

CISY: COMPUTER INFORMATION SYS (CISY)

CISY 201. Microcomputer Concepts. (3 Credits)

CISY 201 Microcomputer Concepts - 3 semester hours This course is for non-business majors. This course provides a hands-on computer experience through the use of microcomputers with an emphasis on a microcomputer operating system and an in-depth coverage of various computer application packages, such as, but not limited to, word processing, database, spreadsheet software, and presentation graphics. Prerequisite(s): High School Algebra or equivalent.

CISY 300. Computer Internship. (3 Credits)

CISY 300 Computer Internship - 3 semester hours Off campus (approved by the Department). Broad spectrum of "hands-on" work experience as an apprentice programmer/analyst in a computer environment for not less than 120 clock hours. Prerequisite(s): CISY 362, CISY 385 or permission of the Instructor.

CISY 305. Programming Logic. (3 Credits)

This course teaches skills for development of algorithms for problem solving. Students are taught how to use structured and other approaches to analyze problems and express their solutions. Through the introduction of programming concepts, this course enforces good style and outlines logical thinking. Prerequisite: COBU 155 or permission of the instructor.

CISY 312. Operating Systems Administration. (3 Credits)

This course provides students with basic knowledge and practical skills in cloud computing and operating systems administration mainly in Linux and Windows systems. It deals with users, file systems, process and software administration, setting permissions, device configuration, setting up disks, operating system installation and controlling the booting process, managing backup and recovery, security problems, and configuring some network services. The course introduces Cloud Essentials for students to understand the fundamentals of cloud computing and virtualization from technical and business perspectives and the benefits of Windows, Linux, or other operating systems technology for enabling cloud computing. The labs are designed to give students hands-on experience with Linux, Windows, and Cloud computing platforms. Students will learn techniques to develop shell scripts to perform complex tasks such as automating user account management, backups, and routine system.

CISY 330. Computer Programming I. (3 Credits)

CISY 330 Computer Programming I - 3 semester hours F, Sp This course provides an introduction to Object-oriented programming. Students will learn how to develop small to medium sized applications. Special topics include programming concepts, Object-Oriented design, Application Programming Interface (API), Graphical User Interface (GUI) components, event handling, exceptions, graphics, input/output, and inheritance. Prerequisite(s): COBU 155 or Permission of the Instructor. Prerequisites must have been completed with a grade of C or better. This course must be completed with a minimum grade of C to meet the requirements of a business major. Co-requisite(s): None.

CISY 331. Python Programming. (3 Credits)

This course provides a foundational understanding of the Python programming language. Students will learn Python syntax, data types, control structures, functions, data structures, file and exceptional handling, as well as Object-Oriented Programming. Emphasis will be placed on students hands-on coding projects to reinforce their understanding of Python programming concepts, problem-solving, techniques, and how to develop practical applications.

CISY 362. Systems Analysis And Design. (3 Credits)

CISY 362 Systems Analysis and Design - 3 semester hours This course focuses on the application of information technologies (IT) to systems analysis, systems design, and systems implementation practices. Methodologies related to identification of information requirements function, feasibility (economic, legal and contractual, operational, political, technical and schedule) and related issues are covered. Development of data dictionary and the application of computer-aided system engineering (CASE) tools for diagramming information flow and procedures in system development process is covered. Prerequisite(s): COBU 303, COBU 302 and an introductory level computer programming language or permission of the Instructor.

CISY 367. Computer Networks I. (3 Credits)

CISY 367 Computer Networks I - 3 semester hours This course is an introduction to the fundamentals of computer communications networks. The course focuses on the network concepts, media, topologies, components, protocols and standards; and issues involved in the design, implementation and management of computer networks. Also, analog and digital transmission of data, transmission media and devices, LANs and WANs, TCP/IP fundamentals and message switching will be discussed. Prerequisite(s): COBU 303 or permission of Instructor.

CISY 368. Information Security & Assurance I. (3 Credits)

CISY 368 Information Security and Assurance I - 3 semester hours The purpose of this course is to introduce the business student to the rapidly evolving and critical arenas of information security. Students will learn principles and methods of information security, various security models, architectures, firewalls and internet security. Students will also learn how to plan and manage security, security policies, business continuity plans, disaster recovery planning, and to build an understanding of the social and legal issues of information security. Prerequisite(s): CISY 367 or permission of the Instructor.

CISY 385. Web Development & Application I. (3 Credits)

This course provides students with basic knowledge and practical skills in designing and developing World Wide Web pages using HTML (HyperText Markup Language) and CSS (Cascading Style Sheets). The course will cover HTML tags for text, images, links, lists, simple layouts, complex layouts, tables, frames, style, internal style sheets, and external style sheets. Basic design issues in using graphics on the Web will also be covered. Students will also create a functioning website which will incorporate all of the above as well as add Media and Social networking sites into their webpages.

CISY 406. Business Analytics II. (3 Credits)

This course would build upon the foundational knowledge acquired in Introduction to Business Analytics to solve complex business problems using sophisticated data analytics tools and methodologies. It will delve deeper into data analytics, by using advanced techniques and skills necessary to tackle complex real-world data challenges. Through hands-on projects, case studies, and in-depth exploration of statistical and machine learning methods, students will gain proficiency in data analysis, predictive modeling, and data-driven decision-making.

