Assessment Record

Program: Computer Information Systems   **Assessment period:** 2021-2022

Program or Department Mission:
- Provide all students access to quality educational opportunities and experiences that will meet the needs of an ever-changing and increasingly demanding technological society.
- Provide career and professional degree programs that prepare students for immediate employment in the computer science field.
- Provide courses that help those already employed acquire specialized skills needed due to technological advances or for job advancement.
- Provide our degree-seeking students and professionals desiring to update their skills with the opportunity to learn and/or enhance computer skills necessary for employment/advancement in local businesses and the computing industry.
- Serve other members of the community desiring computer skills for personal enrichment.
- Make available to our service area quality instruction in computer software applications, computer networking, computer programming and web technologies.

Instructional Program Student Learning Outcomes & Assessment Plan

Student Learning Outcomes:

1. Students will be able to create microcomputer applications using Microsoft Office.
2. Students will be able to analyze and develop programming solutions.
3. Students will demonstrate knowledge and ability to use basic computer hardware, network applications, and cybersecurity software.

Intended Outcomes	Means of Assessment	Criteria for Success	Summary & Analysis of Assessment Evidence	Use of Results
SLO 1: Students will be able to create microcomputer applications using Microsoft Office.	*CIS 113 Spreadsheet Software Applications – Microsoft Excel* Students will be able to: • Use formulas to enhance a spreadsheet • Consolidate and organize multiple spreadsheets	*At least 70% of students enrolled in CIS 113 will successfully demonstrate:* • Completed formulas, such as Sum, Average, and IF function to enhance a spreadsheet • Consolidated and organized multiple spreadsheets into one	See table below	After one year of using myITLab we have seen good results. Through the simulation labs and exams which include simulation labs allowed us to determine knowledge and ability of the students. We saw an increase of 4% in student retention from 2020 to 2021. Based on the low percentage of change, we came together and are moving to a different platform and publisher. We were able to see a small increase in student knowledge and ability in using formulas inside a spreadsheet, consolidating multiple spreadsheets into one, and creating graphs to represent the data.

CIS 113 SLOs	Sections	Complete	Attempt	SLOs
Jefferson				
Fa 2021	1	46	49	94%
Sp 2022	1	37	41	90%
Su 2022	1	33	33	100%
Total	3	116	123	94%

CIS 146 Microcomputer Applications Students will be able to: • Create Word documents such as Letters, Flyers, and APA/MLA Book Reports • Create Excel Spreadsheets which include Formulas, and Analysis of data through Filters • Create PowerPoint presentations with slide transitions, animation, and adding clipart or photos.	*At least 70% of students enrolled in CIS 146 will successfully demonstrate:* **MS Word**: Completed Flyers and APA/MLA report. **MS Excel**: Creation of Budgets and Cost Analysis. **MS PowerPoint**: A presentation with transitions and animation.	(table below)	There was a 1% increase from 2020-2021 to 2021-2022. Discussions about what we could do better in our instruction led us to select a [new publisher and textbook](#). The new material is more explanatory with more labs for students to complete. A 1% increase is not acceptable and hope our new changes will show better results next year. Most students were able to create Word documents, Excel spreadsheets, and PowerPoint presentations. We have now started covering Access databases.

CIS 146 SLOs	Sections	Complete	Attempt	SLOs
Fa 2021	14	929	1127	82%
Sp 2022	14	537	638	84%
Su 2022	7	500	527	95%
Jefferson				
Fa 2021	8	519	554	94%
Sp 2022	7	283	302	94%
Su 2022	2	102	107	95%
Shelby				
Fa 2021	6	410	573	72%
Sp 2022	7	254	336	76%
Su 2022	5	398	420	95%
Total	35	1966	2292	86%

| SLO 2: Students will be able to analyze and develop programming solutions. | CIS 150: Introduction to Computer Logic and Programming

Students will demonstrate knowledge of Information Systems by:

• Utilization of modules in the logic of a program

Evaluate the logic of a program involving a control structure | At least 70% of students enrolled in CIS 150 will successfully demonstrate:

• Utilized modules in the logic of a program
• Evaluated logic of a program involved in a control structure | (table below) | Half the students were able to demonstrate modularization and control structure design in programming using exams, algorithm exercises, and programming assignments.

