Outcome Assessment Timeline Academic Programs

Department of Computer Information Systems

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| **APR 4-Year Cycle SLO 3-Year Cycle** | **2022-2026** | | |
| **Course ID** | **Course-Level Student Learning Outcome (CSLO)** | **Measure/Collect Data** | **Discuss & Plan** |
| **CIS 101**  INTRODUCTION TO BUSINESS INFORMATION SYSTEMS | Explain the importance of determining information system requirements for all management levels by describing the differences between various types of information systems. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
|  | Know the components and functions of computer systems, both hardware and software. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
|  | Display proficiency solving business problems using modern productivity tools (e.g., spreadsheet, database) or creating custom programs. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement:  each term |  |
| **CIS 142**  NETWORKING ACADEMY FUNDAMENTALS (CISCO CERTIFICATION PREPARATION) | Demonstrate the ability to construct a network and explain the connectivity of the hardware and software. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
|  | Analyze problems involving subnets and subnet masks to evaluate a network. | Fall 2021 | Spring 2022 |
|  |  | Fall 2024 | Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 144A** | Describe network configurations and protocols. | Fall 2021 | Spring 2022 |

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| ROUTERS AND INTERNETWORK FUNDAMENTALS (CISCO CERTIFICATION PREPARATION) |  | Fall 2024  Recommend Measurement: each term | Spring 2025 |
|  | Introduces students to networking architectures, models, protocols, and components. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 144B**  ADVANCED ROUTERS AND LAN NETWORKING | Configure a small network using Cisco routers and switches. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
|  | Introduces students to networking architectures, models, protocols, and components. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 144C**  WIDE AREA NETWORKS IMPLEMENTATION AND SUPPORT | Describe network configurations and protocols. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement:  each term |  |
|  | Introduces students to networking architectures, models, protocols, and components. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 290**  WORK EXPERIENCE CIS APPLICATIONS I | Demonstrate effective oral and written communication and technological awareness through the use of technologies (internet, email and telephone) in the workplace. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |

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|  | Apply personal skills, attitudes, cultural awareness, and skill proficiency in the workplace. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  | Recommend Measurement: each term |  |
| **CIS 291**  WORK EXPERIENCE CIS APPLICATIONS II | Demonstrate effective oral and written communication and technological awareness through the use of technologies (internet, email and telephone) in the workplace. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
|  | Apply personal skills, attitudes, cultural awareness, and skill proficiency in the workplace. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 292**  WORK EXPERIENCE CIS APPLICATIONS III | Demonstrate effective oral and written communication and technological awareness through the use of technologies (internet, email and telephone) in the workplace. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
|  | Apply personal skills, attitudes, cultural awareness, and skill proficiency in the workplace. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 293**  WORK EXPERIENCE CIS APPLICATIONS IV | Demonstrate effective oral and written communication and technological awareness through the use of technologies (internet, email and telephone) in the workplace. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
|  | Apply personal skills, attitudes, cultural awareness, and skill proficiency in the workplace. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |

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| **CIS 257**  WEB 2.0 SOCIAL MEDIA STRATEGIES | Student will prepare a multi-platform social media marketing strategy and analyze its effectiveness in a printable report format. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
|  | Implement a social media networking strategy that is culturally appropriate in community, nation, and world. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 257**  WEB 2.0 SOCIAL MEDIA STRATEGIES | Student will prepare a multi-platform social media marketing strategy and analyze its effectiveness in a printable report format. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
|  | Implement a social media networking strategy that is culturally appropriate in community, nation, and world. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 255**  WEB SEARCH ENGINE VISIBILITY | Student will prepare a multi-platform social media marketing strategy and analyze its effectiveness in a printable report format. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
|  | Implement a social media networking strategy that is culturally appropriate in community, nation, and world. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 240**  MICROSOFT OUTLOOK | Student will use appropriate online mail features to communicate with others on local area or wide area networks including sending and receiving email saving, printing, and using automated addressing of email. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |

