CIS 1323. Introduction to Microcomputer Applications.  
This course develops advanced information technology skills, focusing on office productivity software. Primary emphasis is placed on spreadsheet, database, and presentation software. Advanced techniques are presented for use in data analysis and decision-making. Students will be expected to demonstrate mastery of these techniques in a hands-on environment.  
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.  
Grade Mode: Standard Letter  
TCCN: COSC 1301

CIS 2324. Visual Programming I.  
An introduction to application program development to include requirement analysis, design, implementation, and testing. A blend of structured and object-oriented concepts is used to form solutions to business problems using a visual programming language. Prerequisite: CIS 1323  
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.  
Grade Mode: Standard Letter  
TCCN: BCIS 2316

CIS 3317. E-Business.  
Explores the constantly changing world of e-Business from an international perspective. This course will emphasize e-Business challenges and opportunities in the worldwide marketplace, while focusing on global issues of management, implementation, and integration of IT resources. Does not count for CIS advanced elective credit.  
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.  
Grade Mode: Standard Letter

CIS 3325. Visual Programming II.  
An advanced visual programming course covering topics related to the design and implementation of user interface, business logic and data access in a tiered architecture. The emphasis is on techniques that take advantage of a development framework through the use of forms, classes, and objects. Prerequisite: CIS 3382 and completion of or concurrent enrollment in CIS 3374  
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.  
Grade Mode: Standard Letter

This course examines the concepts of information systems and network availability, integrity, and confidentiality in order to develop effective security controls, processes, practices, and procedures. Topics include methodologies, models, architectures, access control systems, ethics, and legal implications of IT security. Prerequisites: Overall GPA 2.0 required. Restricted to Juniors or Seniors in BBA or CJ majors  
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.  
Grade Mode: Standard Letter

CIS 3360. e-Business Applications Design and Development.  
The course focuses on designing effective e-business applications to support the e-business strategy of a company. It covers e-business models, business solution delivery strategy, web required architectures, and development and deployment of dynamic, multi-tiered, transaction-oriented, e-business applications in a business–to–business environment. Prerequisite: CIS 3325 and ACC 2362  
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.  
Grade Mode: Standard Letter

CIS 3374. System Analysis and Design.  
The analysis and general design phases of the system development life cycle are reviewed. Emphasis on techniques and tools for determining systems requirements that lead to the development of logical design models using structured and object-oriented methodologies. (WI)  
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.  
Course Attribute(s): Writing Intensive  
Grade Mode: Standard Letter

CIS 3375. Enterprise Computing Skills using COBOL.  
Basic features of the COBOL language. Emphasis is on structured program development and file processing. Topics include file processing, sort feature, and subprograms. Prerequisite: CIS 3325  
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.  
Grade Mode: Standard Letter

CIS 3380. Enterprise Information Technology and Business Intelligence.  
Students will extend their ability to effectively use integrated software applications to identify and provide access to various information sources. The course will focus on applying information and Internet Technologies that span normal business functions for the development and implementation of solutions to managerial problems. Prerequisites: CIS 1323, MATH 1329 or equivalent, and QMST 2333  
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.  
Grade Mode: Standard Letter

Concepts and methodology of planning, design, development, and management of the computerized data base. The emphasis is on logical database design and a study of relational implementation. A relational DBMS with a relational query language is used for the development of a business application system. Prerequisite: CIS 2324  
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.  
Grade Mode: Standard Letter

CIS 3389. Business Application Programming III.  
This course will continue the study of business-oriented software development using an object-oriented programming language. Topics covered will include client/server object relationships, inheritance, polymorphism, encapsulation, inner classes, threads, GUI design, and the use of event models. Prerequisite: CIS 3325  
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.  
Grade Mode: Standard Letter

CIS 3390. Project Management for Business Professionals.  
An introduction to project management body of knowledge as applied to Information Technology with emphasis on the management of scope, costs, schedules, quality and risks. Program management, system methodologies, material procurement, human, and international issues will be examined from the perspective of their impact on functional disciplines in the organization.  
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.  
Grade Mode: Standard Letter
CIS 4318. Enterprise System Development and Application Security. Advanced use of information technology in the design and implementation of business applications to support electronic commerce. Concepts, methodology, and toolsets for designing, implementing, and management of applications in Business-to-Business paradigm. Prerequisites: CIS 3382 and CIS 3325 or CIS 3389 3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours. Grade Mode: Standard Letter

CIS 4319. Mobile Application Development for Windows. This course introduces the concepts, methodology, and toolset for designing business applications. Students will learn the MVC development framework and .Net programming environment for Windows to create interactive business applications. Prerequisite: CIS 3325 3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours. Grade Mode: Standard Letter

CIS 4320. Mobile Application Development for Apple-iOS. This course introduces the concepts, methodologies, and toolset for designing business applications for mobile devices such as iPhone and iPad. Students will learn the MVC development framework and Objective-C programming environment for Apple-iOS to create interactive business applications. Prerequisite: CIS 3325 3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours. Grade Mode: Standard Letter

CIS 4321. Mobile Application Development for Android. This course introduces the concepts, methodology, and toolset for designing business applications for mobile devices. Students will learn the MVC development framework and Java programming environment for Android to create interactive business applications. Prerequisite: CIS 3325 3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours. Grade Mode: Standard Letter

CIS 4322. Computer System Development and Design. A course that integrates systems development with analysis, design, project management, and the systems development life cycle. Object-oriented methods and UML models will be used to develop a project for a client. Students will select methodology, platform, and development technology based on client requirements. Prerequisites: CIS 3325 and CIS 3382 3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours. Grade Mode: Standard Letter