This course saw one of the largest increases than in the past. Since the 2020-2021 data to 2021-2022 there was a 32% increase in knowledge and ability. Also, we were able to add more courses due to enrollment. We standardized the course within the department which has helped in measuring the increase in knowledge and ability. |

CIS 150 SLOs	Sections	Complete	Attempt	SLOs
Jefferson				
Fa 2021	1	20	18	90%
Sp 2022	2	80	78	93%
Su 2022	2	85	77	91%
Shelby				
Fa 2021	2	156	90	58%
Sp 2022	1	76	71	93%
Su 2022	1	36	33	92%
Total	9	453	367	81%

| | CIS 215 C# Programming

Students will be able to:

• Create a program using a single form
• Create and execute a program using user defined classes | At least 70% of students enrolled in CIS 215 will successfully demonstrate:

• Created a program using a single form
• Created and executed a program using user defined classes | | Students were able to demonstrate the use of Visual Studio Software to write the code by using variables and data types. Using Graphic User Interface (GUI) through visual studio application to create the Window based Application. Quizzes showed the understanding of classes and GUI forms.

There was 10% increase from 2020 to 2022. The difference does not consider the course taught in the fall with a 77% retention. If we look at the one course from Jefferson in 2020 to the one in 2021, there is no change. We are taking a step back to determine where students need more focus and start from there. |

Table within the data column:

CIS 215 SLOs	Sections	Complete	Attempt	SLOs
Jefferson				
Sp 2022	1	16	15	94%
Total	2	36	43	94%

| | CIS 251 C++ Programming

Students will be able to:

- Demonstrate an understanding of employing functions and classes. | *At least 70% of students enrolled in CIS 251 will successfully demonstrate:*

- An understanding of employing function definitions
- An understanding of classes. | Table below | Students were able to identify data types, declare variables and print the required outcomes by using cin and cout operators.

Students completed the programming assignments by using the loops, decision making and array.

Write efficient coding by using Functions and classes by using user defined C++ functions and C++ classes. There was an increase of 4% between 2020 and 2022. We will review areas where students struggled and put more emphasis on those topics. |

CIS 251 SLOs	Sections	Complete	Attempt	SLOs
Fa 2021	1	51	49	96%
Sp 2022	1	8	7	88%
Su 2022	1	64	60	94%
Jefferson				
Fa 2021	1	51	49	96%
Su 2022	1	64	60	94%
Shelby				
Sp 2022	1	8	7	88%
Total	3	123	116	94%

| | CIS 285 Object-Oriented Programming

Students will be able to:

Develop object-oriented program using inheritance and polymorphism

Construct the GUI program using Java FX advanced controls | *At least 70% of students enrolled in CIS 285 will successfully demonstrate their knowledge and ability through:*

- Developed object-oriented program using inheritance and polymorphism
- Constructed the GUI program using Java FX advanced controls | Table below | We saw a decrease of 3% from 2020-2021 to 2021-2022. This decrease does not factor in the additional semester this course was offered. Instructors will be discussing the areas students did not do great in and rework the way the information will be conveyed. |

CIS 285 SLOs	Sections	Complete	Attempt	SLOs
Jefferson				
Sp 2022	1	31	27	87%
Shelby				
Fa 2021	1	28	26	93%
Total	1	59	53	90%

SLO 3: Students will demonstrate knowledge and ability to use basic computer hardware, network applications, and cybersecurity software.	*CIS 244 Introduction to Cybersecurity* - Define key terms and critical concepts of information security and cybersecurity - Describe virtual private networks (VPNs) and discuss the technology that enables them - Explore the basic principles of cryptography - Explain the relationship between information security and physical security	*At least 70% of students enrolled in CIS 244 will successfully demonstrate:* - Defined key terms and critical concepts of information security and cybersecurity - Describe virtual private networks (VPNs) and discuss the technology that enables them - Explored basic principles of cryptography - Explained relationship between information security and physical security	(table below)	There was a decrease of 1% from 2020 to 2022. We changed publishers and platforms spring of 2022. We also added two more courses which affected the percentage. Students showed the understanding of cybersecurity terms by participating in the quizzes, identifying the different cryptographic techniques, discussing the use of virtual private networks VPNs by completing the labs and exams, and their understanding of the use of virtual labs by identify the devices to secure the physical security.