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|  | Student will manage online messages by creating/deleting folders, sorting mail, filtering mail, moving files and folders, and archiving messages. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  | Recommend  Measurement: each term |  |
| **CIS 239**  PROJECT MANAGEMENT | Student will present a completed project in a timely manner applying project management principles throughout its preparation. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement:  each term |  |
|  | Student will set up an overall project plan and execute each step by reviewing data, investigating items and issues, resolving problems, discussing issues with team members, and integrating these at each step in the process. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
|  | Student will apply project management principles to complete a project in a manner that is efficient, high quality, and thorough, taking pride in the final product. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement:  each term |  |
| **CIS 226**  OPERATING SYSTEMS AND COMMAND LANGUAGES | Demonstrate system-oriented tasks effectively and efficiently following written instructions. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
|  | Identify the evolution of memory management methodologies and their associative strengths and weaknesses. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 182**  PYTHON PROGRAMMING FOR SECURITY ANALYSIS AND PENETRATION TESTING | Assess common symptoms and select the best course of action to support incident response. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |

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|  | Research security architecture and identify the compensating controls to implement. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
| **CIS 181**  INTRODUCTION TO DATABASE MANAGEMENT SYSTEMS | Students will be able to analyze current technical trends and activities in the field of Information Technology. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
| Students will be able to compose a set of legal, social and ethical standards an Information Technology firm will follow as it implements its information assurance privacy policies and procedures. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
| **CIS 179**  COMPUTER FORENSICS FUNDAMENTALS | Students will be able to research and report on acquisition tools. Students must contain the vendor's name, tool, and the features of the vendor’s product. With this data collected, students must prepare a spreadsheet listing vendors in the rows. For the column headings, students must use Raw format, Proprietary format, AFF format, Other proprietary formats the tool can read, Compression of image files, Remote network acquisition capabilities, and Method used to validate (MD5, SHA- 1, and so on). | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
|  | Students will be able to analyze current technical trends and activities in the field of Information Technology. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |

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| **CIS 178**  INTRODUCTION TO CYBERSECURITY | Students will be able to scan (SYN, ACK, NULL, and so forth) can indicate which service is running on a computer or server and explain how knowledge of that service can guide testers to exploits that might be used to attack the service or port. Students will match each open port to a service and protocol, Identify the application behind the service and the patch level using banners or fingerprinting, and verify the application’s system and version. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
|  | Students will be able to analyze current technical trends and activities in the field of Information Technology. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 177**  INTRODUCTION TO INFORMATION SYSTEMS SECURITY | Students will be able to control access to the data, programs, and other computing resources. Students will apply hardware authentication and modify the users and groups, and control the security policies. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
|  | Students will be able to analyze current technical trends and activities in the field of Information Technology. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 176**  SYSTEMS AND NETWORK SECURITY ADMINISTRATION | Students will be able to perform the following Common Administrative Tasks:  a. Create a user with a login name of bsmith b. Delete the user bsmith c. Change the properties of the existing user bsmith d. Lock the account of bsmith e. Change the password of bsmith f. Change the properties of the existing user bsmith g. Create a user with the same UID and primary group as root and a login name of bsmith h. Create a new user with a login name of bsmith | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |

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|  | Students will be able to analyze current technical trends and activities in the field of Information Technology. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
| **CIS 173**  INTRODUCTION TO SYSTEMS ANALYSIS AND DESIGN | Students will develop a project to implement the system’s development life cycle. Students will be able to do the following: identify the nature and scope of the problems discovered in the systems request, develop the system and determine and fully document in detail what should take place, design the construction of the information system to best satisfy the documented requirements, implement the system, test and evaluate the system | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
|  | Students will be able to analyze current technical trends and activities in the field of Information Technology. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 170**  INFORMATION COMMUNICATION TECHNOLOGY ESSENTIALS | Students will be able to build a PC and identify common connectors and devices on a typical computer system, select and install a CPU, select and install RAM, install motherboard, Install and maintain power supply, install hard drives, install standard peripherals (that aren’t display devices) on a PC | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
|  | Students will be able to analyze current technical trends and activities in the field of Information Technology. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 169**  CYBERSECURI TY ANALYSIS | Implement the appropriate response and countermeasure for a network-based threat. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
|  | Research security architecture and implement compensating controls. | Fall 2021 | Spring 2022 |

