COMPUTER INFORMATION SYSTEMS (CIS)

CIS 100 Introduction to Word 1(1-0)
Fall, Spring, Summer.
A competency-based course, topics include: file management, formatting, fonts, editing, reports, footnotes, desktop publishing, clip art, styles, outlines, tables, and mail merge.
Prerequisite: None.
Corequisite: None.
Registration Information: None.

CIS 101 CIS Careers & Opportunities 1(1-0)
As Needed.
This course touches the various fields and career opportunities in Computer Information Systems.
Prerequisite: None.
Corequisite: None.
Registration Information: None.

CIS 103 Introduction to PowerPoint 1(1-0)
Fall, Spring, Summer.
An introduction to PowerPoint which includes presentation templates, charts, object embedding, slide shows and other details in enhancing communications via presentation software.
Prerequisite: None.
Corequisite: None.
Registration Information: None.

CIS 104 Introduction to Excel Spreadsheets 1(1-0)
Fall, Spring, Summer.
Includes worksheet design, text and formula manipulation, charts, lists, pivot tables, ranges, lookup tables, data analysis, functions, and macros.
Prerequisite: None.
Corequisite: None.
Registration Information: None.

CIS 105 Introduction to Access DBMS 1(1-0)
Fall, Spring, Summer.
Course includes relational database design, table creation, data manipulation, queries, forms, reports, web access, and interface design.
Prerequisite: None.
Corequisite: None.
Registration Information: None.

CIS 120 Introduction to Programming with Python 3(3-0)
Fall.
This course introduces students to the basic concepts in programming through the Python language. Throughout the course there are multiple opportunities for students to practice the programming and debugging process.
Prerequisites: None.
Corequisites: None.
Registration Information: None.

CIS 150 Introduction to Computer Information Systems 3(3-0)
Fall, Spring.
An examination of the information systems industry. Topics covered include technologies, tools, processes, systems, and careers. Also includes discussion of relevant societal and ethical issues.
Prerequisite: None.
Corequisite: None.
Registration Information: None.

CIS 171 Introduction to Java Programming 4(3-2)
Fall, Spring, Summer.
An introduction to secure computer programming, design, and testing using the Java object-oriented programming language. Topics include language constructs, functions, file handling, and inheritance.
Prerequisite: None.
Corequisite: None.
Registration Information: None.

CIS 185 PC Architecture 3(2-1)
Fall, Spring.
In depth study of personal computer hardware, peripherals, and interfaces. Course examines processors, disk drives, buses, video cards, memory and diagnostic software.
Prerequisite: None.
Corequisite: None.
Registration Information: None.

CIS 210 Introduction to Cyber Security 3(2-2)
Spring.
CIS210 is an introductory and overview course for the principles and application of cyber security concepts and techniques. This course will analyze both the technical and non-technical fundamentals of cyber security.
Prerequisite: None.
Corequisite: None.
Registration Information: None.

CIS 240 Systems Analysis & Design 3(3-0)
Fall.
Practical methods for analyzing business problems and designing contemporary secure information systems solutions using various methodologies, techniques, skills, and tools.
Prerequisite: CIS 171.
Corequisite: None.
Registration Information: None.

CIS 250 Introduction to Business Analytics 3(3-0)
Fall, Spring, Summer.
An introduction to the processes needed to formulate and solve business problems and to support managerial decision making using MS Excel Spreadsheets and Excel add-ins.
Prerequisite: None.
Corequisite: None.
Registration Information: MS Word, Excel and PowerPoint Competency.

CIS 271 Advanced Program Design with Java 4(3-2)
Spring.
Continuation of CIS 171, includes advanced Java programming constructs such as data structures, multi-threading, collections, database connectivity, remote objects and GUI's.
Prerequisite: CIS 171.
Corequisite: None.
Registration Information: None.

CIS 289 Network Concepts 3(2-2)
Fall.
Fundamental hardware, software, data communication, and cyber security concepts necessary for designing and securing computer networks and computing environments.
Prerequisite: None.
Corequisite: None.
Registration Information: None.

CIS 290 Special Projects (1-5 V)
As Needed.
Individual projects designed to extend student knowledge beyond offerings in the current curriculum. Examples include program, database, Web site or network research or development.
Prerequisite: None.
Corequisite: None.
Registration Information: Sophomore standing. Permission of instructor. Repeatable (3).

