Discipline	Course Number	Title
Computer Networking Technology	223	CNT 223 04/07/2023-Networking with Windows Server
College	Division	Department
Business and Computer Technologies	Business and Computer Technologies	Computer Science & Information Technology
Faculty Preparer		Michael Kidd
Date of Last Filed Assessment Report		

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
   >
   > Winter 2016

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

   > Overall, students met the standard of success on each of the outcomes.

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

   > The change suggested in the 2016 assessment would likely improve the course but this change was never implemented by the previous instructor.

II. Assessment Results per Student Learning Outcome

Outcome 1: Recognize and identify basic networking principles for Point to Point and Cross-Network Communication including MAC addressing, IPv4 and IPv6 Addressing schemes and advanced concepts such as subnetting and the transition technologies for IPv6.

- Assessment Plan

    o Assessment Tool: Outcome-related test questions

    o Assessment Date: Winter 2022

    o Course section(s)/other population: All sections

- o Number students to be assessed: All students
- o How the assessment will be scored: Answer key and departmentally-developed rubric
- o Standard of success to be used for this assessment: 70% of the students will correctly answer 70% of the outcome-related questions
- 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)
2022, 2021	2022	2022

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

# of students enrolled	# of students assessed
26	24

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.

Two students withdrew from 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.

All assessed students were on campus students from evening classes.

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

Students were assessed using a multiple-choice quiz (Quiz 1 in the attached data). Scoring was done manually using a test answer sheet. The quiz has a top score of 90 points. 70% of 90 is 63, so students would have to score 63 or higher in order to meet the standard of 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: No

12 of the 24 students assessed managed to obtain a score 70% resulting in just half of the students achieving the assessment goal.

These results can be seen on the attached spreadsheet.

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

Students' grades on the quizzes are not consistent enough to provide any visible area of strength for this assessment.

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.

This concept is a networking concept and the course is a Microsoft course. This made sense when the course was covering a certification exam that focused on networking with Microsoft servers. However, that exam is no longer available, and a networking course should be focused on Microsoft concepts related to technology today. Examples: Cloud computing, Enterprise networks, Microsoft Endpoint Management, etc.

Outcome 2: Identify domain name service (DNS) concepts, including various types of zone creation and categories of resource records, as well as alternative resolution techniques such as standard and conditional forwarding.

- Assessment Plan

  o Assessment Tool: Outcome-related test questions

  o Assessment Date: Winter 2022

  o Course section(s)/other population: All sections

  o Number students to be assessed: All students

  o How the assessment will be scored: Answer key and departmentally-developed rubric

  o Standard of success to be used for this assessment: 70% of the students will correctly answer 70% of the outcome-related questions

  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)

2022, 2021	2022	2022

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

# of students enrolled	# of students assessed
26	24

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.

Two students withdrew from 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.

All assessed students were from on campus classes that met during the evening.

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

Students were assessed using a multiple-choice quiz (Quiz 2 in the attached data). Scoring was done manually using a test answer sheet. The quiz has a top score of 90 points. 70% of 90 is 63, so students would have to score 63 or higher in order to meet the standard of 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: No

9 of the 24 students assessed managed to obtain a score 70% resulting in less than half of the students achieving the assessment goal.

These results can be seen on the attached spreadsheet.

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

Students' grades on the quizzes are not consistent enough to provide any visible area of strength for this assessment.

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.

This outcome is covered in CNT 211 now, and is therefore not needed here.

Outcome 3: Define the concepts behind various remote access implementations of Windows Server such as routing, dial-up, PPT and SSTP VPNs, remote desktop configurations through VPNs, Direct Access, and NPS (RADIUS) servers.

- Assessment Plan

    o Assessment Tool: Outcome-related test questions

    o Assessment Date: Winter 2022

    o Course section(s)/other population: All sections

    o Number students to be assessed: All students

    o How the assessment will be scored: Answer key and departmentally-developed rubric

    o Standard of success to be used for this assessment: 70% of the students will correctly answer 70% of the outcome-related questions

    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)
2022, 2021	2022	2022

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

# of students enrolled	# of students assessed
26	24

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.

Two students withdrew from 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.

Students assessed were from classes that were on campus during the evening.

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

Students were assessed using a multiple-choice quiz (Quiz 3 in the attached data). Scoring was done manually using a test answer sheet. The quiz has a top score of 90 points. 70% of 90 is 63, so students would have to score 63 or higher in order to meet the standard of 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: No

11 of the 24 students assessed managed to obtain a score 70% resulting in less than half of the students achieving the assessment goal.