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|  |  | Fall 2024  Recommend Measurement: each term | Spring 2025 |
| **CIS 10A**  MICROCOMPUTE R REPAIR AND SERVICE | Student will explain to a customer the nature of the computer problem for which he/she has requested assistance. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
|  | Student will troubleshoot a failed computer, determine the problem, and return the computer to working order | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 10B**  MICROCOMPUTE R HARDWARE AND SOFTWARE UPGRADE | Student will explain to a customer the nature of the computer problem for which he/she has requested assistance. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
|  | Student will troubleshoot a failed computer, determine the problem, and return the computer to working order. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement:  each term |  |
| **CIS 14**  OFFICE AUTOMATION EQUIPMENT REPAIR | Students will prepare and present to the class a 15 minute presentation expanding on some area or topic in the text. A written summary of the presentation will be handed in to the instructor. The class will comment on and discuss the presentation. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
|  | Students will analyze and give quantitative and practical answers to problems covering areas such as basic electronics, the repair and use of printers, scanners and other office / business equipment. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
| **CIS 90** | Demonstrate effective oral and written communication and technological | Fall 2021 | Spring 2022 |

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| INTRODUCTION TO ONLINE LEARNING | awareness through the use of technologies (internet, email and telephone) in the workplace. | Fall 2024  Recommend Measurement: each term | Spring 2025 |
|  | Write measurable, achievable, relevant, and timely objectives related to new or expanded workplace responsibilities. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 106**  INTRODUCTION TO PROGRAMMING LOGIC AND DESIGN USING PYTHON | Student will demonstrate the use of the appropriate tool (pseudocode, Nassi - Schneiderman Charts, flowcharts) in the creation of algorithmic solutions to various problems. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
|  | Student will apply the structure theorem in formulating solution sets for given problems | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 108**  PHP (PERSONAL HOME PAGE) AND MYSQL | Administer MySQL database objects and their procedures. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement:  each term |  |
|  | Create and display dynamic web content using PHP programming concepts such as variables, expressions, operators, functions, events, arrays, decision statements, repetition statements, and database queries. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
| **CIS 109**  LINUX OPERATING SYSTEM AND APACHE WEB SERVER | Develop an acceptable solution to implement IP based virtual hosts, name based virtual hosts, and virtual host logging. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement:  each term |  |
|  | Administer, configure, and maintain Apache Web Server and the Linux | Fall 2021 | Spring 2022 |

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|  | Operating System security using the LAMP | Fall 2024 | Spring 2025 |
| stack for server page presentation. |  |  |
|  | Recommend |  |
|  | Measurement: |  |
|  | each term |  |
| **CIS 115**  INTRODUCTION TO PROGRAMMING USING C++ | The student will develop a program that dynamically allocates an array large enough to hold a user defined number of test scores. The scores should be sorted in ascending order, calculate the average score and display the sorted list of scores and averages with appropriate headings. The student will use pointer notation whenever possible. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  | Recommend Measurement: each term |  |
|  | The student will develop a program using looping, arrays, functions and decision making statements. The student will develop a gradebook that at a minimum will consist of 10 quiz scores, 10 written assignment scores, 2 research paper scores, and one midterm and final test score. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
| **CIS 117**  WINDOWS PROGRAMMING USING VISUAL BASIC | Demonstrate the use of Visual Basic syntax to construct repetition statements: while, do...while, for. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
|  | Critically analyze problems to develop algorithmic logical approaches utilizing Visual Basic syntax to code solution(s). | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 119**  OFFICE SUPPORT AND NETWORK TECHNICIAN | Students will prepare and present to the class a 15 minute presentation expanding on some area or topic in the text. A written summary of the presentation will be handed in to the instructor. The class will comment on and discuss the presentation. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
|  | Students will analyze and give quantitative answers to problems covering areas such as computer assembly, repair, software installation, cabling and WIFI and customer service issues…. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |

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| **CIS 121B**  WORD PROCESSING | Demonstrate word processing tasks for creating, editing, formatting, and saving documents. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
|  | Student will apply formatting to characters and to paragraphs by using commands or keyboard shortcuts in word processed documents. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement:  each term |  |
| **CIS 122B**  SPREADSHEET: SOFTWARE | Using the PMT function and Goal Seeking, calculate the most expensive car you can afford. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
|  | Create a spreadsheet of monthly expenses and create a pie chart of those expenses. | Fall 2021 | Spring 2022 |
|  |  | Fall 2024 | Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 123**  **WEB DESIGN I** | student will demonstrate their website to classmates | Fall 2021 | Spring 2022 |
|  |  | Fall 2024 | Spring 2025 |
|  |  | Recommend Measurement: each term |  |
|  | Student will use research data to determine how to fix errors as they quality-control check their uploaded website to meet industry standards. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement:  each term |  |
| **CIS 124**  WEB IMAGING | Student will use raster and vector graphics to communicate messages clearly on a website or web application. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |

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|  | Using samples from research, students will modify their own web-ready images to create specific effects. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  | Recommend Measurement: each term |  |
| **CIS 125**  ANIMATION I - MOTION GRAPHICS | Student will attach original computer animations to websites and present these to class. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
|  | Student will research computer animated films on the web and incorporate ideas into their own movies. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 126**  ANIMATION II - CODING | Students will storyboard and flowchart an animation movie, game and website. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
|  | Student will customize a computer video game and create an original basic game. | Fall 2021 | Spring 2022 |
|  |  | Fall 2024 | Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 129**  MULTIMEDIA PRESENTATIONS--- POWERPOINT | Student will give an oral presentation from between 5 and 10 minutes using a minimum of 4 slides on the subject of your choice. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement:  each term |  |
|  | Student will create a PowerPoint presentation on any subject with a minimum of 10 slides using transitions, animation, graphics, and sound. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement:  each term |  |

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| **CIS 130**  MICROCOMPUTE R DISK OPERATING SYSTEM | The Student will be able to describe and assess fundamental operating system commands. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
|  | The Student will be able to apply the knowledge of the operating system to assess and analyze the results of various operating commands. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement:  each term |  |
| **CIS 133**  ADVANCED MICROCOMPUTER SPREADSHEETS SOFTWARE | Using the Advanced Filter tool, identify all the shoe stores that carry women's shoes from a list of stores. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
|  | Using the VLOOKUP function, match a part number to retrieve the description and price of a series of items in a table. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 134**  MICROCOMPUTE R DATABASE SOFTWARE--- ACCESS | Analyze the database needs of a business given the necessary business data. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
|  | Given a business analysis of database needs, be able to create a database design solution. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 146**  INTRODUCTION TO STRUCTURED QUERY LANGUAGE (SQL) | Demonstrate the use of standard SQL syntax to create, read, update and delete data definitions and manipulate database administration tasks. This will be measured by comprehensive written exercise(s). | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |

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|  | Create, manage, and administer database security privileges and backup procedures for users and database objects. Assessed by the examination of the Database Management System's internal administration log. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
| **CIS 147**  NETWORK SECURITY | Implement encryption, intrusion detection, monitoring, and management for private networks and remote access. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
|  | Demonstrate Cisco and industry security best practices that can be applied in a corporate setting. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 150**  INTRODUCTION TO TELECOMMUNICATIONS AND THE INTERNET | Access and communicate via email and various news groups on the Internet. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
|  | Search and retrieve topic-specific information on the Internet. | Fall 2021 | Spring 2022 |
|  |  | Fall 2024 | Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 151**  RESEARCH USING THE INTERNET | Students will be able to properly cite Internet sources such as web pages, documents, articles from databases, etc. in either MLA or APA format. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement:  each term |  |
|  | Students will be able to recognize and analyze an information need, develop a search strategy which expresses that need, and apply that search strategy successfully on the Internet using tools such as search engines and specialized databases. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |

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| **CIS 152**  USING HTML AND CSS TO CREATE WEB PAGES | Students will upload an original website coded in HTML and CSS and demonstrate this website to the class. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
|  | Students will test the website links for accuracy and correct any malfunctioning links. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 153**  PROGRAMMING INTERNET VISUAL/MOBILE APPLICATIONS USING JAVA | Demonstrate use of Java methods, classes, and objects in an integrated developer environment. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
|  | Demonstrate the use of Java for input, selection, and repetition to manipulate strings and arrays. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 158**  IMAGING FOR THE WORLD WIDE WEB (PHOTOSHOP) | Students will create digital images on websites in order to communicate ideas clearly. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
|  | Students will use appropriate photo retouching techniques developed by others to correct digital photos. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 160**  DIGITAL INFORMATION SYSTEMS, THE INDIVIDUAL AND SOCIETY | Evaluate the responsibility of society in general, and creators and users of technology in particular, to function in an ethical and professional manner. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |

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|  | Compare and contrast the use of technology in a free society and in an authoritarian society | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  | Recommend Measurement: each term |  |
| **CIS 165**  JAVASCRIPT PROGRAMMING | Design and code JavaScript programs utilizing sequence, selection, and iteration control structures. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
|  | Analyze business problems, write custom JavaScript functions and prepare at least one user's manual. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
| **CIS 166**  C# PROGRAMMING | The student will develop an application that includes a Graphical User Interface for a restaurant that calculates a table’s bill.  The application should display all the menu items in four ComboBoxes. Each ComboBox should contain a category of food offered by the restaurant. The user can choose from 1 of these ComboBoxes to add an item to a table’s bill. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
|  | The student will develop a program using looping, arrays, functions and decision making statements. The student will develop a gradebook that at a minimum will consist of 10 quiz scores, 10 written assignment scores, 2 research paper scores,  and one midterm and final test score. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
| **CIS 167**  QUALITY ASSURANCE AND SOFTWARE TESTING | The student will compare and contrast CMMI Management tools or templates that would be used to manage Capability Maturity Model Integration. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement:  each term |  |
|  | Develop acceptable techniques to test the user interface, file system interface, the software/OS interface, and exception and error cases. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |

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|  |  | Recommend Measurement: each term |  |
| **CIS 137**  ADVANCED WORD PROCESSING SOFTWARE | Demonstrate advanced word processing tasks for creating, editing, formatting, and saving documents. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
|  | Student will apply advanced formatting to characters and to paragraphs by using commands or keyboard shortcuts in word processed documents. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend  Measurement: each term |  |
| **CIS 92** MICROSOFT OFFICE SUITE | Students will produce various types of documents using the Microsoft Office Suite. | Fall 2021  Fall 2024 | Spring 2022  Spring 2025 |
|  |  | Recommend Measurement: each term |  |
|  | Students will work with team members and collaborate on production of documents including Excel charts, PowerPoint presentations, Word memos, short reports, tables, and Access database reports. | Fall 2021  Fall 2024  Recommend Measurement: each term | Spring 2022  Spring 2025 |
|  | | | |
| **Program** | **Program-Level Student Learning Outcome (PSLO)** | **Measure/Collect Data** | **Discuss & Plan** |
| Cyber-Forensic Associate in Science (02707) | Students will be able to use knowledge and tools to understand how to secure information, networks, operating systems, and program functions. | 2022 - 2026 | Fall 2025 |
| CIS--Web Search Engine Marketer-CT (02334) | Student will prepare a written proposal for search engine positioning strategies for a client website. | 2022 - 2026 | Fall 2025 |
| CIS---Web Site eCommerce Administrator- AS (02127) | Student will describe and summarize eCommerce business models and solutions to solve and determine current and future business requirements. | 2022 - 2026 | Fall 2025 |

