A.S. in Computer Information Systems

College Learning Outcomes Matrix: Rate each course from 1 to 5 with 5 being the most important.

A.S. in Computer Information Systems CORE CLASSES	Year of SLO Assessment	1. Written, Oral and Visual Communication	2. Scientific and Quantitative Reasoning	3. Critical Thinking 4. Problem Solving	5. Information Literacy:	GE	DEGREE
CIS 110 Introduction to Computer Information Systems	S12	1	2	4	5		X
CIS 113 Presentations and Publications	F12	4	2	2	1		X
CIS 117 Introduction to Database Design and Programming	S12	1	2	5	1		X
CIS 118 Introduction to Spreadsheets	F12	1	2	5	1		X
CIS 122 Networking Essentials	S13	1	2	4	1		X
CIS 126 Introduction to Windows	S13	1	2	4	1		X
CIS 141 Introduction to HTML Programming	S13	3	2	4	1		X

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College Learning Outcomes Matrix: Rate each course from 1 to 5 with 5 being the most important.

A.S. in Computer Information Systems Electives	Year of SLO Assessment	1. Written, Oral and Visual Communication:	2. Scientific and Quantitative Reasoning:	3. Critical Thinking 4. Problem Solving	5. Information Literacy:	DEGREE Electives
CIS 127 Intermediate Database Design	**S13**	1	1	5	1	X
CIS 128 Intermediate Spreadsheet Design	**S13**	1	1	5	1	X
CIS 137 Advanced Database Design	**S13**	1	1	5	1	X
CIS 142 Intermediate HTML and Scripting	**S13**	1	1	2	1	X
CIS 143 Designing Web Sites	**S13**	1	1	2	1	X
CIS 150 Personal Computer Server and Workstation Operating Systems	**S13**	1	1	2	1	X
CIS 151 Implementing and Administering a Network Infrastructure for a Personal Computer Server OS	**S13**	1	1	2	1	X
CIS 153 Implementing and Administering a Directory Services Infrastructure for a Personal Computer Server OS	**S13**	1	1	2	1	X
CIS 155 Designing Security for a Personal Computer Server Operating System	**S13**	1	1	2	1	X
CIS 159 Computer Network Security Basics	**S13**	1	1	2	1	X
CIS 161 Introduction to Computer System Hardware	**S13**	1	1	2	1	X
CIS 162 Computer Operating Systems	**S13**	1	1	2	1	X
CIS 163 Computer System Peripherals	**S13**	1	1	2	1	X
CIS 164 Troubleshooting Peripherals and Networking	**S13**	1	1	2	1	X
CIS 215 Visual BASIC Programming	**S13**	1	1	5	1	X
CIS 237 Introduction to SQL Programming	**S13**	1	1	5	1	X

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GENERAL EDUCATION/COLLEGEWIDE SLOS
WHAT ASSIGNMENTS DO YOU GIVE IN THESE CLASSES THAT ASSESS THE FOLLOWING COLLEGEWIDE SLOS?
ONLY ADDRESS THOSE THAT YOU MARKED ABOVE WITH 4 OR 5.

A.S. in Computer Information Systems CORE CLASSES	1. Written, Oral and Visual Communication:	2. Scientific and Quantitative Reasoning:	3. Critical Thinking 4. Problem Solving	5. Information Literacy:
CIS 110 Introduction to Computer Information Systems			Design a database with a single table. The table will contain an inventory of a personal collection (books, audio CD's or anything else that you might want to keep track of in your database.)	Complete 12 chapter tests in Information Technology
CIS 113 Presentations and Publications	Final project: 5-7 minute presentation (inform, sell, teach) using 12-25 slides with consistent fonts, appropriate artwork, animated effects, transitions and final summary slide. Include associated publication.			
CIS 117 Introduction to Database Design and Programming			Following the creation of the database and associated objects from the Final Project, develop an appropriate query for the application incorporating a compound condition criteria.	
CIS 118 Introduction to Spreadsheets			Owners want to know the profit potential of their furniture inventory. Create and format the worksheet and an appropriate chart.	

CIS 122 Networking Essentials			Research and develop a typical wireless site survey to determine location of wireless access points and ensure the security policies are in place to accommodate access to only the needed services based on user's privileges, permissions and access rights.	
CIS 126 Introduction to Windows			Tutorial 2 Review and case problems; practice the skills learned in tutorial to manage files and folders	
CIS 141 Introduction to HTML Programming			Final: develop a web site with the codes that were taught in this class, using links, font attributes and values, graphics, horizontal rule, table, form and framesets.	

