

COMPUTER INFORMATION SYSTEMS (CISA)

CISA 1305 Business Computer Applications

Credits: 3 (3-0-0)

Students will study computer terminology, hardware, software, security and privacy related to the business environment. Introduce and develop foundational skills in applying essential and emerging business productivity information technology tools. The focus of this course is on business productivity software applications and professional behavior in computing, including word processing (as needed), spreadsheets, databases, presentation graphics, and business-oriented utilization of the internet. Students will study the use of web-based technologies to conduct ethical business research. This course is specifically designed for non-computer information systems majors. This course cannot count for credit towards any of the following programs: BBA-CIS, BBA-CIS/IA, BAAS-IT, BAAS-IT/IA, BS-CS, BS-CET.

Restrictions: Students cannot enroll who have a concentration in Teacher Certification, IT/Info Assurance/Security or Information Technology. Students in the BBA_CISA, BS_CSCI or BS_CYBR programs may not enroll. Graduate level students may not enroll.

CISA 2301 Microcomput Assembly Language

Credits: 3 (3-0-0)

Theory, concepts and terminology required for competency in microcomputer assembly language programming including machine instructions; basic data types; addressing modes; arithmetic, logical and character string operations; interrupts and I/O interfaces. Formerly CISA 4301. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Grade of C or better in each of: MATH 1314 or MATH 1324, and CSCI 1436 or (CSCI 1336 and CSCI 1136).

Restrictions: Graduate level students may not enroll.

CISA 2302 Business Apps Using C++

Credits: 3 (3-0-0)

Concepts and applications of the C++ programming language for business and industry. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Grade of C or better in each of: MATH 1314, CSCI 1336 and CSCI 1136.

Restrictions: Graduate level students may not enroll.

CISA 2305 Java Programming

Credits: 3 (3-0-0)

This course discusses concepts and applications of the Java programming languages for business and industry. Topics include the fundamentals of Java programming, control structures, methods, arrays, object-oriented programming, concepts, and other advanced topics. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Grade of C or better in each of: MATH 1314, CSCI 1336 and CSCI 1136.

Restrictions: Graduate level students may not enroll.

CISA 2306 Computer Networks

Credits: 3 (3-0-0)

This course covers subjects related to computer networks including TCP/IP and OSI models, network applications, distributed systems and an introduction to network security. The course focuses on concepts, principles and technologies that enable the integration of information and telecommunications systems for support of internal and external business activities. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Grade of 'C' or better in MATH 1314.

Restrictions: Graduate level students may not enroll.

CISA 2313 Python Programming

Credits: 3 (3-0-0)

This course introduces students to Python world as a common data analysis tool. Students will learn the functional programming in Python like input/output, decision, repetition, functions, and files as well as the primary data structures in Python like list, tuples, strings, set and dictionary. Students also will explore the latest Python tools and techniques to help tackle the world of data acquisition and analysis. Students will review topics like scientific computing with NumPy and data manipulation with Pandas. TSI Restriction(s): Reading, and Math. Graduate level students may not enroll.

Prerequisites: A grade of C or better in Math 1314.

Restrictions: Graduate level students may not enroll.

CISA 2354 Cobol Programming I

Credits: 3 (3-0-0)

Fundamentals and techniques of programming in the COBOL language including program design and structure, flowcharting and documentation. Formerly CISA 3354. TSI Restriction(s): Reading, and Writing

Prerequisites: Grade of C or better in each of: MATH 1314 or MATH 1324, and CSCI 1436 or (CSCI 1336 and CSCI 1136).

Restrictions: Graduate level students may not enroll.

CISA 2356 Systems Analysis and Design

Credits: 3 (3-0-0)

Analysis and design techniques required for implementing medium to large-scale computer information systems. Development of requirements for personnel, software, and equipment for typical applications. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Grade of C or better in MATH 1314 or MATH 1324.

Restrictions: Enrollment is limited to Undergraduate level students.

CISA 3304 Database Systems

Credits: 3 (3-0-0)

This course examines file and database organization techniques including network, hierarchical, relational, object and NoSQL data models, commercially available and open source database systems, database design and implementation, query language, transaction processing, database administration and database security. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Grade of C or better in each of: MATH 1314 or MATH 1324, CSCI 1436 or (CSCI 1336 and CSCI 1136), and CISA 3351.

