COMPUTER INFORMATION SYSTEMS

Division: Business and Computer Information Systems

Division Dean

Dr. Treisa Cassens (Interim)

Counselor

Robert Grantham

Faculty

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Dr. Penn Wu

Computer Information Systems Transfer Program (AS-T Business Administration)

Students should consult a counselor or www.assist.org (http://www.assist.org) for lower division major requirements for most California public universities. (See the Standard Definitions section of the catalog for a description of ASSIST.) Students transferring to an independent college/university should consult the catalog of the individual school and a counselor for lower division major requirements.

- Business Information Worker Certificate (https://catalog.nocccd.edu/cypress-college/degrees-certificates/computer-information-systems/business-information-worker-certificate/)
- Cisco Networking Certificate (https://catalog.nocccd.edu/cypress-college/degrees-certificates/computer-information-systems/cisco-networking-certificate/)
- Computer and Office Applications Certificate (https://catalog.nocccd.edu/cypress-college/degrees-certificates/computer-information-systems/computer-office-applications-certificate/)
- Computer Information Systems Associate in Science Degree (https://catalog.nocccd.edu/cypress-college/degrees-certificates/computer-information-systems/computer-information-systems-associate-in-science-degree/)
- Computer Programming Associate in Science Degree (https://catalog.nocccd.edu/cypress-college/degrees-certificates/computer-information-systems/associate-science-degree-computer-programming/)
- Computer Programming Certificate (https://catalog.nocccd.edu/cypress-college/degrees-certificates/computer-information-systems/computer-programing-certificate/)
- Cyber Defense Associate in Science Degree (https://catalog.nocccd.edu/cypress-college/degrees-certificates/computer-information-systems/cyber-defense-associate-in-science-degree/)
- Cyber Defense Certificate (https://catalog.nocccd.edu/cypress-college/degrees-certificates/computer-information-systems/cyber-defense-certificate/)
- Cybersecurity Certificate (https://catalog.nocccd.edu/cypress-college/degrees-certificates/computer-information-systems/cyber-security-certificate/)
- Data Analytics Certificate (https://catalog.nocccd.edu/cypress-college/degrees-certificates/computer-information-systems/data-analytics-certificate/)
- Data Management Certificate (https://catalog.nocccd.edu/cypress-college/degrees-certificates/computer-information-systems/data-management-certificate/)
- DevSecOps (Development, Security, and Operations) Certificate (https://catalog.nocccd.edu/cypress-college/degrees-certificates/computer-information-systems/devseops-development-security-and-operations-certificate/)
- System Administration and Technical Support Certificate (https://catalog.nocccd.edu/cypress-college/degrees-certificates/computer-information-systems/system-administration-and-technical-support-certificate/)
- Virtualization and Cloud Computing Certificate (https://catalog.nocccd.edu/cypress-college/degrees-certificates/computer-information-systems/virtualization-and-cloud-computing-certificate/)

CIS 075 C Business Skills Development **2 Units**
Term hours: 18 lecture and 54 laboratory. This course is designed for the student who needs to gain job skills in a short period of time. Occupational training will be provided in the areas of office occupations, and communication skills. $3.00 Materials Fee - PAYABLE AT REGISTRATION. . Pass/No Pass or Letter Grade Option

CIS 100 C Introduction to Computer and Windows Concepts (formerly CIS 050 C) **3 Units**
Term hours: 54 lecture and 18 laboratory. This course is designed to teach the computer hardware, Windows Operating System, E-mail, Web Apps, and Internet concepts. Students will receive hands-on experience. $3.00 Materials Fee--PAYABLE AT REGISTRATION. Pass/No Pass/Letter Grade Option. (CSU)

CIS 102 C MS Word Business Apps **4 Units**
Term hours: 54 lecture and 54 laboratory. This course teaches students how to use Word to create and edit documents; format documents; add tables and lists; add design elements and layout options; and proof documents. Students will learn how to create and format business, legal, medical, and other professional looking documents using Microsoft Word as well as Adobe PDF. Focus will be on using Word features such as mail merge, form letters, styles, themes, macros, and desktop publishing to generate letters, tables, reports, flyers, and newsletters. This course will prepare students for Microsoft Office Specialist (MOS) exam. $3.00 Materials Fee -- PAYABLE AT REGISTRATION. Pass/No Pass or Letter Grade Option. (CSU)