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CORE PROGRAM (12 units)

The following courses are required of all Computer Information Systems degree students:

REQUIREMENTS UNITS

CIS 110	Introduction to Computer Information Systems
CIS 113	Presentations and Publications
CIS 117	Introduction to Database Design and Programming
CIS 118	Introduction to Spreadsheet Design
CIS 122	Networking Essentials
CIS 126	Introduction to Windows
CIS 141	Introduction to HTML Programming

ELECTIVES

In addition to the core program listed above, each Computer Information Systems degree student will complete a minimum of 12 additional units from this list of electives:

CIS 127	Intermediate Database Design 1½
CIS 128	Intermediate Spreadsheet Design 1½
CIS 137	Advanced Database Design 1½
CIS 142	Intermediate HTML and Scripting
CIS 143	Designing Web Sites
CIS 150	PC Server and Workstation Operating Systems
CIS 151	Implementing and Administering a Network Infrastructure for a Personal Computer Operating System
CIS 153	Implementing and Administering a Directory Services Infrastructure for a Personal Computer Server Operating System
CIS 155	Designing Security for a Personal Computer Server Operating System
CIS 159	Network Security 1½
CIS 161	Introduction to Computer System Hardware
CIS 162	Computer Operating Systems
CIS 163	Computer System Peripherals
CIS 164	Troubleshooting System Peripherals and Networking
CIS 215	Visual BASIC Programming
CIS 237	SQL Programming

STUDENT LEARNING OUTCOMES:

Upon completion of this degree/certificate a student will be able to

Perform the duties typically assigned an entry-level computer programmer position in a business or non-profit organization

Use object oriented programming, database, and Web programming software to support business information needs

Analyze a problem, and identify and define the computing requirements appropriate to its solution

Design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs

Use best practices and standards to integrate computer-based solutions into the user environment, with particular concern for systems and data security and integrity

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THESE DEGREE OUTCOMES EQUAL WHICH COURSE OUTCOMES FOR THESE COURSES?

A.S. in Computer Information Systems	Perform the duties typically assigned an entry-level computer manager position in a business or non-profit organization	Use object oriented programming, database, and Web programming software to support business information needs	Analyze a problem, and identify and define the computing requirements appropriate to its solution	Design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs	Use best practices and standards to integrate computer-based solutions into the user environment, with particular concern for systems and data security and integrity
CIS 110 Introduction to Computer Information Systems	~ Students will be able make informed decisions concerning the use of hardware, software and procedures to meet the information technology needs of organizations	~ Students will be able to solve simple business problems by coding elementary programs in a high level procedural programming language.	~ Students will be able to use current application software to solve simple business problems in communications, what- if analysis and, data organization and reporting	~ Students will be able to use current application software to solve simple business problems in communications, what- if analysis and, data organization and reporting	~ Students will be able make informed decisions concerning the use of hardware, software and procedures to meet the information technology needs of organizations
CIS 113 Presentations and Publications	~Increase facility in the operation of a personal computer and application software, thereby preparing for advanced courses or independent work in a professional environment.				
CIS 117 Introduction to Database Design and Programming		ALL	ALL		
CIS 118 Introduction to Spreadsheets		ALL	ALL		

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CIS 122 Networking Essentials	To provide students with an overview of the capabilities of Networks. The students should learn to identify the basic types of Networks, their appropriate applications and when they should be used.				To provide students with an overview of the capabilities of Networks. The students should learn to identify the basic types of Networks, their appropriate applications and when they should be used.
CIS 126 Introduction to Windows			~Identify and correctly select classes of software appropriate for specific problem solving tasks ~Utilize the appropriate Windows Utility for a given task	~Demonstrate installations and removal of programs ~Demonstrate advanced file and folder management skills ~Demonstrate Internet setup and searching skills ~Demonstrate installation and removal of hardware including printers.	
CIS 141 Introduction to HTML Programming		ALL	ALL		

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IN WHICH COURSES ARE THESE DEGREE SLOS ASSESSED? Use "I" for Intro, "P" for Practice and "M" for Mastery OR just use an X to mark those that are assessed.

A.S. in Computer Information Systems	Perform the duties typically assigned an entry-level computer manager position in a business or non-profit organization	Use object oriented programming, database, and Web programming software to support business information needs	Analyze a problem, and identify and define the computing requirements appropriate to its solution	Design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs	Use best practices and standards to integrate computer-based solutions into the user environment, with particular concern for systems and data security and integrity
CIS 110 Introduction to Computer Information Systems	X	X	X	X	X
CIS 113 Presentations and Publications	X				
CIS 117 Introduction to Database Design and Programming		X	X		
CIS 118 Introduction to Spreadsheets		X	X		
CIS 122 Networking Essentials	X				X
CIS 126 Introduction to Windows			X	X	
CIS 141 Introduction to HTML Programming		X	X		

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DEGREE SLOS
WHAT ASSIGNMENTS DO YOU GIVE IN THESE CLASSES THAT ASSESS THE FOLLOWING DEGREE SLOS?