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| CIS--eCommerce Emphasis (02071) | Students will compare and contrast strategies techniques and programming techniques of developing an online store. | 2022 - 2026 | Fall 2025 |
| CIS--Web and Gaming 2D and 3D Animator-CT (A2134) | Students will create an animated video game, a website, or a movie with a clear content message. | 2022 - 2026 | Fall 2025 |
| CIS---Web Database Programmer/Administrator  --LAMP-CP (02107) | Students will use government regulations to evaluate LAMP stack and other website presentation technologies for accessibility compliance. | 2022 - 2026 | Fall 2025 |
| CIS---Web Site Designer and Developer-CT (02122) | Student will create a website which matches an industry standard for effective communication. | 2022 - 2026 | Fall 2025 |
| CIS---Systems Programming Emphasis- CT (02099) | Student will analyze and report outcomes from Test Report Presentations. | 2022 - 2026 | Fall 2025 |
| CIS---Web and Gaming Animator-CP (A2109) | Student will create an animated movie with clear content message. | 2022 - 2026 | Fall 2025 |
| CIS---Web and Gaming Animator-AS (A2129) | Students will create an animated video game, web application, or movie short with clear content message. | 2022 - 2026 | Fall 2025 |
| CIS---Internetwork Technician Emphasis--- Basic-CP (02089) | Demonstrate the ability to design, administer, configure, analyze, and explain basic network hardware and software connectivity using commands and interfaces that monitor and control traffic within and between devices. | 2022 - 2026 | Fall 2025 |
| Project Management-CP (02276) | Student will utilize the principles of project management and software logic and design to inspect, analyze, edit, and document technology in a tracking system. | 2022 - 2026 | Fall 2025 |
| CIS: Computer Programming With an Emphasis on App-BSC-CT (02274) | Students will demonstrate the use of the appropriate user interface design and application tools to solve various basic programming problems. | 2022 - 2026 | Fall 2025 |
| CIS---Web Designer-CP (02108) | Students will create a site statement and site contract for a website client. | 2022 - 2026 | Fall 2025 |
| CIS--Internetwork Technician Emphasis (02088) | Demonstrate the ability to design, administer, configure, analyze, and explain network hardware and software connectivity using commands and | 2022 - 2026 | Fall 2025 |

|  |  |  |  |
| --- | --- | --- | --- |
|  | interfaces that monitor and control traffic within and between devices. |  |  |
| CIS---Web Site Designer and Developer-AS (02121) | Student will create a website which matches an industry standard for effective communication using search engine analytical tools to create a search engine marketing plan. | 2022 - 2026 | Fall 2025 |
| CIS--Systems Programming Emphasis (02090) | Demonstrate the ability to solve industrial, business, and scientific programming problems using a variety of programming languages, system software resources, and associated techniques. | 2022 - 2026 | Fall 2025 |
| C++ Certificate-CP (01064) | Student will develop strategies to work with diverse groups utilizing technology. | 2022 - 2026 | Fall 2025 |
| CIS--Operations/PC Support Specialist Emphasis (02079) | Demonstrate the ability to evaluate, connect, support, maintain, and troubleshoot computing devices on various basic networks. | 2022 - 2026 | Fall 2025 |
| Information Systems (01130) | Demonstrate the ability to analyze the information technology infrastructure needs of an organization and determine the appropriate applications to solve specific business problems. | 2022 - 2026 | Fall 2025 |
| CIS: Computer Programming With Emphasis on Applicat-AS (02273) | Student will demonstrate the use of the appropriate user interface design and application tools to solve various programming problems. | 2022 - 2026 | Fall 2025 |

**Directions & Helpful Hints**

In the spaces provided on the timeline, please list course-level and program-level student learning outcomes and when each will be assessed.

**APR/SLO 3-Year Cycle**: The APR/SLO cycle begins with a compressive program review and ends just before the next comprehensive is due.

**Course ID:** Insert course designator (e.g., ENGL 114, MATH 60, COMM 103)

**Course-Level Student Learning Outcome (CSLO):** Write in each CSLO listed on the course outline of record. This can be accessed in CurricUNET.

**Measure:** Insert the semester(s) each CSLO will be measured, and entered into eLumen.

**Discuss & Plan:** State the semester the faculty will meet to discuss assessment results and create action plans as needed.

**Program:** State the program being assessed.

**Program-Level Student Learning Outcome (PSLO):** State the PSLO(s) for each program listed.

Considerations for Completing the SLO Assessment Timeline:

As per the SCEA contract, “The timeline shall ensure that all SLOs in all sections for each course are to be assessed at least once during the 3-year cycle, with a maximum number of course SLOs per section collected by a Unit member at any one time being three (3)”.

According to the ACCJC Standard II.A.3, “The institution identifies and regularly assesses learning outcomes for courses, programs, certificates, and degrees using established institutional procedures.”