CIS 103 C Pres - PowerPoint for Windows **3 Units**
Term hours: 54 lecture and 18 laboratory. This course teaches the students how to use PowerPoint for business and professional use. Students create, edit, format, and enhance presentations and apply transitions and animations. This course will help prepare students to take the Microsoft Office Specialist (MOS) exam. $3.00 Materials Fee -- PAYABLE AT REGISTRATION Pass/No Pass/Letter Grade Option (CSU)

CIS 110 C Linux Operating System **3 Units**
Term hours: 54 lecture and 18 laboratory. This course is an introduction to the Linux operating system. Topics include installing, configuring, maintaining, administering, and troubleshooting of the Linux Operating System. It provides preparation for the Sair Linux Certification. $3.00 Materials Fee-Payable at Registration. (CSU)

CIS 111 C Computer Information Systems **3 Units**
Advisory: ENGL 058 C.
Term hours: 54 lecture and 18 laboratory. This course is an introduction to computer concepts, computer organization, operation, hardware, systems and application software; business-problem solving; and applications to business. $3 Material Fee - Payable at Registration. (CSU/UC, AA GE, CSU GE, C-ID: BUS 140 and ITIS 120)

CIS 116 C MS Outlook/Office Procedures **3 Units**
Term hours: 54 lecture and 18 laboratory. This course prepares management or office personnel for work in a computerized office environment. MS Outlook is taught in this class and integrated with Word and other MS Office applications. Pass/No Pass/Letter Grade Option, $3.00 Material Fee - Payable at Registration. (CSU)

CIS 132 C Spreadsheet-Excel for Windows **4 Units**
Term hours: 72 lecture. This course is designed to introduce students to the use of spreadsheet programs in the solution of problems. Students will use spreadsheet software to create, edit, graph, save, and print out spreadsheets. $3.00 Material Fee-Payable at Registration. (CSU)

CIS 142 C Database-Access for Windows **3 Units**
Term hours: 54 lecture and 18 laboratory. This course is designed to introduce the student to the use of database programs in the solution of record keeping problems. Students will use database software to create, update, and report data files. $3.00 Material Fee - Payable at Registration. (CSU)

CIS 150 C Microsoft Office Applications **3 Units**
Term hours: 54 lecture and 18 laboratory. This course studies the terms, concepts, and features of Microsoft Office software in today's business office. Students will create hands-on application office projects using Microsoft Office. Pass/No Pass/Letter Grade Option. $3.00 Material Fee-Payable at Registration. (CSU)

CIS 160 C Information Systems Management **3 Units**
Term hours: 54 lecture and 18 laboratory. This course is for students interested in managing a Computer Information Systems Center. The subject areas to be studied are planning, equipping, staffing, and managing a computerized business office. The student will use a computer spreadsheet and database in hands-on exercises in planning and managing an information systems office. $3 materials fee payable at registration. Pass/No Pass/Letter Grade Option (CSU)

CIS 162 C PC and Network Hardware Support **3 Units**
Term hours: 54 lecture and 18 laboratory. This course prepares students with both theoretical and practical lessons relating to computer hardware and peripherals in a networked environment. Emphasis is placed on hands-on experience in how hardware components function together to make a computer work properly. In addition, students will gain real-world knowledge and skills in current network concepts and operating systems. CompTIA's IT Fundamentals and A+ topics will be included. (CSU)

CIS 164 C IT Support Services **3 Units**
Term hours: 36 lecture and 54 laboratory. This course is designed to teach students the crucial skills needed to work as an IT support in an Active Directory network or Windows workgroup environment. Students will learn the kinds of knowledge, skills, abilities, and strategies they need to be employable in the support industry. Emphasis will be placed on deploying Windows, managing devices and data, configuring connectivity, maintaining Windows, managing policies and profiles, managing and protecting devices, and managing apps and data. This course prepares students for the Microsoft 365 Certified: Modern Desktop Administrator Associate. $3.00 Materials Fee--PAYABLE AT REGISTRATION. . Pass/No Pass or Letter Grade Option. (CSU)

CIS 170 C Introduction to Data Analytics **3 Units**
This course is an introduction to the fundamental concepts of Data Analytics and Business Intelligence (BI). Data Analytics and BI are utilized to turn big data into useful information to enable educators, researchers, industry, and businesses to make better decisions. Students will examine the tools, applications, and processes including analytics, understanding data, data warehousing, big data, cloud computing, and data visualization. $3 materials fee payable at registration (CSU/UC)