A.S. in Computer Information Systems	Perform the duties typically assigned an entry-level computer manager position in a business or non-profit organization	Use object oriented programming, database, and Web programming software to support business information needs	Analyze a problem, and identify and define the computing requirements appropriate to its solution	Design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs	Use best practices and standards to integrate computer-based solutions into the user environment, with particular concern for systems and data security and integrity
CIS 110 Introduction to Computer Information Systems	Complete 12 chapter tests in Information Technology	Design a database with a single table. The table will contain an inventory of a personal collection (books, audio CD's or anything else that you might want to keep track of in your database.)	Complete 12 chapter tests in Information Technology	Complete 12 chapter tests in Information Technology	Complete 12 chapter tests in Information Technology
CIS 113 Presentations and Publications	Final project: 5-7 minute presentation (inform, sell, teach) using 12-25 slides with consistent fonts, appropriate artwork, animated effects, transitions and final summary slide. Include associated publication.				
CIS 117 Introduction to Database Design and Programming		Utilize the Final Project Specifications to create a database with Tables, Relationships, Forms, Queries and Reports as defined.	Following the creation of the database and associated objects from the Final Project, develop an appropriate query for the application incorporating a compound condition criteria.		

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CIS 118 Introduction to Spreadsheets		Owners want to know the profit potential of their furniture inventory. Create and format the worksheet and an appropriate chart.	Owners want to know the profit potential of their furniture inventory. Create and format the worksheet and an appropriate chart.		
CIS 122 Networking Essentials	You have been hired to install a network a conventional Ethernet network in a new office building. Determine what types of cable you would install, reviewing the characteristic of the following: fiber-optic, cabling, twisted-pair cable, coaxial cable or wireless connections.				Research and develop a typical wireless site survey to determine location of wireless access points and ensure the security policies are in place to accommodate access to only the needed services based on user's privileges, permissions and access rights.
CIS 126 Introduction to Windows			Tutorial 1, chapter review assignments from the book. Use your skills to explore the contents of a computer, extend what has been learned to customize the Windows Explorer windows.	Tutorial 2 Review and case problems; practice the skills learned in tutorial to manage files and folders	
CIS 141 Introduction to HTML Programming		Assignment: Lesson 1; Teamwork Project, create a list of your favorite Web pages. With three or four people in a group go through everyone's favorites and vote which are the top seven and why.	Final: develop a web site with the codes that were taught in this class, using links, font attributes and values, graphics, horizontal rule, table, form and framesets.		

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CIS_110	Introduction to CIS	Revise Course
Expected Outcomes for Student:		

Upon completion of the course,
~ Students will be able make informed decisions concerning the use of hardware, software and procedures to meet the information technology needs of organizations
~ Students will be able to use current application software to solve simple business problems in communications, what-if analysis and, data organization and reporting
~ Students will be able to solve simple business problems by coding elementary programs in a high level procedural programming language.

CIS_113	Presentations and Publications	Revise Course
Expected Outcomes for Student:		

~Create Presentations that reflect basic design principles, appropriate typesetting and use of color and graphics.
~Operate (on a basic level) at least one of three software programs (presentation, business graphics or page layout) to produce a digital document viewed by a large audience.
~Select the composition, layout, type, color and tone needed to present information to achieve a desired effect on an audience.
~Increase facility in the operation of a personal computer and application software, thereby preparing for advanced courses or independent work in a professional environment.

CIS_117	Introduction to Database Design and Programming	Revise Course
Expected Outcomes for Student:		

Upon completion of this course, students will be able to demonstrate a basic skill level knowledge of database design and to create database objects appropriate for simple business problems. Specifically,
~Create, modify and update a database
~Identify the applications suitable for databases
~Create a variety of table structures
~Create a variety of query objects
~Create a variety of simple form objects using wizards
~Create a variety of simple report objects using wizards

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CIS_118	Introduction to Spreadsheet Design	Revise Course
Expected Outcomes for Student:		
Upon completion of this course, students will be able to demonstrate a basic skill level knowledge of spreadsheet design to create spreadsheets appropriate for solving simple business problems. Specifically, ~ design and create a suitable worksheet to solve a problem ~ identify and create suitable charts to support a worksheet ~ identify and utilize suitable formulas to support a worksheet ~ identify and utilize suitable functions to support a worksheet.		

CIS_122	Networking Essentials	Revise Course
Expected Outcomes for Student:		
To provide students with an overview of the capabilities of Networks. The students should learn to identify the basic types of Networks, their appropriate applications and when they should be used.		

