware for utilizing artificial intelligence in designing expert systems and decision support systems are covered.
3 Credit Hours
3 Total Contact Hours
0 Lab Hours
3 Lecture Hours
0 Other Hours
Major Restrictions:
Restricted to majors of ACCT, BSAD, CIS, ECON, FIN, GENB, INBU, INFS, IS, MGMT, MKT, OSCM

ISBA 4365. Database Management.
A practical course covering the concepts of relational database management systems (RDBMS) and Structured Query Language (SQL). Topics include conceptual design, relational systems design, normalization and denormalization processes, SQL, and its components such as data manipulation commands.
3 Credit Hours
3 Total Contact Hours
0 Lab Hours
3 Lecture Hours
0 Other Hours
Major Restrictions:
Restricted to majors of ACCT, BSAD, CIS, ECON, FIN, GENB, INBU, INFS, IS, ISBA, MGMT, MKT, OSCM

ISBA 4370. Data Comm. & Network Manag..
This course introduces theory, concepts and applications of data communications technologies in a today's business environment. It includes an introduction to personal, local and wide area network architectures as well as wired, wireless, and mobile technology standards employed in those architectures. The course also introduces the business issues related to network and data security and covers methodologies and technologies commonly employed to protect corporate data assets. Finally, the course explores emerging standards and other related management considerations such as cloud computing.
3 Credit Hours
3 Total Contact Hours
0 Lab Hours
3 Lecture Hours
0 Other Hours
Major Restrictions:
Restricted to majors of ACCT, BSAD, CIS, ECON, FIN, GENB, INBU, INFS, IS, ISBA, MGMT, MKT, OSCM

ISBA 4375. Intro to Electronic Commerce.
This course will combine Electronic Commerce (e-commerce) business and technical state of the art topics and introduce students to these issues in order to facilitate their participation and involvement in the e-commerce area. Students will create working e-commerce web-sites.
3 Credit Hours
3 Total Contact Hours
0 Lab Hours
3 Lecture Hours
0 Other Hours
Major Restrictions:
Restricted to majors of ACCT, CIS, ECON, FIN, GENB, INFS, IS, MGMT, MKT, OSCM

ISBA 4385. Info Sec. & Cybers. Analytics.
This course presents different methods on how organizations are using artificial intelligence (AI) to prevent various cyber incidents. The course explores cybersecurity challenges and how to mitigate them with AI tools. Coverage also includes an in-depth coverage of organizational information security concepts such as governance, policy, risk management frameworks, business continuity planning, security compliance, ethics, etc. Concepts are covered using both case studies and cybersecurity tools. Finally, the course will explore emerging standards and managerial issues in security.
3 Credit Hours
3 Total Contact Hours
0 Lab Hours
3 Lecture Hours
0 Other Hours
Major Restrictions:
Restricted to majors of ACCT, CIS, ECON, FIN, GENB, INFS, IS, ISBA, MGMT, MKT, OSCM

ISBA 4396. Intern. in Info Sys & Busn An..
To be arranged with the prior approval of the instructor and the department chairman.
3 Credit Hours
3 Total Contact Hours
0 Lab Hours
0 Lecture Hours
3 Other Hours
Major Restrictions:
Restricted to majors of ACCT, BSAD, CIS, ECON, FIN, GENB, INFS, IS, ISBA, MGMT, MKT, OSCM

ISBA 4398. Independent Study (CIS).
The student studies a topic as a semester-long project. The project may be independent library research or a work-related task. The student must have the topic approved by the department chair and have a schedule to report progress with the instructor before work commences.
3 Credit Hours
3 Total Contact Hours
0 Lab Hours
0 Lecture Hours
3 Other Hours
Major Restrictions:
Restricted to majors of ACCT, BSAD, CIS, ECON, FIN, INFS, IS, MGMT, MKT

Prerequisite(s): (ISBA 3340 w/D or better)

ISBA 4399. Current Top. in Bus Anal. & IS.
The topics to be announced. This course may be repeated for credit as topics are changed.
3 Credit Hours
3 Total Contact Hours
0 Lab Hours
3 Lecture Hours
0 Other Hours
Major Restrictions:
Restricted to majors of ACCT, CIS, ECON, FIN, GENB, INFS, IS, MGMT, MKT, OSCM