CIS 172 C Data Visualization **3 Units**
Term hours: 54 lecture and 18 laboratory. This course will teach students how to develop data dashboards that reveal meaningful information to relevant target audiences. Students will learn how to organize raw data, to analyze and interpret data and to draw and present conclusions using Tableau software. $3.00 Materials Fee--PAYABLE AT REGISTRATION (UC/CSU)

CIS 179 C Introduction to Web Page Design **3 Units**
Term hours: 54 lecture and 18 laboratory. This course introduces students to Web publishing with HTML (Markup Language) for business and personal applications. Students will learn techniques to design a professional-looking Web site. Emphasis is placed on learning the HTML from the basic tags to the advanced topics such as tables, graphics, cascading style sheets, and creation of the business-related Web pages. $3.00 Material Fee-Payable at Registration. (CSU)

CIS 185 C Administering Windows Server **3 Units**
Term hours: 36 lecture and 54 laboratory. This course introduces students to both Microsoft client and server sides for the administration and management of Windows networking on domain directory services. Students will learn the features and architectures of the various types of client/server implementations such as program installation, working with files and folders, security permissions to the network resources, network auditing, printing system, configuring users and groups, managing domains and OUs, configuring authentication policies, managing DFS, and group policies, identity solutions and domain name systems. $3.00 Materials Fee - PAYABLE AT REGISTRATION. Pass/No Pass/Letter Grade Option. (CSU)

CIS 189 C Admintg Wdws Active Dir Svs **3 Units**
Term hours: 36 lecture and 54 laboratory. This course covers implementing, managing, maintaining and configuring directory services and infrastructure in a Windows server environment. Emphasis would be on active directory domain services (AD DS), group policies at both introductory and advanced, domain name system, file services, AD certificate services, setting up user accounts and user access, managing resources, AD federation services, AD rights management, AD trusts, and advanced networking services and infrastructure. $3.00 Materials Fee - PAYABLE AT REGISTRATION. Pass/No Pass/Letter Grade Option. (CSU)

CIS 190 C IT and Cybersecurity Funds **4 Units**
Term hours: 72 lecture and 36 laboratory. This course provides students with the fundamental knowledge in Information technology and Cybersecurity and prepares students for CompTIA's ITF+ and Cloud Essentials exams. Topics will include Cybersecurity essentials, OS installation and hardening, Windows and Linux administration, networking fundamentals and basics of cloud computing. Pass/No Pass or Letter Grade Option. (CSU)

CIS 191 C Network Infrastructure Service **3 Units**
Term hours: 36 lecture and 54 laboratory. This course primarily covers the administration and configuration tasks required to deploy, manage and maintain infrastructure and necessary network services. Emphasis is placed on advanced network and file services, dynamic access control, distributed active directory domain, active directory certificate, rights management, network load balancing, virtual machine manager, VPN solution, sites topology, failover clustering, and IP address management. Pass/No Pass or Letter Grade option. $3.00 Materials Fee--PAYABLE AT REGISTRATION. (CSU)

CIS 195 C Network Security **3 Units**
Term hours: 36 lecture and 54 laboratory. This course prepares students to identify network security threats and implement measures for securing networks. Important network security topics covered in CompTIA's Security+ certificate such as malware and social engineering attacks, basic cryptography, mobile, IoT, and wireless network security, account and access control, risk management and vulnerability assessment are covered. Pass/No Pass/Letter Grade Option. $3.00 Materials Fee--PAYABLE AT REGISTRATION. (CSU)

CIS 196 C Ethical Hacking **3 Units**
Term hours: 36 lecture and 54 laboratory. This course provides students with basic anti-hacking, penetration testing, risk assessment and management, incident response, security controls, and enterprise network security concepts and hands-on skills. Important defense in depth topics such as network and computer attacks, footprinting, port scanning, enumeration, forensics, cryptography and operating systems vulnerabilities and hardening are covered. This course also prepares students for the CompTIA CySA+ Cybersecurity Analyst certificate. $3.00 Material Fee - PAYABLE AT REGISTRATION. Pass/No Pass/Letter Grade Option. (CSU)