CIS 291 Special Topics (1-5 V)
As Needed.
Study of new and emerging topics and technologies in the computing field.
Prerequisite: None.
Corequisite: None.
Registration Information: Sophomore standing. Repeatable (3).

CIS 298 Internship (1-5 V)
As Needed.
IT-related industrial work experience under the direction of a field supervisor and faculty member.
Prerequisite: None.
Corequisite: None.
Registration Information: Repeatable (6).

CIS 311 Introduction to Web Development 3(3-0)
Fall.
This course provides hands-on experience in designing and securing Web-based applications. It applies the latest web technologies to create, debug and publish secure web applications.
Prerequisite: CIS 171.
Corequisite: None.
Registration Information: None.

CIS 315 Linux Fundamentals 3(3-0)
Fall.
Explore Linux features, including shell commands and shell scripts, file system and directory structures, text editors, processes, regular expression, and other system administration topic such as file ownership and permissions.
Prerequisite: CIS 171.
Corequisite: None.
Registration Information: None.

CIS 350 Database Management 3(3-0)
Fall.
Design, implementation and use of database management systems; comparison of available software packages; concepts of query languages and security considerations. Laboratory assignments utilize a relational data base system.
Prerequisite: CIS 240.
Corequisite: None.
Registration Information: Permission of instructor.

CIS 359 Advanced Programming with C# 3(3-0)
Spring.
Design and develop desktop and web-based applications using C# and .NET. Emphasis on advanced programming concepts and technique, and secure coding practices.
Prerequisite: CIS 171.
Corequisite: None.
Registration Information: None.

CIS 365 Management Information Systems 3(3-0)
As Needed.
Introduction to application and management of IT in functional business areas (marketing, finance, accounting, etc.). Topics include IT strategy, business intelligence, e-commerce, and cyber security.
Prerequisite: CIS 103 and CIS 104 and MGMT 201.
Corequisite: None.
Registration Information: Open to non-CIS majors only.

CIS 383 E-Commerce 3(3-0)
As Needed.
This course focuses on key issues including e-commerce strategy, business models, technology infrastructure, security and payment systems, e-marketing, and ethical behavior.
Prerequisite: MGMT 201.
Corequisite: None.
Registration Information: Junior standing.

CIS 386 Android Application Development (3 V)
Fall.
Secure development of Android applications using advanced Java programming concepts for the Android devices.
Prerequisite: CIS 271.
Corequisite: None.
Registration Information: None.

CIS 401 Network Systems Administration 3(2-2)
Spring.
Introduces the necessary knowledge and skills to install, configure, manage, and secure network operating systems, preparing students to be system administrators in a networking environment.
Prerequisite: CIS 289.
Corequisite: None.
Registration Information: None.

CIS 410 Data Analytics with Python 3(3-0)
Fall.
Using Python programming language as a tool to solve the problems in Data Analytics such as data visualization, natural language processing, database handling, and machine learning.
Prerequisite: CIS 171.
Corequisite: None.
Registration Information: None.

CIS 411 Internet Server-Side Programming (3 V)
Spring.
Secure server based web programming and scripting. Includes data base access methods, open source tools, and web application construction from the server side.
Prerequisite: CIS 311 and CIS 350.
Corequisite: None.
Registration Information: None.

CIS 432 Senior Professional Project 6(3-6)
Spring.
Student Teams design and implement database, network, web and other computer-based projects in the local community. Modern analysis, design and modeling techniques are emphasized.
Prerequisite: MGMT 368.
Corequisite: None.
Registration Information: Must have completed CIS core.

CIS 450 Advanced Data Analytics 3(3-0)
Spring.
Emphasis on cutting-edge applications, tools, techniques, and trends in Data Analytics such as data visualization, interactive dashboard, Artificial Intelligence, Machine Learning, and Big Data architecture.
Prerequisite: CIS 350.
Corequisite: None.
Registration Information: Permission of instructor.

CIS 460 Cyber Security & Defense (3 V)
Spring.
Students will understand the impact of cyber threats to critical IT resources. Topics include defense-in-depth safeguards, threat vulnerability asset analysis, and secure programming.
Prerequisite: CIS 289.
Corequisite: None.
Registration Information: None.

CIS 461 IT Security Risk Management 3(3-0)
Fall.
Overview of cyber security threats to operations, hardware, software, assessment of cyber security risk, risk mitigation strategies, disaster recovery planning, and cyber security law.
Prerequisite: None.
Corequisite: None.
Registration Information: None.

CIS 462 Computer Forensics 3(2-2)
Fall.
Focus on the detection, isolation and response to information security breaches and attacks. Provides a detailed examination of the entire computer forensic process.
Prerequisite: CIS 289.
Corequisite: None.
Registration Information: None.

CIS 470 Virtualization & Cloud Technologies 3(2-2)
Spring.
This course provides students with the knowledge and skills to install and configure various cloud and virtualization technologies. Course topics include hardware virtualization, OS virtualization, and cloud platforms.
Prerequisites: CIS 315.
Corequisites: None.
Registration Information: None.

CIS 490 Special Projects (1-5 V)
As Needed.
Individual projects designed to extend student knowledge beyond offerings in the current curriculum. Examples include program, database, Web site or network research or development.
Prerequisite: None.
Corequisite: None.
Registration Information: Permission of instructor. Repeatable (6).

CIS 491 Special Topics 1-5(1-5-1-5)
As Needed.
Study of new and emerging topics and technologies in the computing field.
Prerequisite: None.
Corequisite: None.
Registration Information: Junior standing. Repeatable (9).

CIS 493 Senior Seminar 1(1-0)
Fall.
Seminar concerning appropriate career topics in computer information systems. Speakers may include guests, faculty or students. Student outcomes will be assessed. Required of majors.
Prerequisite: None.
Corequisite: CIS 432.
Registration Information: Must have completed CIS core.

CIS 498 Internship (1-6 V)
As Needed.
IT-related industrial work experience under the direction of a field supervisor and faculty member.
Prerequisite: None.
Corequisite: None.
Registration Information: Junior Standing. Repeatable (6).

CIS 510 Data Analytics with Python 3(3-0)
As Needed.
Using Python programming language as a tool to solve the problems in Data Analytics such as data visualization, natural language processing, database handling, and machine learning.
Prerequisite: CIS 171.
Corequisite: None.
Registration Information: Permission of instructor.

CIS 532 Professional Project 6(3-6)
As Needed.
Student teams design and implement database, network, web and other computer-based projects in the local community. Modern analysis, design and modeling techniques are emphasized.
Prerequisite: MGMT 368.
Corequisite: None.
Registration Information: Must have completed CIS core.

CIS 550 Advanced Data Analytics 3(3-0)
Spring.
Emphasis on cutting-edge applications, tools, techniques, and trends in Data Analytics such as data visualization, interactive dashboard, Artificial Intelligence, Machine Learning, and Big Data architecture.
Prerequisite: CIS 240 or CIS 350.
Corequisite: None.
Registration Information: Permission of instructor.

CIS 560 Cyber Security & Defense (3 V)
Spring.
Students will understand the impact of cyber threats to critical IT resources. Topics include defense-in-depth safeguards, threat vulnerability asset analysis, and secure programming.
Prerequisite: CIS 289 or permission of instructor.
Corequisite: None.
Registration Information: Permission of instructor.

CIS 561 IT Security Management 3(3-0)
Spring.
Overview of cyber security threats to operations, hardware, software; assessment of cyber security risk, risk mitigation strategies, disaster recovery planning, cyber security law.
Prerequisite: Any Introduction to Management course.
Corequisite: None.
Registration Information: Introduction to MGMT course strongly recommended as prerequisite.

CIS 562 Computer Forensics 3(2-2)
Fall.
Students will learn computer forensics, business continuity planning, incident response, 3rd party contractual agreements with response agencies, Case Law and detection, and isolation response to info security.
Prerequisite: None.
Corequisite: None.
Registration Information: Permission of instructor.

CIS 565 Management Information Systems 3(3-0)
Fall, Spring.
Principles, methodologies, practices and management of information systems in business organizations, topics include: IT strategy, IT project management, e-commerce, and enterprise information systems.
Prerequisite: CIS 100 and CIS 103 and CIS 104 and MGMT 201.
Corequisite: None.
Registration Information: Admission to MBA. Permission of MBA Director.

CIS 583 E-Commerce 3(3-0)
As Needed.
This course focuses on key issues including e-commerce strategy, business models, technology infrastructure, security and payment systems, e-marketing, and ethical behavior.
Prerequisite: None.
Corequisite: None.
Registration Information: Admission to MBA. Permission of MBA Director.

CIS 591 Special Topics (1-5 V)
As Needed.
Study of new and emerging topics and technologies in the computing field.
Prerequisite: None.
Corequisite: None.
Registration Information: Graduate standing. Permission of instructor.