These results can be seen on the attached spreadsheet.

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

Students' grades on the quizzes are not consistent enough to provide any visible area of strength for this assessment.

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.

Like with outcome 1, this exam is no longer available and a networking course should instead be focused on modern cloud computing concepts.

Outcome 4: Identify methods for centralizing remote locations for file sharing including DFS (Distributed File System), BranchCache, Remote Desktop Gateway and for centralizing remote management of IP Address Networks (IPAM).

- Assessment Plan

    o Assessment Tool: Outcome-related test questions

- o Assessment Date: Winter 2022

- o Course section(s)/other population: All sections

- o Number students to be assessed: All students

- o How the assessment will be scored: Answer key and departmentally-developed rubric

- o Standard of success to be used for this assessment: 70% of the students will correctly answer 70% of the outcome-related questions

- 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)
2022, 2021	2022	2022

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

# of students enrolled	# of students assessed
26	24

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.

Two students withdrew from 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 assessed students are all from evening classes that met on campus.

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

Students were assessed using a multiple-choice quiz (Quiz 4 in the attached data). Scoring was done manually using a test answer sheet. The quiz has a top score of 90 points. 70% of 90 is 63, so students would have to score 63 or higher in order to meet the standard of 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: <u>No</u>
8 of the 24 students assessed managed to obtain a score 70% resulting in just one-third of the students achieving the assessment goal. These results can be seen on the attached spreadsheet.

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

Students' grades on the quizzes are not consistent enough to provide any visible area of strength for this assessment.

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.

Like outcome 2, the material for this outcome is now covered in CNT 211.

Outcome 5: Identify the methods used to create and deploy a Windows DHCP Server, including scope creation, server and scope options, failover methods, relay agents, and superscopes.

- Assessment Plan

    o Assessment Tool: Outcome-related test questions

    o Assessment Date: Winter 2022

    o Course section(s)/other population: All sections

    o Number students to be assessed: All students

    o How the assessment will be scored: Answer key and departmentally-developed rubric

    o Standard of success to be used for this assessment: 70% of the students will correctly answer 70% of the outcome-related questions

    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)
2022, 2021	2022	2022

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

# of students enrolled	# of students assessed
26	24

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.

Two students withdrew from 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 from evening classes that met on campus.

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

Students were assessed using a multiple-choice quiz (Quiz 5 in the attached data). Scoring was done manually using a test answer sheet. The quiz has a top score of 90 points. 70% of 90 is 63, so students would have to score 63 or higher in order to meet the standard of 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: No

9 of the 24 students assessed managed to obtain a score 70% resulting in less than half of the students achieving the assessment goal.

These results can be seen on the attached spreadsheet.

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

Students' grades on the quizzes are not consistent enough to provide any visible area of strength for this assessment.

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.

Like outcomes 2 and 4, the material for this outcome is now covered in CNT 221. To reiterate, because this was a course designed to prepare students for a specific certification that is no longer available, it makes sense to sunset this course and instead focus on the concepts that are relevant and examinable for the certifications of today.

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.

Changes to this course suggested in the 2016 report were not implemented by the previous instructor, and therefore did not impact student learning.

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?

This course is outdated and needs to be retired to allow new courses with content that is relevant to today's student regarding the field of Microsoft administration. This course was developed for a certification exam that is no longer available and the content is no longer relevant.

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

This course will be retired and a course will be developed to take its place that focuses on cloud computing in a Microsoft environment.

4.
Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Other: Retire the course	This course will be retired and replaced with a course that is relevant to today's IT professionals.	This course was designed to prepare students for successful completion of a Microsoft certification that is no longer available. Therefore, this course should be retired and new,	2024

		relevant material needs to be developed for a course that is focused on cloud computing in a Microsoft environment.	

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

No

III. Attached Files

[CNT 223 assessment results](#)

Faculty/Preparer: Michael Kidd **Date:** 06/05/2023
Department Chair: Scott Shaper **Date:** 06/06/2023
Dean: Eva Samulski **Date:** 06/06/2023
Assessment Committee Chair: Jessica Hale **Date:** 10/06/2023

Discipline	Course Number	Title
Computer Networking Technology	223	CNT 223 05/17/2016-Administering Windows Server 2012
Division	Department	Faculty Preparer
Business and Computer Technologies	Computer Instruction	William Reichert
Date of Last Filed Assessment Report		

I. Assessment Results per Student Learning Outcome

Outcome 1: Identify advanced active directory group policy concepts including desktop management, folder redirection, log on scripts, software deployment, loop back policies and printer management using preferences as well as defining and identifying active directory user/computer account creation characteristics including password/account policies, delegation of authority and A.D. object permissions.