Restrictions: Graduate level students may not enroll.

CISA 3309 Scripting Languages**Credits:** 3 (3-0-0)

This course introduces students to common scripting languages used in computing. It examines the overall design of scripting languages as well as the specific syntax of common scripting languages. Students will develop projects in each of the languages examined and will determine the best application environment for each of the languages examined.

TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Grade of C or better in each of: MATH 1314, CSCI 1436 or (CSCI 1336 and CSCI 1136), CSCI 1437 or (CSCI 1337 and CSCI 1137).

Restrictions: Graduate level students may not enroll.

CISA 3311 Project Management**Credits:** 3 (3-0-0)

This course examines the concepts, principles, and applications of project management in the business environment, including the study of project management procedures, project management tools, organizational structure, management of project team members, and the planning, organizing, and control activities necessary for good projects. There will be an emphasis of information technology (IT) in the course lectures; however, projects do not have to include an IT component. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Completed 30 hours.

Restrictions: Enrollment limited to students with a semester level of Junior or Senior. Graduate level students may not enroll.

CISA 3321 Information Security**Credits:** 3 (3-0-0)

This course examines the concepts, principles, and applications of computer security in the business environment including privacy, information security, and critical infrastructure and explores the knowledge and skills needed to ensure security of information and information systems within organizations. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Grade of 'C' or better in each of: MATH 1314, CISA 2306 (or CISA 4306).

Restrictions: Graduate level students may not enroll.

CISA 3325 Network Security**Credits:** 3 (3-0-0)

The course explores mechanisms for protecting networks against attacks with an emphasis placed on network security applications for the Internet and corporate networks. The course also investigates various networking security standards and explores methods for enforcing and enhancing those standards. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Grade of C or better in each of: MATH 1314 or equivalent, and (CSEC 2306 or CISA 2306 or CSCI 4406), and (CSEC 3321 or CISA 3321 or CSCI 3321 or CISA 4321 or CSCI 4321).

Restrictions: Graduate level students may not enroll.

CISA 3328 Internship in Computr Info Sys**Credits:** 3 (0-0-3)

An off-campus learning experience allowing the acquisition and application of information technology skills in an actual work setting. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Grade of C or better in each of: MATH 1314, CSCI 1436 or (CSCI 1336 and CSCI 1136).

Restrictions: Graduate level students may not enroll.

CISA 3351 Database Design & SQL**Credits:** 3 (3-0-0)

Basic database design and introduction to structured query language (SQL). Includes instruction on creating user interface forms for a database. TSI Restriction(s): Reading, Math, and Writing.

Prerequisites: Grade of C or better in each of: MATH 1314, CSCI 1436 or (CSCI 1336 and CSCI 1136).

Restrictions: Graduate level students may not enroll.

CISA 3352 Mobile Application Development**Credits:** 3 (3-0-0)

This course introduces the student to the concepts, principles, and development in the major platforms including iOS, Android, and Windows. Its objective is to provide students with the tools and knowledge necessary to create applications that can run on mobile and/or smart devices. Differences between mobile and desktop computing will be investigated, sample mobile apps will be dissected, and tool suites for the development of mobile software will be covered. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Grade of C or better in each of: MATH 1314, CSCI 1436 or (CSCI 1336 and CSCI 1136).

Restrictions: Graduate level students may not enroll.

CISA 3355 Cobol Programming II**Credits:** 3 (3-0-0)

Refinement and expansion of programming competencies in the COBOL language including structured programming, sorting, merging, file systems and access methods. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Grades of C or better in each of: MATH 1314, CSCI 1436 or (CSCI 1336 and CSCI 1136), and CISA 2354 (or CISA 3354).

Restrictions: Graduate level students may not enroll.

CISA 3358 Management Information Systems**Credits:** 3 (3-0-0)

A comprehensive study of the use of information technology as an organizational resource, including the implementation of disciplined processes and management development to effectively exploit the power of modern information technology. This course is specifically designed for non-computer information systems majors. Cannot be applied as credit for Major courses or an elective for any computing major. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Grade of 'C' or better in each of: CISA 1305 or CSCI 1336 or CSCI 1436.