CIS 4332. Enterprise Resource Planning Systems. The use of advanced information technology for integrating business functions in an enterprise through distributed databases is emphasized. Methodology and tools for the selection and implementation of Enterprise Resource Planning (ERP) systems are discussed. Students will use available ERP software to create, track and communicate enterprise information. Prerequisite: CIS 3380 3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours. Grade Mode: Standard Letter

CIS 4348. Fundamentals of Data Communications. A course oriented to the technical concepts of data communications and network designs and how they relate to contemporary computer end-user environments. It incorporates the systems approach for understanding, designing, managing, securing, and implementing data communication networks. Students will analyze and design data communication networks for various business situations 3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours. Grade Mode: Standard Letter

CIS 4349. Advanced Database Management Systems. This course introduces advanced concepts and database processes to support applications for Business Intelligence. Multi-dimensional modeling along with database, reporting, and analysis capabilities of a modern database environment will be used to design and develop stored procedures, views, user-defined functions, reports and multi-dimensional information cubes. Prerequisite: CIS 3382. Co-requisite: QMST 3339 3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours. Grade Mode: Standard Letter

CIS 4350. Information Systems Security. This course focuses on the technology and managerial issues related to information systems security. Topics include: Attack methods, access control, authentication, firewalls, incident and disaster response, disaster recovery, security function management, and cryptography. Prerequisite: CIS 4348 3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours. Grade Mode: Standard Letter

CIS 4358. Network Administration. This course provides students with an understanding of the responsibilities assigned to network administrators. Students will acquire a working knowledge of these responsibilities and skills using tools and technologies for administering enterprise networks via network operating systems commonly used in modern business enterprises. Prerequisite: CIS 4348 3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours. Grade Mode: Standard Letter

CIS 4360. Developing Business Solutions for the Enterprise. An introduction to the concepts, methodology, and toolsets for the architecture, design, implementation, and deployment of business solutions for the enterprise in a services-oriented computing environment. Topics include services-oriented architecture, “Software as a Service” framework, n-tier development of business and data services, and application security. Prerequisites: CIS 3325 and CIS 3382 3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours. Grade Mode: Standard Letter

CIS 4373K. Entrepreneurship - Starting a Software-based Business. Covers the essential requirements to launch a new software-based business. Topics include an introduction to entrepreneurial mind-set, managing a start-up firm, development of business models, use of development methods, creation of cost/volume/profit models to address capital funding needs, and tools, techniques and methods for testing new venture hypotheses. Prerequisite: Must have 2.5 overall GPA 3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours. Course Attribute(s): Exclude from 3-peat Processing!Topics Grade Mode: Standard Letter
CIS 4395. Independent Study in Computer Information Systems.  
An in-depth study of a single topic or related problem solved through computer information systems research. May be repeated once for credit with a different emphasis. Prerequisite: Consent of instructor and department chair  
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.  
Course Attribute(s): Exclude from 3-peat Processing  
Grade Mode: Standard Letter  

This one-semester course involves an internship in business information systems. Emphasis is on the application of computer information systems theory to business problems in the area of computer based management information systems. Prerequisite: Specified by employer with consent of instructor and department chair  
3 Credit Hours. 0 Lecture Contact Hours. 15 Lab Contact Hours.  

CIS 5318. Information Technology in the Digital Economy.  
Provides an understanding of the issues involved in the strategic management of the information assets of organizations. Examines the issues and challenges that users face within the Information Technology (IT) management arena as part of a firm's business and IT strategy. Focus is on managerial rather than technical issues. Prerequisite: B A 5351  
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.  
Grade Mode: Standard Letter  

CIS 5355. Database Management Systems.  
Explores the concepts, principles, issues and techniques for managing corporate data resources using database management systems. The course includes techniques for analysis, design and development of database systems, creating and using logical data models, database query languages, and procedures for evaluating database management software. Students will use a relational database management system to develop a management information system  
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.  
Grade Mode: Standard Letter  

CIS 5356. Business Telecommunications.  
Explores the technology that is revolutionizing the manner in which business and government conduct their operations and the effects new developments in communication media have on computing systems. This course reflects the current state-of-the-art in data communication networking  
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.  
Grade Mode: Standard Letter  

CIS 5358. IT Systems Project Management.  
An in-depth study of the project management body of knowledge as applied to information Technology with emphasis on the management of scope, costs, schedules, quality and risks. Includes program management, system methodologies, material procurement, and human, cultural, and international issues and their impact on the organization  
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.  
Grade Mode: Standard Letter  

This course is designed to familiarize students with current and emerging e-commerce technologies. Topics include Internet technology for business advantage, reinventing the future of business through e-commerce, business opportunities in e-commerce, and social, political, global, and ethical issues associated with ecommerce  
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.  
Grade Mode: Standard Letter  

CIS 5364. Data Warehousing and Mining.  
Familiarizes students with current and emerging data warehousing and mining technologies that are likely to play a strategic role in business organizations. Topics include data mining techniques, data warehouse development life cycle, data warehouse navigation, data quality, and performance issues. Prerequisites: QMST 5334, QMST 2333 or equivalent  
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.  

This course covers the analysis, design, development, implementation, and maintenance of information security systems. Topics include legal, ethical, professional, personnel issues; risk management; technology; cryptography; and physical security  
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.  
Grade Mode: Standard Letter  

The use of information technology in integrating enterprises for operational control and strategic business intelligence is examined via Enterprise Resource Planning (ERP) applications in customer relationships management, accounting, finance, purchasing, production control, sales, marketing, and human resource management. Emphasizes managerial issues surrounding the need, selection, and implementation of ERP systems  
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.  
Grade Mode: Standard Letter