- Assessment Plan

    o Assessment Tool: Written Exam specifically created for the Assessment.

    o Assessment Date: Winter 2017

    o Course section(s)/other population: All course sections

    o Number students to be assessed: 20 -40

    o How the assessment will be scored: Rubric: A written test will be given that addresses both the outcomes and objectives listed in the syllabus. This test will be divided into sections, each identified with an outcome and the questions in each section will address the objectives.

    o Standard of success to be used for this assessment: Average of all students taking the test should equal or exceed 70% correct answers for all questions used in the assessment test. 70% or greater of the number of students taking the assessment test should equal or exceed that 70% mark for all the questions used in the assessment test. Outcome success: average of all student scores for each particular outcome's part of the test equal to or exceeds 70%.

    o Who will score and analyze the data: All departmental instructors who teach sections of this course.

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)
	2016	

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

# of students enrolled	# of students assessed
14	12

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.

The two students that were not included did not show up for the remaining class sessions at approximately 2/3 of the way through the semester. Therefore, they could not be included. All the students that finished the course were included in the 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.

There was only one section of this course, so every student that finished the course was included - the ones that did well as well as those not as proficient to give balanced results on the course effectiveness.

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

Since there were five outcomes, a 40 question test was developed with eight multiple choice questions for each outcome that reflected key concepts involved with achieving the outcome as stated above - in other words, questions that would show that the student had a good understanding of these key points. The answers were scored as either correct or incorrect for each of the 12 students.

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

There were four methods of measuring success - each is shown below with results. The first percentage shown is the goal for success, the 2nd is the actual result from the testing.

Overall average of all students for the test as a whole   70%   Results   83.7%

Percent of students for the whole test achieving average of 70%   Results   75.0%

Overall average of all students for this outcome   70%   Results   100%

Percent of students for this outcome achieving an average of 70%   Results 75.0 %

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

1. Group Policy Inheritance

2. Computer/User Configuration Policies

3. Group Policy Software Installation

4. Storage Locations for Group Policy

5. Tools for Troubleshooting Group Policy

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.

Strengthen presentations in two areas:

1. Default Group Policies in Active Directory

2. Importance of Folder Redirection for Centralizing of Data and Backups.

Outcome 2: Identify domain name service (DNS) concepts, including various types of zone creation and categories of resource records, as well as alternative resolution techniques such as standard and conditional forwarding.

- Assessment Plan
  - o Assessment Tool: Written Exam specifically created for the assessment.

- o Assessment Date: Winter 2017

- o Course section(s)/other population: All course sections

- o Number students to be assessed: 20 -40

- o How the assessment will be scored: Rubric: A written test will be given that addresses both the outcomes and objectives listed in the syllabus. This test will be divided into sections, each identified with an outcome and the questions in each section will address the objectives.

- o Standard of success to be used for this assessment: Average of all students taking the test should equal or exceed 70% correct answers for all questions used in the assessment test. 70% or greater of the number of students taking the assessment test should equal or exceed that 70% mark for all the questions used in the assessment test. Outcome success: average of all student scores for each particular outcome's part of the test equal to or exceeds 70%.

- o Who will score and analyze the data: All departmental instructors who teach sections of this course.

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)
	2016	

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

# of students enrolled	# of students assessed
14	12

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.

The two students that were not included did not show up for the remaining class sessions approximately 2/3 of the way through the semester. Therefore, they could not be included. All the students that finished the course were included in the 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.

There was only one section of this course, so every student that finished the course was included - the ones that did well as well as those not as proficient to give balanced results on the course effectiveness.

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

> Since there were five outcomes, a 40 question test was developed with eight multiple choice questions for each outcome that reflected key concepts involved with achieving the outcome as stated above - in other words, questions that would show that the student had a good understanding of these key points. The answers were scored as either correct or incorrect for each of the 12 students.

