

Course Assessment Report
Washtenaw Community College

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
 - 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 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
 - 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 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.

- | |
|---|
| <ol style="list-style-type: none"> 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

- 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 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

	<p>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.</p>	<p>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.</p>	
--	---	--	--

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