CIS 201 C Microsoft Virtualization and Cloud Deployment **3 Units**
Term hours: 54 lecture and 18 laboratory. This course will prepare students with the knowledge and skills in virtualization technology such as Hyper-V, System Center services, desktop virtualization, and cloud computing using Azure networking platform. Students will be proficient in developing applications and services by using cloud and virtualization tools including storage, security, computing, and communications. $3 materials fee is payable at registration. Pass/No Pass or Letter Grade Option. (CSU)

CIS 202 C VMware Cloud and Virtual Netw **3 Units**
Term hours: 54 lecture and 18 laboratory. In this hands-on training course students will install, configure, manage, and troubleshoot VMware vSphere, which includes VMware ESXi and VMware VCenter Server. Students are taught how to administer a vSphere infrastructure for an organization of any size. In doing so, students explore fundamentals of virtual network design and implementation, fundamentals of storage area networks, virtual switching, virtual system management, and engineering for high availability. In addition, students will learn the skills necessary to install and configure VMware vRealize for cloud solutions. $3 materials fee payable at registration. Pass/No Pass or Letter Grade option. (CSU)

CIS 211 C Introduction to Programming **3 Units**
Term hours: 54 lecture and 18 laboratory. This beginning course in programming introduces students to the Visual C# .NET and Visual Basic .NET programming languages. Students will learn how to design, code, and debug programs common to the business environment. Some of the topics include: Program Design, Control Structures, Functions, Sub Procedures, Form Design, and Object-Oriented coding. $3.00 Material Fee - Payable at Registration. (CSU/UC, C-ID: ITIS 130)

CIS 216 C Microsoft Project **3 Units**
Term hours: 54 lecture and 18 laboratory. This course uses Microsoft Project to create a task list, set up and assign resources, format and print plan, track progress, share project information, and manage project team. Students will learn how to solve typical project and business problems using the planning, control and reporting features of Microsoft Project. $3.00 Material Fee-Payable at Registration. (CSU)

CIS 218 C Visual C Programming **3 Units**
Prerequisite(s): CIS 211 C with a grade of C or better.
. Term hours: 54 lecture and 18 laboratory. This course introduces students to the Visual C# programming language. Students will learn how to design, code, and debug programs common to the business environment. Some of the topics include: Classes and Objects, Methods, Arrays, and Form Development. $3.00 Material Fee - Payable at Registration. (UC/CSU)

CIS 220 C Web Page Programming **3 Units**
Advisory: CIS 179 or consent of instructor.
Term hours: 54 lecture and 18 laboratory. In this course, students will learn how to create Web pages that include Cascading Style Sheets (CSS), how to create JavaScript programs inside HTML (Hyper Text Markup Language) documents, how to use JavaScript programs to enhance Web pages, and how to use elements of Dynamic HTML. Emphasis is placed on multiple page layers, scripting, and managing large-scale Web sites. Using these tools and techniques, students will learn to create dynamic effects based on users interaction, simple animation, drop-down menu, and other sophisticated and useful design effects. Pass/No Pass/Letter Grade Option. $3.00 Material Fee-Payable at Registration. (CSU)

CIS 223 C Visual C Programming **3 Units**
Prerequisite(s): CIS 211 C with a grade of C or better.
Term hours: 54 lecture and 18 laboratory. This course introduces students to the Visual C++ programming language. Students will learn how to design, code, and debug programs common to the business environment. Some of the topics include: Control Structures, Functions, Classes and Objects, Arrays, and File Processing. $3.00 Material Fee - Payable at Registration. (UC/CSU)

CIS 225 C Web Programming with ASP **3 Units**
Term hours: 54 lecture and 18 laboratory. This course prepares students to use ASP (Active Server Pages) as a web programming language to create dynamic, interactive, and data-driven web applications. Students will learn how to develop web applications that interact with viewers as well as with other computer applications. Emphasis is placed on reading and writing data to a file on the web server, developing interactive web pages, creating web applications that integrate data bases, server-side programming, optimizing the performance of web applications, developing user controls, working with ASP web services, debugging web applications, creating mobile web applications. Pass/No Pass/Letter Grade Option. $3.00 Material Fee-Payable at Registration. (CSU)

CIS 226 C Java Programming **3 Units**

Advisory: CIS 211 C or equivalent programming experience.