Restrictions: Students cannot enroll who have a major in Teacher Certification, Computer Information Systems, IT/Info Assurance/Security or Information Technology. Students in the BBA_CISA, BS_CSCI or BS_CYBR programs may not enroll. Graduate level students may not enroll.

CISA 3367 Adv Microcomputer Appl & Sys**Credits:** 3 (3-0-0)

Study of advanced microcomputer hardware and software technologies having application in business administration. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Grade of C or better in each of: MATH 1314, CSCI 1436 or (CSCI 1336 and CSCI 1136).

Restrictions: Graduate level students may not enroll.

CISA 4101 Ethical Issues in Computing**Credit:** 1 (1-0-0)

In this course, students will identify the various ethical issues and values as it relates to future careers within their discipline. Students will study various cases and identify the ethical issues, and seek mechanisms for addressing and resolving the issues. Through mock debates, studying, writing and presenting professional ethical analysis studies, students will be prepared to understand and address the ethical issues within their discipline. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: CISA 3101 or Senior standing.

Restrictions: Enrollment limited to students with a semester level of Senior. Graduate level students may not enroll.

CISA 4303 Client Server App Dev**Credits:** 3 (3-0-0)

Client/Server application development practices and tools. Emphasis on developing distributed database applications that support the information processing needs of business. Topics include: object-oriented program design, programming with object-oriented development platforms and the use of embedded Structured Query Language for database transaction processing. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Grade of C or better in each of: MATH 1314, CSCI 1436 or (CSCI 1336 and CSCI 1136).

Restrictions: Graduate level students may not enroll.

CISA 4312 Risk Management**Credits:** 3 (3-0-0)

This course is an overview of the basic components of risk as they pertain to technical projects. Topics include risk identification, risk impact analysis, risk response planning, mitigating risk, and risk management techniques. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Senior standing and Grade of 'C' or better in each of: CISA 3311 OR CISA 4311.

Restrictions: Enrollment limited to students with a semester level of Senior. Graduate level students may not enroll.

CISA 4313 Programming for Data Analytics**Credits:** 3 (3-0-0)

This course introduces students to a common scripting language used in data analytics. Students will explore the latest tools techniques to help tackle the world of data acquisition and analysis. Students will review topics like scientific computing, data manipulation, machine learning, Textual Data Analysis, and Data Visualization. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Grade of 'C' or better in each of: MATH 1314, CSCI 1336, CSCI 1136, CSCI 1337, CSCI 1137.

Restrictions: Graduate level students may not enroll.

CISA 4322 Information Policy Assurance**Credits:** 3 (3-0-0)

This course explores information security policies. The course includes both sociological and psychological issues in policy implementation in general, a dialogue on information security specific policies, the structure of a policy, and the lifecycle of policy from creation to enactment. The course also exposes the student to issue specific policies in different domains of security to assist the students learn in context of real life situations. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Grade of 'C' or better in each: MATH 1314 or equivalent, (CSEC 2306 or CISA 2306 or CSCI 4406) and (CSEC 3321 or CISA 3321 or CSCI 3321 or CISA 4321 or CSCI 4321).

Restrictions: Graduate level students may not enroll.

CISA 4323 Computer Forensics**Credits:** 3 (3-0-0)

This course is an overview of the methods and tools utilized for collecting and preserving electronic digital evidence for the computer forensic process. Topics include the forensic examination, analysis, and report writing; and preparing for courtroom testimony about the forensic results. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Grade of C or better in each of: MATH 1314 or equivalent and (CSEC 3321 or CISA 3321 or CSCI 3321 or CISA 4321 or CSCI 4321).

Restrictions: Graduate level students may not enroll.

CISA 4324 Penetration Testing**Credits:** 3 (3-0-0)

This course examines concepts of risk analysis, risks in engineered systems, environmental risks, security risks; methods of risk analysis, fault trees and event trees. Students will study risk assessment using penetration testing methods. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Grade of C or better in each of: MATH 1314 or equivalent, (CSEC 2306 or CISA 2306 or CSCI 4406) and (CSEC 3321 or CISA 3321 or CSCI 3321 or CISA 4321 or CSCI 4321).

