Discipline	Course Number	Title
Computer Systems Technology	160	CST 160 05/04/2023-Computer Technology I
College	Division	Department
Business and Computer Technologies	Business and Computer Technologies	Computer Science & Information Technology
Faculty Preparer		James Lewis
Date of Last Filed Assessment Report		10/19/2017

I. Review previous assessment reports submitted for this course and provide the following information.

1. Was this course previously assessed and if so, when?

   Yes

   This course was last assessed in Winter 2017.

2. Briefly describe the results of previous assessment report(s).

   Students met the standards of success for all outcomes.

3. Briefly describe the Action Plan/Intended Changes from the previous report(s), when and how changes were implemented.

   Equipment has been upgraded, and new classroom tools have been acquired.

II. Assessment Results per Student Learning Outcome

Outcome 1: Identify the names, purposes and operational characteristics of personal computer hardware components.

- Assessment Plan
    - Assessment Tool: Departmental test questions (multiple choice/matching) included as part of instructor developed tests.
    - Assessment Date: Winter 2016
    - Course section(s)/other population: all
    - Number students to be assessed: all

- o How the assessment will be scored: Answer Key

- o Standard of success to be used for this assessment: At least 70% of the students will score 70% or better.

- o Who will score and analyze the data: The test will be scored through Blackboard. The department faculty will analyze the data.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2023	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
14	13

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

One student did not attend the day of this assessment.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

The students assessed were day students in face-to-face (F2F) format.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

The assessment tool below is a more meaningful tool to assess student performance compared to the test question(s) in the online curriculum that was put into place during campus lockdowns.

Students disassembled and reassembled systems while identifying each major component and subsystem. The assessment was scored using a rubric awarding full credit for 100% success, 1/2 credit for partial success, or 0 credit for no success or not completing. The rubric specifies what is required for success.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes
13 out of 13 students successfully completed this assessment. The standard of success was met.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Strengths were the actual hands-on exercises that provided the students with opportunity to perform the same tasks as those in the profession.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Improvement is a continual process for this practitioner-based occupation. New equipment is being acquired every three years in order to keep up with current technologies.

Outcome 2: Install, configure, optimize and upgrade personal computer hardware components.

- Assessment Plan

    o Assessment Tool: Departmental task list used to assess proficiency in applying concepts and performing hands-on tasks.

    o Assessment Date: Winter 2016

    o Course section(s)/other population: all

    o Number students to be assessed: all

    o How the assessment will be scored: The student will complete hands-on lab experiences, installing the required hardware components. A departmentally approved task list will be used for the evaluation.

    o Standard of success to be used for this assessment: At least 70% of the students will successfully install and configure the required hardware.

    o Who will score and analyze the data: Departmental faculty.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2023	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
14	13

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

One student did not attend or had dropped the course.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

The students assessed were day students in face-to-face (F2F) format.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Students configured a computer system adding memory and solid-state drive. The assessment was scored using a rubric awarding full credit for 100% success, 1/2 credit for partial success, or 0 credit for no success or not completing. The rubric specifies what is required for success.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes
13 out of 13 students successfully completed the assessment.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

All students tested on this outcome were successful thus indicating the environment and delivery are adequate for this task.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

We will integrate the latest information in newest technologies, which is in development for Fall 2023.

Outcome 3: Identify tools, diagnostic procedures and troubleshooting techniques used to resolve personal computer hardware problems.

- Assessment Plan

    - Assessment Tool: Departmental test questions (multiple choice/matching) included as part of instructor developed tests.

    - Assessment Date: Winter 2016

    - Course section(s)/other population: all

    - Number students to be assessed: all

    - How the assessment will be scored: Answer Key

    - Standard of success to be used for this assessment: At least 70% of the students will score 70% or better.

    - Who will score and analyze the data: The test will be scored through Blackboard. The department faculty will analyze the data.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2023	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
14	7

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Students were assessed using temporary online curriculum made available during campus lockdowns and taken during their personal time. Not all students answered all questions.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

The students assessed were day students in a F2F section with online supplemental curriculum.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

This outcome was assessed using three outcome-related questions from the online curriculum. Questions were multiple-choice and scored by the online curriculum provider.

The online provider does not display results in terms of individual students' performance across the outcome-related questions. Not all students were provided with the same outcome-related questions. Moving forward, we are not planning to use this tool for assessment.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: <u>Yes</u>

uCertify Question 7: 6 students attempted the test question, 6 answered correctly (100%).

uCertify Question 18: 7 students attempted the test question, 6 answered correctly (85.7%).

uCertify Question 46: 6 students attempted the test question, 4 answered correctly (67%).

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Students performed well in identifying and using various tools, computer tool kits, electronic multi-meters and voltage wall testers.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Continued use of these tools is intended and will be maintained in future course developments.

Outcome 4: Identify the names, locations, purposes and characteristics of key operating system files.

- Assessment Plan

  o Assessment Tool: Departmental test questions (multiple choice/matching) included as part of instructor developed tests.

  o Assessment Date: Winter 2016

  o Course section(s)/other population: all

- o Number students to be assessed: all

- o How the assessment will be scored: Answer Key

- o Standard of success to be used for this assessment: At least 70% of the students will score 70% or better.

- o Who will score and analyze the data: The test will be scored through Blackboard. The department faculty will analyze the data.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2023	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
14	9

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Students were assessed using temporary online curriculum made available during campus lockdowns and taken during their personal time. Not all students answered all questions.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

The students assessed were day students in a F2F section with online supplemental curriculum.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

This outcome was assessed using two outcome-related questions from the online curriculum. Questions were multiple-choice and scored by the online curriculum provider.

The online provider does not display results in terms of individual students' performance across the outcome-related questions. Not all students were provided with the same outcome-related questions. Moving forward, we are not planning to use this tool for assessment.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: <u>Yes</u>
uCertify Question 20: 8 students attempted, 8 students answered correctly (100%). uCertify question 6: 9 students attempted question, 8 students answered correctly (89%).   Students met the standard of success.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Student strengths in this area could be improved as keeping up with new operating systems is a challenge. Additional depth of operating system characteristics is needed.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Current development in operating system technologies is underway and targeted for integration in the Fall 2023 term.

Outcome 5: Install, configure, optimize and upgrade operating systems.

- Assessment Plan

  - Assessment Tool: Departmental task list used to assess proficiency in applying concepts and performing hands-on tasks.

  - Assessment Date: Winter 2016

  - Course section(s)/other population: all

  - Number students to be assessed: all

  - How the assessment will be scored: The student will complete hands-on lab experiences, installing the required hardware components. A departmentally approved task list will be used for the evaluation.

  - Standard of success to be used for this assessment: At least 70% of the students will successfully install and configure the required hardware.

- o   Who will score and analyze the data: Departmental faculty.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2023	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
14	8

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Not all students attended class during this assessment.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

The students assessed were day students in face-to-face (F2F) format.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

The assessment tool for this outcome was a hands-on demonstration where students installed and configured a new operating system on a client system. The assessment was scored using a rubric awarding full credit for 100% success, 1/2 credit for partial success, or 0 credit for no success or not completing. The rubric specifies what is required for success.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes

Eight out of eight students completed the assessment successfully.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

This is one of the most important skills for students to master. New and different types of operating systems abound in industry and understanding the fundamentals

of their hierarchical structure is shown to be base for implementing new system configurations.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

More in-depth materials in future courses will be presented in the latest operating systems.

Outcome 6: Identify tools, diagnostic procedures and troubleshooting techniques used to resolve operating system problems.

- Assessment Plan

  o Assessment Tool: Departmental test questions (multiple choice/matching) included as part of instructor developed tests.

  o Assessment Date: Winter 2016

  o Course section(s)/other population: all

  o Number students to be assessed: all

  o How the assessment will be scored: Answer Key

  o Standard of success to be used for this assessment: At least 70% of the students will score 70% or better.

  o Who will score and analyze the data: The test will be scored through Blackboard. The department faculty will analyze the data.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2023	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
14	5

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

> Students were assessed using temporary online curriculum made available during campus lockdowns and taken during their personal time. Not all students answered all questions.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

> The students assessed were day students in a F2F section with online supplemental curriculum.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

> One outcome-related question was used to assess this outcome. The question was multiple-choice and scored by the online curriculum provider.
>
> The online provider does not display results in terms of individual students' performance across the outcome-related questions. Moving forward, we are not planning to use this tool for assessment.
>
> Note: Outcome #6 was written when the class was F2F, but the assessment was performed using online curriculum. This is in the process of being reverted back entirely to F2F.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

> Met Standard of Success: <u>Yes</u>
>
> 5 students attempted, 5 students answered correctly.
>
> Students met the standard of success.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

> This is an area that is difficult to both deploy and assess with the current mixed curriculum (F2F and online).

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

New course development is underway that will address the weaknesses in this aspect of the course and expected to be deployed for Fall 2023.

III. Course Summary and Intended Changes Based on Assessment Results

1. Based on the previous report's Intended Change(s) identified in Section I above, please discuss how effective the changes were in improving student learning.

Department acquired new system boards for this course prior to the campus lockdown, however, we were not able to fully integrate custom developed curriculum materials due to going online. Since resuming F2F, it is taking significant time and effort to realign.

2. Describe your overall impression of how this course is meeting the needs of students. Did the assessment process bring to light anything about student achievement of learning outcomes that surprised you?

Currently this course is meeting most needs and is dynamic in materials. Substantial advisory input from one of our biggest provides of students into this course (UofM Medical Division Apprenticeship Program) is being integrated into the next phase of course development.

3. Describe when and how this information, including the action plan, was or will be shared with Departmental Faculty.

With relevant faculty in program revision meeting targeted for return in fall 2023.

4.
Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Outcome Language	Outcome #4 will be removed.	It is not necessary to assess this as a separate outcome.	2023
Assessment Tool	Update assessment tools and standards of success to align with updates in the course.	To collect assessment data from current tools used in the course that will more accurately reflect student learning.	2024
Pre-requisite	Previous pre-requisite did not demonstrate enough	Remove CIS 100 as a pre-requisite.	2023

	relevance to this course (CIS 100) as it was a Microsoft Office course and this is primarily a hardware and operating system course.		
Course Materials (e.g. textbooks, handouts, on-line ancillaries)	New materials representing latest in microprocessor, memory, storage devices and system board technologies are being integrated. Additional content related to operating system characteristics will be included.	Currently this course is a F2F course mixed with online curriculum from the previous on campus lockdowns and it takes about six months to update a course. Multiple courses have been updated and this course is next to be completed. ETA is Fall 2023.	2023

5. Is there anything that you would like to mention that was not already captured?

> 6.

III. Attached Files

[CST 160 Data 2023](#)

Faculty/Preparer:	James Lewis	**Date:** 05/05/2023
Department Chair:	Scott Shaper	**Date:** 05/05/2023
Dean:	Eva Samulski	**Date:** 05/12/2023
Assessment Committee Chair:	Jessica Hale	**Date:** 10/19/2023

Discipline	Course Number	Title
Computer Systems Technology	160	CST 160 03/16/2017- Computer Technology I
Division	Department	Faculty Preparer
Business and Computer Technologies	Computer Instruction	James Lewis
Date of Last Filed Assessment Report		

I. Assessment Results per Student Learning Outcome

Outcome 1: Identify the names, purposes and operational characteristics of personal computer hardware components.

- Assessment Plan

    o Assessment Tool: Departmental test questions (multiple choice/matching) included as part of instructor developed tests.

    o Assessment Date: Winter 2016

    o Course section(s)/other population: all

    o Number students to be assessed: all

    o How the assessment will be scored: Answer Key

    o Standard of success to be used for this assessment: At least 70% of the students will score 70% or better.

    o Who will score and analyze the data: The test will be scored through Blackboard. The department faculty will analyze the data.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2017	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
38	37

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Out of 38 enrolled students, one student quit attending and was not assessed.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

These courses were F2F. Both day and night courses were assessed using a common departmental task list.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

A departmental task list was used for both sections of this course. The task list used for this objective included disassembly, assessembly and component identification, and a common 100 question final examination. Questions 1, 7, 16,18, 57, 62, 64, 82, 86, and 97 related to SLO 1. Pass / Fail was the criteria for the exercise and all of the multiple choice / fill in the blank questions.

100% of the students successfully performed Exercise #1.
86.4 % of the students successfully answered question 1
86.4% of the students successfully answered question 7
94.5% of the students successfully answered question 16
100% of the students successfully answered question 18
97.2% of the students successfully answered question 57
94.5% of the students successfully answered question 62
97.2% of the students successfully answered question 64
97.2% of the students successfully answered question 82
86.4% of the students successfully answered question 86
91.8% of the students successfully answered question 97
83.7% of the students successfully answered question 98

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this

learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes
The standard of success was met for all students. The minimum of 70% or higher in all tasks related to this SLO were met.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Students are able to relate client and desktop hardware concepts to networking appliances. Both require hands-on to build, install, configure and maintain. 100% of the students were successfully in this objective.

These skills are carried forward into networking courses. Students successfully answered the following SLO1 relevant final exam questions:

Question 1 = 86.4%

Question 7 = 86.5%

Question 16 = 94.5%

Question 18 = 100%

Question 57 = 97.2%

Question 62 = 94.5%

Question 64 = 97.2%

Question 82 = 97.2%

Question 86 = 86.4%

Question 97 = 91.8%

Question 98 = 83.7%

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Students met the standards for success, however, integrating more networking hardware into the course will assist in migrating skills to the needs and demands of

cloud-based environments and improve preparation for student success in subsequent networking courses.

Outcome 2: Install, configure, optimize and upgrade personal computer hardware components.

- Assessment Plan

    o Assessment Tool: Departmental task list used to assess proficiency in applying concepts and performing hands-on tasks.

    o Assessment Date: Winter 2016

    o Course section(s)/other population: all

    o Number students to be assessed: all

    o How the assessment will be scored: The student will complete hands-on lab experiences, installing the required hardware components. A departmentally approved task list will be used for the evaluation.

    o Standard of success to be used for this assessment: At least 70% of the students will successfully install and configure the required hardware.

    o Who will score and analyze the data: Departmental faculty.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2017	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
38	37

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Out of 38 enrolled students, one student quit attending and was not assessed.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

A common practical hands-on and 100 question written final examination was administered.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Exercise 7, Remove and Replace RAM, and Exercise 8, Remove and Reinstall Hard disk drive were used as rubrics for this SLO. Pass / Fail was the criteria for both exercises.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes

97.2% of students successfully completed both tasks (exercises 7 and 8).

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Strength in this objective is demonstrated by students who successfully completed the hands-on portion of these exercises without instructor assistance.

Exercise 7 = 97.2%

Remove and replace hard drive = 97.2%

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Students met the standards for success, however, integrating more networking hardware into the course will assist in migrating skills to the needs and demands of cloud-based environments and improve preparation for student success in subsequent networking courses.

Outcome 3: Identify tools, diagnostic procedures and troubleshooting techniques used to resolve personal computer hardware problems.

- Assessment Plan
    - Assessment Tool: Departmental test questions (multiple choice/matching) included as part of instructor developed tests.
    - Assessment Date: Winter 2016

- o Course section(s)/other population: all

- o Number students to be assessed: all

- o How the assessment will be scored: Answer Key

- o Standard of success to be used for this assessment: At least 70% of the students will score 70% or better.

- o Who will score and analyze the data: The test will be scored through Blackboard. The department faculty will analyze the data.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2017	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
38	37

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Out of 38 enrolled students, one student quit attending and was not assessed.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

Both course sections were F2F.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

A 100-question departmental final exam was used in both sections of this course. Pass / Fail was the criteria for each question on the departmental final examination.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes

86.4% of the students successfully completed final examination question 21
91.8% of the students successfully completed final examination question 22
64.8% of the students successfully completed final examination question 51
70.2% of the students successfully completed final examination question 52
94.5% of the students successfully completed final examination question 63

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Student success was identified by accurately answering the following relevant final exam questions and completing the required hands-on practical.

Question 21 = 86.4%

Question 22 = 91.8%

Question 63 = 94.5%

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Students met the standards of success.

Outcome 4: Identify the names, locations, purposes and characteristics of key operating system files.

- Assessment Plan

    o Assessment Tool: Departmental test questions (multiple choice/matching) included as part of instructor developed tests.

    o Assessment Date: Winter 2016

    o Course section(s)/other population: all

    o Number students to be assessed: all

    o How the assessment will be scored: Answer Key

    o Standard of success to be used for this assessment: At least 70% of the students will score 70% or better.

    o Who will score and analyze the data: The test will be scored through Blackboard. The department faculty will analyze the data.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2017	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
38	37

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Out of 38 enrolled students, one student quit attending and was not assessed.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

All sections offered this term were F2F.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Students were assessed on successful completion of locating and managing critical system files stored on a hard disk drive. Exercise 3 and Exercise 12 were used as rubrics for this SLO.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes
97.2% of students successfully completed exercise 3.
91.8% of students successfully completed exercise 12.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Student success rates for this SLO are:

Exercise 3 = 97.2% (Identify, locate and replace Bootmgr, Winload, HAL, NTOSKRNL)

Exercise 12 = 91.8% (Identify, locate and replace csrss.ese, lsass.exe, svchost.exe)

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Future students will continue with base understanding and troubleshooting concepts associated with key operating system files.

Outcome 5: Install, configure, optimize and upgrade operating systems.

- Assessment Plan

    o Assessment Tool: Departmental task list used to assess proficiency in applying concepts and performing hands-on tasks.

    o Assessment Date: Winter 2016

    o Course section(s)/other population: all

    o Number students to be assessed: all

    o How the assessment will be scored: The student will complete hands-on lab experiences, installing the required hardware components. A departmentally approved task list will be used for the evaluation.

    o Standard of success to be used for this assessment: At least 70% of the students will successfully install and configure the required hardware.

    o Who will score and analyze the data: Departmental faculty.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2017	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
38	37

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Out of 38 enrolled students, one student quit attending and was not assessed.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

Both sections of this course were F2F.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Exercise 11, "Install an operating system on a desktop client", was used as the rubric for this SLO. Pass / Fail was the criteria for this exercise.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes

97.2% of the students were successful in completion of this SLO.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Students were 97.2% successful in installing, configuring, optimizing and upgrading their operating systems. This demonstrates a high percentage of efficiency of student skill. Exercise 11 was used for this SLO.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Continuous improvement will be based on maintaining standards and continual infusion of new information into the course materials.

Outcome 6: Identify tools, diagnostic procedures and troubleshooting techniques used to resolve operating system problems.

- Assessment Plan

    o Assessment Tool: Departmental test questions (multiple choice/matching) included as part of instructor developed tests.

    o Assessment Date: Winter 2016

    o Course section(s)/other population: all

- o   Number students to be assessed: all

- o   How the assessment will be scored: Answer Key

- o   Standard of success to be used for this assessment: At least 70% of the students will score 70% or better.

- o   Who will score and analyze the data: The test will be scored through Blackboard. The department faculty will analyze the data.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2017	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
38	37

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Out of 38 enrolled students, one student quit attending and was not assessed.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

Departmental Exercise 3 and Exercise 12 were used as the rubric for this SLO.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Exercise 3 - Students utilized the Windows command line in a live operating system environment. Pass / Fail was the criteria for this exercise.

Exercise 12 - Students utilized stress test and malware detection tools in a live operating system environment. Pass / Fail was the criteria for this exercise.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes

97.2% of the students successfully completed exercise 3
91.8% of the students successfully completed exercise 12.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

This SLO was assessed by successful completion of exercise 3 with 97.2% and exercise 12 - step 15 = 91.8% successful demonstration, which required appropriate selection and use of software tools for diagnosing system faults.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Continuous improvement will be based on infusion of new and relevant material into the course.

II. Course Summary and Action Plans Based on Assessment Results

1. Describe your overall impression of how this course is meeting the needs of students. Did the assessment process bring to light anything about student achievement of learning outcomes that surprised you?

Students receive extensive hands-on experience in maintaining hardware and installation of operating systems on new equipment, which is in high demand in our local community.

2. Describe when and how this information, including the action plan, was or will be shared with Departmental Faculty.

Via this assessment report.

3.
Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
No changes intended.			

4. Is there anything that you would like to mention that was not already captured?

5.

III. Attached Files

[CST 160 SLO Assessment Tallys](#)

Faculty/Preparer: James Lewis **Date:** 06/22/2017
Department Chair: Philip Geyer **Date:** 06/22/2017
Dean: Kristin Good **Date:** 06/26/2017
Assessment Committee Chair: Michelle Garey **Date:** 10/18/2017