Term hours: 54 lecture and 18 laboratory. This course introduces students to the Java programming language. Students will learn the language syntax, how to design and debug programs as well as object oriented programming concepts. $3.00 Material Fee-Payable at Registration. (CSU/UC, C-ID: COMP 122)

CIS 230 C Cisco Networking 1 **4 Units**

Advisory: CIS 190 C Term hours: 72 lecture and 36 laboratory.

The first course in the CCNA (Cisco Certified Networking Associate) focuses on network terminology and protocols, Local Area Networks (LANs), Wide Area Networks (WANs), Open System Interconnection (OSI) model, cabling, cabling tools, routers, router programming, Ethernet, Internet Protocol (IP) addressing, and network standards and security fundamentals. This course is offered through Cisco Local Academy and upon successful course completion, students will receive a digital badge from Cisco. $3.00 Materials Fee--PAYABLE AT REGISTRATION. Pass/No Pass/Letter Grade Option. (CSU).

CIS 231 C Cisco Networking 2 **3 Units**

Prerequisite(s): CIS 230 C with a grade of C or better.

Term hours: 36 lecture and 54 laboratory. This is the second course in the CCNA (Cisco Certified Networking Associate) curriculum that focuses on switching technologies and router operations that support small-to-medium business networks and includes wireless local area networks (WLAN) and security concepts. Students learn key switching and routing concepts. They can perform basic network configuration and troubleshooting, identify and mitigate LAN security threats, and configure and secure a basic WLAN. This course is offered through Cisco Local Academy and upon successful course completion students will receive a certificate from Cisco. $3 materials fee payable at registration. Pass/No Pass or Letter Grade Option. (CSU)

CIS 232 C Cisco Networking 3 **3 Units**

Prerequisite(s): CIS 231 C with a grade of C or better.

Term hours: 36 lecture and 54 laboratory. The third course in the CCNA (Cisco Certified Networking Associate) curriculum describes the architectures and considerations related to designing, securing, operating, and troubleshooting enterprise networks. This course covers wide area network (WAN) technologies and quality of service (QoS) mechanisms used for secure remote access along with the introduction of software-defined networking, virtualization, and automation concepts that support the digitalization of networks. This course is offered through Cisco Local Academy and upon successful course completion students will receive a certificate from Cisco. $3.00 Materials Fee--PAYABLE AT REGISTRATION. Pass/No Pass/Letter Grade Option. (CSU)

CIS 233 C Cisco CyberOps **3 Units**

Advisory: CIS 190 C and CIS 230 C.

Formerly: CIS 233 C Cisco Networking 4 Term hours: 36 lecture and 54 laboratory. This course provides an introduction to the knowledge and skills needed as an associate-level Security Analyst working with a security Operations Center team. Students gain understanding and hands-on experience on how to detect and respond to security incidents, understand how organizations deal with cybercrime, cyber espionage, insider threats, advanced persistent threats, regulatory requirements, and related issues. This course is offered through Cisco Local Academy and upon successful course completion students will receive a certificate from Cisco. Students will also be prepared for CCNA Cyber Ops exams. $3.00 Materials Fee--PAYABLE AT REGISTRATION. Pass/No Pass/Letter Grade Option. (CSU)

CIS 234 C Advanced Java Programming **3 Units**

Prerequisite(s): CIS 226 C with a grade of C or better.

Term hours: 54 lecture and 18 laboratory. This course covers advanced Java programming through the design and use of data structures and algorithms. The following data structures will be covered: arrays, linked structures, stacks, queues, hash tables, and various types of trees. Students will learn to implement and use each. $3 Materials Fee - PAYABLE AT REGISTRATION. (UC/CSU, C-ID: COMP 132)

CIS 236 C Intro to Oracle - SQL PL-SQL **3 Units**

Term hours: 36 lecture and 54 laboratory. This course offers students an extensive introduction to data server technology. The class covers the concepts of both relational and object relational databases and the powerful SQL (Structured Query Language). Students are taught to create and maintain database objects and to store, retrieve, and manipulate data. $3.00 Materials Fee - PAYABLE AT REGISTRATION. (CSU, C-ID: ITIS 180)

CIS 239 C CCNA Bootcamp **3 Units**

Advisory: CIS 230 C and CIS 231 C and CIS 232 C.