Restrictions: Graduate level students may not enroll.

CISA 4326 Security & Operation Practicum**Credits:** 3 (3-0-0)

This course combines the theoretical foundation of system security with hands-on practical application on real systems. Students will practice roles of network and system administrators and system architects from both security and business operations perspectives. Meets College of Business Experiential Learning Requirements. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Grade of C or better in each of: MATH 1314, CISA 2306, CISA 3321, and (CISA 4324 or CISA 3325 or CISA 4325).

Restrictions: Graduate level students may not enroll.

CISA 4331 Enterprise Resource Plan Sys**Credits:** 3 (3-0-0)

This course examines the concepts, principles, and applications of Enterprise Resource Planning (ERP) systems. This course helps students understand the key processes of business organizations. It also improves the student's understanding of how key business processes are managed and integrated in enterprise level software used by large organizations. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Senior standing.

Restrictions: Enrollment limited to students with a semester level of Senior. Graduate level students may not enroll.

CISA 4332 Data Science and Analytics**Credits:** 3 (3-0-0)

This course provides an integrative foundation in the field of business intelligence and data mining. It focuses on business data warehousing, multidimensional data modeling, online analytic processing, business reporting and planning, and data mining. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Grade of C or better in each of MATH 1314 and (CSCI 1436 or (CSCI 1136 and CSCI 1336) or CISA 2313) and (CISA 3351 or CISA 3358).

Restrictions: Graduate level students may not enroll.

CISA 4333 Supply Chain Integration**Credits:** 3 (3-0-0)

Supply chain management is the successful cross-functional integration of key business processes from the original suppliers of products, services, and information through the firm to its customers and stakeholders with an emphasis on value-added benefits. This course emphasizes the use of information technology in the supply chain management process. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Senior standing.

Restrictions: Enrollment limited to students with a semester level of Senior. Graduate level students may not enroll.

CISA 4334 Business Process Integration**Credits:** 3 (3-0-0)

This course provides a foundation for information system professionals who are often called upon to configure and integrate business processes. Information system professionals are often called upon to install and configure computer information systems including packages such as SAP. They must also demonstrate an understanding of how data is shared throughout the organization. This course helps students understand the key processes of business organizations. It also improves the student's understanding of how key business processes are managed and integrated in enterprise level software used by large organizations. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Grade of 'C' or better in CISA 4331.

Restrictions: Graduate level students may not enroll.

CISA 4335 ABAP SAP Programming**Credits:** 3 (3-0-0)

This course will introduce the student to the concepts, principles, and development in programming in ABAP. Its objective is to provide students with the tools and knowledge necessary to create applications that can run on mobile and/or smart devices. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Grade of C or better in each of: MATH 1314, CSCI 1436 or (CSCI 1336 and CSCI 1136).

Restrictions: Graduate level students may not enroll.

CISA 4358 Senior Project and Seminar**Credits:** 3 (3-0-0)

This course will introduce the student to the concepts, principles, and applications of information systems technology in the business environment, including a study of organizational structure, management and personnel of a data center, and the planning, organizing, and control activities necessary for good management of the information systems resource. Students will also complete an information system development project. Meets College of Business Experiential Learning Requirements. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Grade of C or better in each of: MATH 1314, CSCI 1436 or (CSCI 1336 and CSCI 1136), CISA 3309 (or CISA 4309), CISA 3351, and (CISA 2356 or CISA 3356).

Restrictions: Graduate level students may not enroll.

CISA 4359 Topics in Computer Inform Syst

Credits: 3 (3-0-0)

Research in selected fields of computer information systems. May be repeated once for additional credit. TSI Restriction(s): Reading, Math, and Writing

Prerequisites: Grade of C or better in each of: MATH 1314, CSCI 1436 or (CSCI 1336 and CSCI 1136) and Senior standing.

Restrictions: Enrollment limited to students with a semester level of Senior. Graduate level students may not enroll.

Repeat Status: Course may be repeated 1 time(s).