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**
>
> There were four methods of measuring success - each is shown below with results. The first percentage shown is the goal for success, the 2nd is the actual result from the testing.
>
> Overall average of all students for the test as a whole   70%   Results   83.7%
>
> Percent of students for the whole test achieving average of 70%   Results   75.0%
>
> Overall average of all students for this outcome   70%   Results 81.25%
>
> Percent of students for this outcome achieving an average of 70%   Results 75.0 %

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

> 1. Use of the NSLookup tool
>
> 2. Requirements for Dynamic Updates
>
> 3. Dynamic DNS Registration
>
> 4. Categories of DNS Zones

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.

| 1. Forward and Reverse Zone Lookup Records |
| 2. Difference between Primary and Connection Specific Suffixes |
| 3. Characteristics of Primary and Secondary DNS Zones |
| 4. Uses of a Caching Only Server |

Outcome 3: Define the concepts behind various remote access implementations such as VPN, remote desktop, direct access, routing, NPS (radius) servers, as well as NPS access control lists and other condition/constraint requirements.

- Assessment Plan

  - Assessment Tool: Written Exam specifically created for the assessment.

  - Assessment Date: Winter 2017

  - Course section(s)/other population: All course sections

  - Number students to be assessed: 20 -40

  - How the assessment will be scored: Rubric: A written test will be given that addresses both the outcomes and objectives listed in the syllabus. This test will be divided into sections, each identified with an outcome and the questions in each section will address the objectives.

  - Standard of success to be used for this assessment: Average of all students taking the test should equal or exceed 70% correct answers for all questions used in the assessment test. 70% or greater of the number of students taking the assessment test should equal or exceed that 70% mark for all the questions used in the assessment test. Outcome success: average of all student scores for each particular outcome's part of the test equal to or exceeds 70%.

  - Who will score and analyze the data: All departmental instructors who teach sections of this course.

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)
	2016	

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

# of students enrolled	# of students assessed
14	12

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.

The two students that were not included did not show up for the remaining class sessions approximately 2/3 of the way through the semester. Therefore, they could not be included. All the students that finished the course were included in the 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.

There was only one section of this course, so every student that finished the course was included - the ones that did well as well as those not as proficient to give balanced results on the course effectiveness.

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

Since there were five outcomes, a 40 question test was developed with eight multiple choice questions for each outcome that reflected key concepts involved with achieving the outcome as stated above - in other words, questions that would show that the student had a good understanding of these key points. The answers were scored as either correct or incorrect for each of the 12 students.

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

There were four methods of measuring success - each is shown below with results. The first percentage shown is the goal for success, the 2nd is the actual result from the testing.

Overall average of all students for the test as a whole   70%   Results   83.7%

Percent of students for the whole test achieving average of 70%   Results   75.0%

Overall average of all students for this outcome   70%   Results 89.5%

Percent of students for this outcome achieving an average of 70%   Results 100%

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

> 1. Tools used for troubleshooting remote access
>
> 2. Routing table options
>
> 3. Remote Access Server uses
>
> 4. Differences in types of Remote Access
>
> 5. Protocols used with VPN's
>
> 6. RADIUS Server Purposes

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.

> 1. Recognizing VPN connections at the Client end

Outcome 4: Identify optimized file services, including DFS (distributed file system), disk quotas, FSRM (file screening), share and storage management (access enumeration), file encryption and object auditing.

- Assessment Plan

  - Assessment Tool: Written Exam specifically created for the assessment.

  - Assessment Date: Winter 2017

  - Course section(s)/other population: All course sections

  - Number students to be assessed: 20 -40

  - How the assessment will be scored: Rubric: A written test will be given that addresses both the outcomes and objectives listed in the syllabus. This test will be divided into sections, each identified with an outcome and the questions in each section will address the objectives.

  - Standard of success to be used for this assessment: Average of all students taking the test should equal or exceed 70% correct answers for all questions used in the assessment test. 70% or greater of the number of students taking the assessment test should equal or exceed that 70% mark for all the questions used in the assessment test. Outcome success: average of all

student scores for each particular outcome's part of the test equal to or exceeds 70%.

- o Who will score and analyze the data: All departmental instructors who teach sections of this course.

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)
	2016	

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

# of students enrolled	# of students assessed
14	12

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.

The two students that were not included did not show up for the remaining class sessions approximately 2/3 of the way through the semester. Therefore, they could not be included. All the students that finished the course were included in the 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.

There was only one section of this course, so every student that finished the course was included - the ones that did well as well as those not as proficient to give balanced results on the course effectiveness.

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

Since there were five outcomes, a 40 question test was developed with eight multiple choice questions for each outcome that reflected key concepts involved with achieving the outcome as stated above - in other words, questions that would show that the student had a good understanding of these key points. The answers were scored as either correct or incorrect for each of the 12 students.