Term hours: 54 lecture and 18 laboratory. Students will be prepared for the CompTIA Network+ and Cisco Certified Networking Associate (CCNA) Routing and Switching exams. Major concepts such as IP addressing and subnetting, router and switch configurations, troubleshooting, routing, switching and VLANs will be reviewed. Students will be provided with the test bank questions and sample simulation scenarios to prepare for the exams. Pass/No Pass/Letter Grade Option $3.00 Materials Fee-Payable at Registration. (CSU).

CIS 243 C Linux Server Administration **3 Units**

Advisory: CIS 100 C.

Term hours: 54 lecture and 18 laboratory. This is a hands-on course for students to acquire basic skills and knowledge needed to administer Linux servers in a network environment. Topics include installing, configuring, and maintaining Apache, FTP, SSH, Samba, NFS, DHCP, NTP, mail, printing, and LAMP servers as well as system log files and basic network security measures. (UC/CSU)

CIS 244 C Java Game Programming **3 Units**

Term hours: 54 lecture and 18 laboratory. This course covers game programming for Java developers. It leads students to create desktop and Internet computer games using the latest Java programming language techniques. $3.00 Material Fee-Payable at Registration. (CSU/UC)

CIS 245 C Perl Programming **3 Units**

Term hours: 54 lecture and 18 laboratory. This hands-on course introduces students to the Perl and CGI programming language. Topics include syntax, basic scripting skills, arrays and hashes, I/O, regular expressions, and subroutines. The course also introduces object-oriented programming in Perl, as well as CGI.pm module and Perl web programming. Pass/No Pass/Letter Grade Option. $3.00 Material Fee-Payable at Registration. (UC/CSU)

CIS 246 C PHP Programming **3 Units**

Term hours: 54 lecture and 18 laboratory. This hands-on course introduces students to the PHP programming language. Topics include basic PHP programming skills, and integration with HTML. It also explores advanced modules including accessing the MySQL database. Students will learn to develop dynamic web content and data-driven web sites using PHP. Pass/No Pass/Letter Grade Option. $3.00 Material Fee-Payable at Registration. (UC/CSU)

CIS 247 C Python Programming **3 Units**

Term hours: 54 lecture and 18 laboratory. In this course, students will obtain a hands-on introduction to the Python language, Python tools, Python applications, and problem-solving with Python. Through lectures and laboratory work, students learn the skills of Python programming. Pass/No Pass/Letter Grade Option. $3 materials fee payable at registration. (CSU/UC, C-ID: COMP 122)

CIS 252 C Java Web and Mobile Applications **3 Units**

Prerequisite(s): CIS 226 C with a grade of C or better.

. Term hours: 54 laboratory and 18 laboratory. This course covers topics in Java Web and Mobile Applications. Topics include multithreading, networking, JDBC, Servlet, JSF, web services and mobile applications. $3.00 Material Fee-Payable at Registration. (CSU/UC)

CIS 256 C Appl. Security & Pntratn Test. **4 Units**

Advisory: CIS 247 C Term hours: 63 lecture and 36 laboratory.

This course prepares students to understand Application Security (AppSec) and Development, Security and IT Operations (DevSecOps), will help learn various aspects of software development, operations, continuous integration, continuous delivery, automated build, test, deployment and analysis of application's source code for vulnerabilities. The course will explore the different tools that enable DevSecOps like GitLab, GitHub, SAST/DAST, fuzzers, Codacy, SonarQube, Snyk.io, Logz.io, XebiaLabs, dependency scanners, OWASP ZAP and Infrastructure as Code. This course prepares students for the CompTIA PenTest+ certification exam. Pass/No Pass/Letter Grade Option $3.00 Materials Fee--PAYABLE AT REGISTRATION (CSU)

CIS 257 C Cloud Implementation and Secur **4 Units**

Advisory: CIS 230 C Term hours: 63 lecture and 36 laboratory.

This course prepares students to understand cloud computing, analyze cloud technologies, secure cloud infrastructures, learn different cloud types and services, and manage virtual servers and cloud storage. The course also will cover the topics of virtualization, software defined networks, storage, and various vendor cloud products, and programming models. Course is supplemented with 24/7 access to NetLab. Pass/No Pass/Letter Grade Option $3.00 Materials Fee--PAYABLE AT REGISTRATION (CSU)

CIS 258 C Cisco Security **3 Units**

Advisory: CIS 230 C and CIS 231 C.