CISY 431. Computer Programming II. (3 Credits)

This is a second course on Object-oriented programming. Students will learn how to develop medium sized applications and applets. Special topics include key issues related to software engineering, object oriented design, Application Programming Interface (API), graphical user interface components, event handling, exceptions, input/output, and inheritance, data structures, and multithreading and animation.

CISY 432. Advanced Python Programming. (3 Credits)

This is a second course on Python programming for students who have a foundation in python and are seeking to deepen their understanding knowledge and skills. It provides students with advanced Python concepts and practical applications in many domains including data analysis, business analytics, data visualization, AI big data, and more. Students will gain a deeper understanding of Python, enhance their problem-solving abilities, and acquire practical skills that can be applied in various fields.

CISY 450. Cloud Operations and Visuals. (3 Credits)

This course offers in-depth knowledge of cloud computing operations and visualization, blending theoretical knowledge and practical skills essential for managing cloud-based infrastructures. It covers key concepts, tools, and techniques related to cloud computing operations, specifically focusing on visualization for effective management and decision-making. Particular emphasis is placed on leading cloud platforms such as Amazon AWS, Microsoft Azure, and Google Cloud. Through theoretical study and virtual labs, students gain practical insights to leverage cloud technologies effectively across diverse industries.

CISY 468. Advanced Infor Security & Assu. (3 Credits)

This is an advanced-level information security course. The student will learn contemporary security issues; cybersecurity resilience; cloud and virtualization security; infrastructure security management processes, architecture, and model; risk management and data privacy; security management models, policies, procedures, standards, and best practices; incidence handling and response, and planning for contingencies. The course has labs providing a virtual environment for students to explore and learn in a safe environment. This advanced-level information security course and labs are tailored for students to gain practical knowledge, skills, and ability to perform core security tasks required for troubleshooting, configuring and managing systems and application security, networks and security infrastructure; using information security policies and procedures to ensure data confidentiality, integrity, and availability; apply techniques to trace a vulnerability to its root cause; using cyber defense tools, methods, and components.

CISY 478. Managing Org'l IT Sec Risks. (3 Credits)

CISY 478 Managing Organizational IT Security Risks - 3 semester hours This course takes a multi-disciplinary perspective of risk assessment, modeling, and management. Topics discussed include concepts of personal accountability versus governance and policy, how organizations define and measure risk and loss, and planning for contingencies. Prerequisite(s): CISY 368 or permission of Instructor.

CISY 480. Database Design & Applications. (3 Credits)

CISY 480 Database Design and Applications - 3 semester hours A study of the principles of database systems with emphasis on the relational model of data, and covering both the user and the system perspectives. User issues include data modeling, informal and commercial query languages and the theory of database design. System issues include file structures, query formulation, form design, and report generation using different database management systems (DBMSs). Prerequisite(s): COBU 303, CISY 362, and an introductory level programming language or permission of the Instructor.

CISY 485. Adv WEB Develop & Applications. (3 Credits)

CISY 485 Advanced WEB Development and Applications - 3 semester hours This course provides students with the understanding and practical experience in web-enabled database and e-commerce business application development. Topics include scripting business rules and application logic on a web server, client and server side technologies, and techniques to develop fully functional business applications. Application design uses current application software. E-commerce business issues and security implementations are also covered. Prerequisite(s): CISY 385 or permission of the Instructor.

CISY 487. ERP Systems Configuration. (3 Credits)

The goal of the course is to customize ERP for a typical modern organization. Students will learn about business processes, managing changes to those processes, and configuring an Enterprise Resource Planning system to implement business process changes. Students will setup Financial Accounting (FI), Controlling (CO), Material Management (MM), and Sales Distribution (SD), Production Planning (PP) modules to configure the company structure, business processes and master data. Students will learn to implement ERP from the ground up and test the configured system with transactions for the various modules.

CISY 488. Infor Tech Security & Forensic. (3 Credits)

CISY 488 Information Technology Security and Forensics - 3 semester hours This course will introduce students to how forensic science, management information systems, and information security all blend into digital forensics. The students will learn the fundamentals of the forensic process, evidence handling, and quality assurance as they apply to digital forensics. Prerequisite(s): CISY 368 or permission of the Instructor.

CISY 491. Special Topics in IT. (1 Credit)

In-depth treatment within a seminar format of timely topics in information Systems and Technology. Prerequisite(s): Permission of the instructor. Prerequisites must have been completed with a grade of C or better. This course must be completed with a minimum grade of C to meet the requirements of a business major.

CISY 492. Special Topics in IT. (2 Credits)

In-depth treatment within a seminar format of timely topics in Information Systems and Technology. Prerequisite(s): Permission of the instructor. Prerequisites must have been completed with a grade of C or better. This course must be completed with a minimum grade of C to meet the requirements of a business major.

CISY 493. Special Topics in IT. (3 Credits)

In-depth treatment within a seminar format of timely topics in Information Systems and Technology. Prerequisite(s): Permission of the instructor. Prerequisites must have been completed with a grade of C or better. This course must be completed with a minimum grade of C to meet the requirements of a business major.

CISY 495. Special Topics. (3 Credits)

CISY 495 Special Topics - 3 semester hours In-depth treatment within a seminar format of a timely topic in Information Systems and Decision Sciences. Prerequisite(s): Permission of the Instructor.

CISY 499. Professiona Certification Path. (3 Credits)

This is the capstone course for students pursuing a major in Computer Information Systems. The department enrolls each student in an entry-level professional certification preparation course from the current list approved by the department's Curriculum Committee and the Chair. Prerequisite(s): Permission of the instructor.