CIS_126	Introduction to Windows	Revise Course
Expected Outcomes for Student:		
~Identify and correctly select classes of software appropriate for specific problem solving tasks ~Utilize the appropriate Windows Utility for a given task ~Demonstrate installations and removal of programs ~Demonstrate advanced file and folder management skills ~Demonstrate Internet setup and searching skills ~Demonstrate installation and removal of hardware including printers. ~Decide strategies to maintain a malware free computer through the use of software.		

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CIS_141	Intro to HTML Programming	Revise Course

Expected Outcomes for Student:
~Demonstrate an understanding of symbolic source program coding by creating simple HTML code in a text editor and displaying the resultant Web page in a browser. ~Incorporate the use of elementary HTML commands for text layout and formatting, hyperlinking, navigation, and image placement using sequential command placement to create simple static Web pages. ~Incorporate table commands to create simple table data in Web pages as well as creating overall Web page structural layouts to produce more complex options for laying out elements. ~Apply knowledge of elementary HTML commands to produce simple Web pages consistent with good programming and design practices.

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ELECTIVES

CIS_127	Intermediate Database Design	Revise Course
Expected Outcomes for Student:		
Upon completion of this course, students will be able to demonstrate a growing skill level knowledge of database design and to create and customize database objects appropriate for simple business problems. Specifically, ~Design and implement database applications for business ~Create a variety of custom forms ~Create a variety of custom reports ~Create a variety of Action queries		

CIS_128	Intermediate Spreadsheet Design	Revise Course
Expected Outcomes for Student:		
Upon completion of this course, students will be able to demonstrate an intermediate skill level knowledge of spreadsheet design to create spreadsheets appropriate for solving more advanced business problems. Students will be able to identify the need for and create spreadsheets that ~sort and query database tables and use lookup functions ~consolidate worksheets and workbooks ~use solver for finding multi-variable multi-constraint solutions ~incorporate scenarios, pivot tables and pivot charts		

CIS_137	Advanced Database Design	Revise Course
Expected Outcomes for Student:		
Upon completion of this course, students will be able to demonstrate an advanced skill level knowledge of database design and to create and customize database objects appropriately for simple business problems. Specifically, ~Design and implement database applications for business ~Create a variety of Macros ~Create a variety of Graphical User Interfaces ~Create a variety of VBA procedures to support custom forms ~Create a variety of VBA procedures to support custom reports ~Implement techniques for securing a database		

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CIS_142	Intermediate HTML and Scripting	Revise Course
Expected Outcomes for Student:		
Students completing this course will understand the concepts and terminology of advanced programming for Internet and intranet applications. They will be able to design, develop, code, test, and implement pages that include interactive data exchange and animation.		

CIS_143	Designing Web Sites	Revise Course
Expected Outcomes for Student:		
Through lecture and reinforcing laboratory assignments, students will develop the conceptual and logical design for a Website, construct a conceptual design that is based on a variety of scenarios that includes context, workflow process and task sequence and that satisfies requirements for user interface, maintainability, and training.		

CIS_150	Personal Computer Server and Workstation Operating Systems	Revise Course
Expected Outcomes for Student:		
~ Analyze the requirements for a computer system ~ Install, design, configure, test, and maintain a workstation operating systems ~ Install, design, configure, test, and maintain server operating systems ~ Determine the best configuration ~ Identify and troubleshoot problems		

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CIS_215	Visual Basic Programming	Revise Course

Expected Outcomes for Student:

Upon completion of the course, Students will be able to:
 ~ Use problem-solving skills for planning and developing applications using the Visual BASIC .NET programming language
 ~ Understand object-oriented / event-driven programs for Windows based applications.
 ~ Plan and create a User Interface
 ~ Analyze and diagram a solution for a problem using pseudo code and flowcharts
 ~ Plan and create code employing sequential structure
 ~ Plan and create code employing selection structure
 ~ Plan and create code employing repetition structure
 ~ Write code to create Sub procedures and Functions
 ~ Write code to create Classes and objects
 ~ Writing code to connect and manipulate a MS Access database

CIS_237	Introduction to SQL Programming	Revise Course

Expected Outcomes for Student:

Upon completion of this course, students will be able to demonstrate a skill level knowledge of the SQL programming language. Specifically,
~Plan and create the SQL code necessary to create database tables, indexes and relationships to support an application
~Plan and create the SQL code for queries utilizing appropriate selection criteria techniques to obtain the desired results
~Plan and create code for action queries such as Delete, Update and Append
~Plan and create SQL code utilizing functions such as row level and aggregate appropriately to obtain the desired results