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>
There were four methods of measuring success - each is shown below with results. The first percentage shown is the goal for success, the 2nd is the actual result from the testing. Overall average of all students for the test as a whole   70%   Results 83.7% Percent of students for the whole test achieving average of 70%   Results 75.0% Overall average of all students for this outcome   70%   Results 79.16% Percent of students for this outcome achieving an average of 70%   Results 75%

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

1. Use of the Distributed File System 2. Use of Disk Quotas 3. Alerts used with Disk quotas 4. Event View Usage with File System Tools 5. Windows capabilities with Linux File Systems

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.

1. Windows Sharing Tools 2,   Sharing Encrypted Files 3. Purposes of the Advanced auditing tools

Outcome 5: Identify the methods used to create and deploy images including windows deployment services, ImageX, and sysprep as well as using WSUS for updating and the various tools for server monitoring such as resource monitor and event viewer.

- Assessment Plan

  o Assessment Tool: Written Exam specifically created for the assessment.

  o Assessment Date: Winter 2017

  o Course section(s)/other population: All course sections

  o Number students to be assessed: 20 -40

  o How the assessment will be scored: Rubric: A written test will be given that addresses both the outcomes and objectives listed in the syllabus. This test will be divided into sections, each identified with an outcome and the questions in each section will address the objectives.

  o Standard of success to be used for this assessment: Average of all students taking the test should equal or exceed 70% correct answers for all questions used in the assessment test. 70% or greater of the number of students taking the assessment test should equal or exceed that 70% mark for all the questions used in the assessment test. Outcome success: average of all student scores for each particular outcome's part of the test equal to or exceeds 70%.

  o Who will score and analyze the data: All departmental instructors who teach sections of this course.

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)
	2016	

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

# of students enrolled	# of students assessed
14	12

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.

The two students that were not included did not show up for the remaining class sessions approximately 2/3 of the way through the semester. Therefore, they could not be included. All the students that finished the course were included in the 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.

> There was only one section of this course, so every student that finished the course was included - the ones that did well as well as those not as proficient to give balanced results on the course effectiveness.

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

> Since there were five outcomes, a 40 question test was developed with eight multiple choice questions for each outcome that reflected key concepts involved with achieving the outcome as stated above - in other words, questions that would show that the student had a good understanding of these key points. The answers were scored as either correct or incorrect for each of the 12 students.

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>
>
> There were four methods of measuring success - each is shown below with results. The first percentage shown is the goal for success, the 2nd is the actual result from the testing.
>
> Overall average of all students for the test as a whole   70%   Results   83.7%
>
> Percent of students for the whole test achieving average of 70%   Results   75.0%
>
> Overall average of all students for this outcome   70%   Results 79.16%
>
> Percent of students for this outcome achieving an average of
> 70% Results 66.67%

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

> 1. Tools used for Windows Imaging
>
> 2. Tool to create scripts for Windows images

| 3. | Tool used to Prepare Windows Images |
| 4. | Tool used to provide Windows Updates locally |

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.

1.	Types of Files created with Windows Imaging Utilities
2.	Transmission types used with Windows imaging
3.	ImageX/DISM options
4.	Types of Servers used with Windows Update Services

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?

The results were actually considerably better than expected. With the exception of one goal within one outcome (described in the outcome analysis section) all the results were way above the 70% average which we were looking to obtain with the overall test results as well as those within each outcome.

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

The information will be shared during department meetings among all instructors when we discuss individual course results as well as proposed course changes, revised curriculum, and will be incorporated into all our future planning.

3.

Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Assessment Tool	While the intent was to match the questions with important concepts within each outcome, there is	With this high a test average, it looks as if all students are highly skilled and retained a lot of the presented	2019

	probably a need to review the test again to insure against "repetition" within the questions - while there certainly was no direct repetition, some questions overlapped important points within a concept. There may be a need to add some more questions that address some additional areas of each outcome.	information. However, the students in this class actually fall within all ranges of skills, study habits, and abilities, and the assessment test really did not reflect that totally.	

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

5.

III. Attached Files

Assessment Results
Assessment Test

Faculty/Preparer:	William Reichert	**Date:** 05/17/2016
Department Chair:	John Trame	**Date:** 06/14/2016
Dean:	Kimberly Hurns	**Date:** 06/22/2016
Assessment Committee Chair:	Michelle Garey	**Date:** 08/03/2016