This course focuses on securing network devices, implementing firewall and intrusion prevention technologies, cryptography, implementing Virtual Private Networks (VPNs), implementing the Cisco Adaptive security Appliance (ASA), and managing a secure network. This course is offered through Cisco Local Academy and upon successful course completion, students will receive a certificate from Cisco. Students will be also prepared for Cisco's IINS exam by completing Bootcamp sessions. $3 materials fee payable at registration. Pass/No Pass or Letter Grade option. (CSU)

CIS 259 C Advanced Cloud Implementation **3 Units**

Advisory: CIS 257 C with a grade of C or better.

Term hours: 36 lecture and 54 laboratory. This course prepares students for the AWS Certified Solutions Architect and covers the fundamentals of building IT infrastructure in the cloud. The course is designed to teach how to optimize use of the cloud by understanding different best practices on implementation and deployment of different cloud services and solutions. Throughout the course, students will explore case studies that showcase how businesses and customers are designing their cloud-based IT infrastructures and the strategies and services they follow. This course will provide students the opportunity to build a variety of infrastructures through a guided, hands-on approach. Pass/No Pass/Letter Grade Option $3.00 Materials Fee-- PAYABLE AT REGISTRATION (CSU)

CIS 261 C Game Programming **3 Units**

Term hours: 54 lecture and 18 laboratory. This course introduces students to basic game programming concepts and program design process. Topics include game terminology, genre analysis, platform comparisons, and content creation. Students will also explore major game programming languages. Pass/No Pass/Letter Grade Option. $3.00 Materials Fee - Payable at Registration. (UC/CSU)

CIS 263 C Mobile Game Programming **3 Units**

Term hours: 54 lecture and 18 laboratory. This course offers an overview of the gaming products for platforms involving anything handheld, including cell phones, PDAs and Pocket PCs. Students will learn to develop mobile games for the portable platforms of their choices. Pass/No Pass/Letter Grade Option. $3.00 Materials Fee-Payable at Registration. (UC/CSU)

CIS 264 C Windows Game Programming **3 Units**

Term hours: 54 lecture and 18 laboratory. This course leads students to develop skills and techniques relevant to the programming of computer games for Windows. The course will focus primarily on programming aspects. Pass/No Pass/Letter Grade Option. $3.00 Material Fee - Payable at Registration. (CSU/UC)

CIS 274 C IT Project Management **3 Units**

Term hours: 36 lecture and 54 laboratory. This course provides the concepts and solutions that supports the planning, scheduling, controlling, resource allocation, and performance measurement activities required for successful completion of an information technology project and helps prepare for the CompTIA Project+ certification exam. Topics include integration, scope, time, cost, quality, human resource management, communications, procurement, risk, and technology, management. $3.00 Materials Fee--PAYABLE AT REGISTRATION (CSU)

CIS 275 C Adv Python Programming **3 Units**

Prerequisite(s): CIS 247 C with a grade of C or better.

Term hours: 54 lecture and 18 laboratory. This is an intermediate-level course for students to develop programming skills to build larger, more complex, higher-quality software. Topics include functional programming, data structures, modules, class protocols, inheritance, generators, operator overloading, reflection, and optimization. (CSU/UC, C-ID: COMP 132)

CIS 276 C Computer Forensics I **3 Units**

Term hours: 54 lecture and 18 laboratory. This course introduces basic techniques and methods used for collecting and preserving digital evidences for computer forensic process. This course emphasizes on gathering digital evidences from a computer system. Pass/No Pass/Letter Grade Option. $3.00 Material Fee - Payable at Registration. (CSU)

CIS 277 C Digital Forensics **3 Units**

Term hours: 36 lecture and 54 laboratory. This hands-on course provides theoretical and practical knowledge, as well as current research on digital forensics and delivers technical and management knowledge of computer forensics to students. This course equips students with professional knowledge and techniques to investigate, preserve, process, report, and present digital evidence. $3 materials fee payable at registration. (CSU)

CIS 278 C Cyber Crime **3 Units**

Term hours: 54 lecture and 18 laboratory. This course will introduce the student to concepts and actions involved with cybercrime. The emphasis of the course will be placed on the student gaining an understanding of the types, the elements, and the corresponding forensic evidence that exists from cybercrime. $3.00 Material Fee - Payable at Registration. (CSU)

CIS 279 C Computer Forensics Legal Aspects **3 Units**
Term hours: 54 lecture and 18 laboratory. This course will examine the civil and criminal aspects of computer forensics. Students will be introduced to case law and will learn appropriate steps, procedures, and techniques to comply with law when conducting forensic examinations. Also, testimony concepts by the forensic examiner will be discussed. Pass/No Pass/Letter Grade Option. $3.00 Material Fee - Payable at Registration. (CSU)

CIS 280 C Analysis of Digital Media **3 Units**
Term hours: 54 lecture and 18 laboratory. This course will provide the student with the concepts and skills to complete examinations on alternative digital media. This includes an understanding of the various file systems, acquisition procedures, recovery methods, and reporting on findings. $3.00 Material Fee - Payable at Registration. (CSU)

CIS 281 C Computer Forensics Capstone **3 Units**
Prerequisite(s): CIS 280 C with a minimum grade of "C".
Term hours: 54 lecture and 18 laboratory. This course will complete the computer forensics certificate program with a thorough testing process of the student's knowledge of computer forensics. Through a series of examinations, students will demonstrate their knowledge of appropriate computer forensic procedures/protocol, acquisition techniques, file systems, analysis of files, alternative media, Internet history/email analysis, log analysis, reporting, incorporating all knowledge gained through the courses. $3.00 Material Fee - Payable at Registration. (CSU)

CIS 295 C CIS Internship **1-4 Units**
Term hours: 18 lecture and 54-240 laboratory depending on units attempted. This course is designed to give the student credit for work experience at a related occupational worksite, while being concurrently enrolled in a vocational major. For each unit of credit, a minimum of 75 paid or 60 unpaid worksite internship hours is required. The internship allows students to apply knowledge gained in college courses to an actual work setting, sample career choices and improve job-readiness skills. Supplemental reading and course assignments required. Variable Unit Class. May be taken for credit 4 times. Open Entry/Open Exit. Pass/No Pass/Letter Grade Option.(CSU)

CIS 299 C CIS Independent Study **0.5-2 Units**
Prerequisite(s): Approved Independent Study Learning Contract
Term hours: 9-36 hours lecture depending on units attempted. This course is designed for students who wish to gain further experience, knowledge, or expertise beyond their current offerings in their area of study. The number of class hours or activities per week will be determined by the scope of the topic. The instructor will devise learning strategies to be followed by the student. Students must obtain permission from the program coordinator to be enrolled in this class. Pass/No Pass/Letter Grade Option. May be taken for credit 4 times. (CSU)

At Cypress College, there are Department Program Student Learning Outcomes and Degree & Certificate Program Student Learning Outcomes.

Department Program Student Learning Outcomes:

Computer Information Systems

The courses taught by this department contribute to the following ISLO/PSLOs: A-Breadth of Knowledge, Competencies, and Skills, B-Communication Skills, and C-Critical Thinking, Problem Solving, and Information Competency Skills; specifically, the following ISLO/PSLO subcategories: A1-Business and Computer Information Systems, B1-Reading, B2-Writing, B3-Communicating, B4-Presenting, C1-Analysis, C3-Research, C4-Problem Solving, and C5-Technology.

A student who completes the Computer Information Systems (CIS) field of study will be able to:

- Demonstrate the knowledge and skills to utilize operating system commands, emails, Internet use, digital storage media.
- Use contemporary software application to create and modify word processing, spreadsheet, database, or presentation files.
- Acquire computer application skills to enhance his/her employment opportunity.

Computer Science

The courses taught by this department contribute to the following ISLO/PSLOs: A-Breadth of Knowledge, Competencies, and Skills; specifically, the following ISLO/PSLO subcategories: A1-Business and Computer Information Systems.

Computer Programming

A student who completes the Computer Programming field of study will be able to:

- Acquire problem analysis skills to design suitable solutions
- Code, debug, implement and maintain the computer programs
- Enhance his/her employment opportunity in the specific area of computer programming

Web Applications and Programming

A student who completes the Web Applications field of study will be able to:

- Demonstrate the knowledge and skills to employ the Internet tools to search the Web, manage email, communicate on the Web, download programs, share information, and strengthen Web security.
- Demonstrate the knowledge and skills to create and implement maintainable Websites using a range of programming techniques and languages.
- Demonstrate the knowledge and skills to apply a variety of Website management tools to maintain Websites.
- Enhance his/her employment opportunity in a specific area of Web applications programming.

Degree & Certificate Program Student Learning Outcomes:

The program student learning outcomes for each award can be found on the specific degree or certificate page.