CIS 244 SLOs	Sections	Complete	Attempt	SLOs
Jefferson				
Fa 2021	1	56	51	91%
Sp 2022	1	16	14	88%
Su 2022	1	47	45	96%
Total	1	119	110	85%

| | **CIS 260 Network Security and Risk Management**

Students will be able to:

• Secure data from threats and attacks on endpoint devices
• Deter cybersecurity attacks and defenses
• Install and create virtual machines from physical computers
• Secure Cloud Infrastructure with virtualization security
• Implement wireless security configuration
• Authentication using biometrics | *At least 70% of students enrolled in CIS 260 will successfully demonstrate:*

• Secured threats and attacks
• Deterred attacks and defenses using cryptography
• Installed and created virtual machines, i.e. VMware
• Secured cloud infrastructure with virtualization Security
• Implemented wireless network security
• Used biometrics for authentication | | There was a decrease of 6% between 2020-21 to 2021-22. Fall of 2021 we changed books and publishers to increase student's hands-on activities and live virtual machines. The previous textbook did not have the depth of information as the new one. We will keep adding new hands-on and live machines to continue to increase the student's level of expertise.

At the beginning and end of each semester, students are required to take a pre- and post-assessment. By comparing the two assessments at the end of the semester, students and instructor can gauge the increase in student knowledge throughout the semester. |

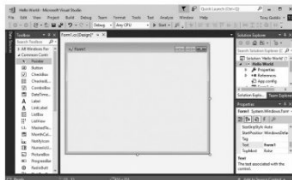| CIS 260 SLOs	Sections	Complete	Attempt	SLOs
Shelby				
Fa 2021	1	60	55	92%
Total	1	60	55	92%

SLO 1:

SLO 1:

SLO 2:

215-SPRING 2023-VIS-STUDIO-LAB1- FIRST PROGRAM IN VISUAL C# -USING VISUAL STUDIO 2017 (TUTORIAL 2-1)

Tutorial 2-1: Creating the GUI for the *Hello World* Application

Step 1: Start Visual Studio.

Step 2: Start a new project by clicking *File* on the menu bar and then selecting *New Project...*

Step 3: The *New Project* window should appear. At the left side of the window, under *Installed > Templates*, make sure *Visual C#* is selected. Then, select *Windows Forms App (.NET Framework)* as the type of application. In the *Name* text box (at the bottom of the window), change the name of the project to *Hello World*, and then click the *Ok* button.

Step 4: Make sure the *Toolbox*, the *Solution Explorer*, and the *Properties* window are visible and that Auto Hide is turned off for each of these windows. The Visual Studio environment should appear as shown in **Figure 2-15**.
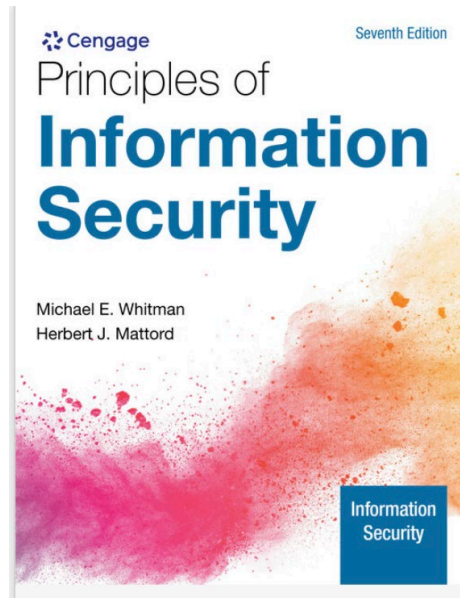
Figure 2-15   The Visual Studio environment

SLO 3:

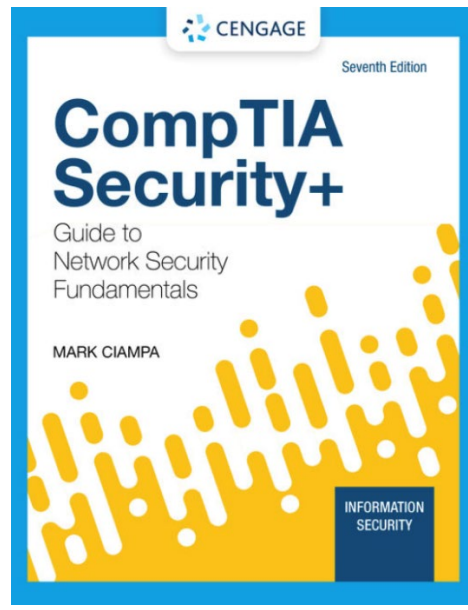SLO 3: