

Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Computer Networking Technology	201	CNT 201 12/05/2019-Administering Microsoft Windows Client Operating Systems
Division	Department	Faculty Preparer
Business and Computer Technologies	Computer Science & Information Technology	John Trame
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?

No

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

3.

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

5.

II. Assessment Results per Student Learning Outcome

Outcome 1: Identify Windows operating system features and components.

- Assessment Plan
 - Assessment Tool: Multiple-choice test questions
 - Assessment Date: Winter 2015
 - Course section(s)/other population: All sections
 - Number students to be assessed: All students
 - How the assessment will be scored: Answer key

- Standard of success to be used for this assessment: 70% of the students will correctly answer 80% of these questions.
- 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)
2019		

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

# of students enrolled	# of students assessed
44	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.

This is the total of my two sections. I did not get results from the section taught at Pinkney High School.

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.

This is the total of my two sections. I did not get results from the section taught at Pinkney High School.

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

The written final exam was a multiple-choice exam administered on Blackboard.
The hands-on skills final exam was performed on the computers in the lab ti 138.

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
Overall the students performed fairly well. One area that showed significant weekness, was security - authentication, authorization and accounting.

Outcome 1 had 12 questions on the final exam.

24 Students completed the exam

17 students scored 70% or better on these 12 questions

$(17/24)*100 = 71\%$

71% of the students scored 70% or better on the questions for this outcome.

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 identify Windows operating system features. They perform better on the skills exam than they do on the written exam.

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 could use a little more time working with features.

Outcome 2: Plan and prepare the installation of the Windows client operating system in a corporate and SOHO environment.

- Assessment Plan
 - Assessment Tool: Multiple-choice test questions
 - Assessment Date: Winter 2015
 - Course section(s)/other population: All sections
 - Number students to be assessed: All students
 - How the assessment will be scored: Answer key
 - Standard of success to be used for this assessment: 70% of the students will correctly answer 80% of these questions.
 - 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)
2019		

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

# of students enrolled	# of students assessed
44	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.

This is the total of my two sections. I did not get results from the section taught at Pinkney High School.

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.

This is the total of my two sections. I did not get results from the section taught at Pinkney High School.

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

The written final exam was a multiple-choice exam administered on Blackboard. The hands-on skills final exam was performed on the computers in the lab ti 138.

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
Outcome 2 had 8 questions on the final concepts exam.
24 students completed the exam
15 students scored 70% or better on this set of questions.
 $(15/24)*100 = 63\%$
63% of the students scored 70% or better on this outcome

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

Students perform well in the lab environment. However, they do not perform as well when answering questions on a written test.

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 only had 8 questions on the concepts exam. This is a rather small sample of questions. Perhaps more questions could provide more statistical significance for this outcome.

Outcome 3: Install Windows client operating system in a SOHO environment.

- Assessment Plan
 - Assessment Tool: Multiple-choice test questions
 - Assessment Date: Winter 2015
 - Course section(s)/other population: All sections
 - Number students to be assessed: All students
 - How the assessment will be scored: Answer key
 - Standard of success to be used for this assessment: 70% of the students will correctly answer 80% of these questions.
 - 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)
2019		

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

# of students enrolled	# of students assessed
44	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.

This is the total of my two sections. I did not get results from the section taught at Pinkney High School.

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.

This is the total of my two sections. I did not get results from the section taught at Pinkney High School.

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

The written final exam was a multiple-choice exam administered on Blackboard. The hands-on skills final exam was performed on the computers in the lab ti 138.

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

Outcome 3 had 2 questions on the final concepts exam.

24 students completed the exam.

8 students scored 70% or better.

$(8/24)*100 = 33\%$

33% of the students scored 70% or better on this outcome.

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

The students performed well in the lab environment. However, they performed quite poorly on the written exam.

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 only had 2 questions on the concepts exam. This is a rather small sample of questions. Perhaps more questions could provide more statistical significance for this outcome.

Outcome 4: Configure Windows client operating system in a workgroup environment,

including the configuration of users/groups, network protocols, file shares, encryption and printing.

- Assessment Plan
 - Assessment Tool: Multiple-choice test questions
 - Assessment Date: Winter 2015
 - Course section(s)/other population: All sections
 - Number students to be assessed: All students
 - How the assessment will be scored: Answer key
 - Standard of success to be used for this assessment: 70% of the students will correctly answer 80% of these questions.
 - 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)
2019		

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

# of students enrolled	# of students assessed
44	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.

This is the total of my two sections. I did not get results from the section taught at Pinkney High School.

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.

This is the total of my two sections. I did not get results from the section taught at Pinkney High School.

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

The written final exam was a multiple-choice exam administered on Blackboard. The hands-on skills final exam was performed on the computers in the lab ti 138.

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

Outcome 4 had 38 questions on the concepts final exam.

24 students completed the exam.

16 students scored 70% or better on this set of questions

$(16/24)*100 = 67\%$

67% of the students scored 70% or better on this outcome.

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

The students performed fairly well in the lab environment. However, they do not perform as well on the written exam.

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.

File sharing and NTFS permissions is an area of significant weakness. More time in this area may help. Perhaps creating two class sessions (two days) with lectures and labs on this topic may improve student performance.

User account security is another area of weakness.

Outcome 5: Troubleshoot various configuration problems in a Windows Workgroup peer-to-peer network.

- Assessment Plan
 - Assessment Tool: Multiple-choice test questions
 - Assessment Date: Winter 2015
 - Course section(s)/other population: All sections
 - Number students to be assessed: All students
 - How the assessment will be scored: Answer key

- Standard of success to be used for this assessment: 70% of the students will correctly answer 80% of these questions.
- 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)
2019		

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

# of students enrolled	# of students assessed
44	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.

This is the total of my two sections. I did not get results from the section taught at Pinkney High School.

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.

This is the total of my two sections. I did not get results from the section taught at Pinkney High School.

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

The written final exam was a multiple-choice exam administered on Blackboard. The hands-on skills final exam was performed on the computers in the lab ti 138.

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>
Outcome 5 had 16 questions on the concepts final exam.
24 students completed the exam.

7 students scored 70% or higher on this set of questions.

$(7/24)*100 = 29\%$

29% of the students scored 70% or better on this outcome

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

Students show weakness both in the lab and on the written exam.

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.

Troubleshooting is a complicated concept. Students need more time practicing troubleshooting. Perhaps we could include a troubleshooting portion in every lab experience.

Outcome 2: Plan and prepare the installation of the Windows client operating system in a corporate and SOHO environment.

- Assessment Plan
 - Assessment Tool: Lab Activities
 - Assessment Date: Winter 2015
 - Course section(s)/other population: All sections
 - Number students to be assessed: All students
 - How the assessment will be scored: Task check list
 - Standard of success to be used for this assessment: At least 70% of the students will successfully install Windows client on a computer.
 - Who will score and analyze the data: department 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)
2019		

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

# of students enrolled	# of students assessed
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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.

This is the total of my two sections. I did not get results from the section taught at Pinkney High School.

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.

This is the total of my two sections. I did not get results from the section taught at Pinkney High School.

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

The hands-on skills final exam was performed on the computers in the lab ti 138.

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

Student performed well in the lab environment. 100 percent of the students met this outcome during the hands-on lab.

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

Students perform well in the lab environment. However, they do not perform as well when answering questions on a written test.

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 only had 8 questions on the concepts exam. This is a rather small sample of questions. Perhaps more questions could provide more statistical significance for this outcome.

Outcome 3: Install Windows client operating system in a SOHO environment.

- Assessment Plan
 - Assessment Tool: Lab Activities
 - Assessment Date: Winter 2015
 - Course section(s)/other population: All sections
 - Number students to be assessed: All students
 - How the assessment will be scored: Task check list
 - Standard of success to be used for this assessment: At least 70% of the students will successfully install Windows client on a computer.
 - Who will score and analyze the data: department 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)
2019		

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

# of students enrolled	# of students assessed
44	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.

This is the total of my two sections. I did not get results from the section taught at Pinkney High School.

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.

This is the total of my two sections. I did not get results from the section taught at Pinkney High School.

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

The hands-on skills final exam was performed on the computers in the lab ti 138.

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>
100 percent of the students met this outcome during the hands-on lab.

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

The students performed well in the lab environment. However, they performed quite poorly on the written exam.

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 only had 2 questions on the concepts exam. This is a rather small sample of questions. Perhaps more questions could provide more statistical significance for this outcome.
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Outcome 4: Configure Windows client operating system in a workgroup environment, including the configuration of users/groups, network protocols, file shares, encryption and printing.

- Assessment Plan
 - Assessment Tool: Lab Activities
 - Assessment Date: Winter 2015
 - Course section(s)/other population: All sections
 - Number students to be assessed: All students
 - How the assessment will be scored: Task check list
 - Standard of success to be used for this assessment: At least 70% of the students will successfully configure Windows client to meet the specified requirements.
 - Who will score and analyze the data: department 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)
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2019		
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2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
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This is the total of my two sections. I did not get results from the section taught at Pinkney High School.

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.

This is the total of my two sections. I did not get results from the section taught at Pinkney High School.

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

The hands-on skills final exam was performed on the computers in the lab ti 138.

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

70% of the students successfully accomplished 70% or more of the skills outlined in this outcome.

Students perform much better in the hands-on skills environment as compared to the multiple-choice tests. However, some students need more time working with/practicing the following:

recovering the encryption key

secure file sharing

user account security

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

The students performed fairly well in the lab environment. However, they do not perform as well on the written exam.

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.

File sharing and NTFS permissions is an area of significant weakness. More time in this area may help. Perhaps creating two class sessions (two days) with lectures and labs on this topic may improve student performance.

User account security is another area of weakness.

Outcome 5: Troubleshoot various configuration problems in a Windows Workgroup peer-to-peer network.

- Assessment Plan
 - Assessment Tool: Lab Activities
 - Assessment Date: Winter 2015
 - Course section(s)/other population: All sections
 - Number students to be assessed: All students
 - How the assessment will be scored: Task check list
 - Standard of success to be used for this assessment: At least 70% of the students will successfully troubleshoot and repair instructor inserted problems in a Windows client environment.
 - Who will score and analyze the data: department 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)
2019		

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

# of students enrolled	# of students assessed
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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.

This is the total of my two sections. I did not get results from the section taught at Pinkney High School.

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.

This is the total of my two sections. I did not get results from the section taught at Pinkney High School.

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

The hands-on skills final exam was performed on the computers in the lab ti 138.

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
Less than 70% of the students successfully repaired problems without instructor help.
Students clearly need more time practicing good troubleshooting techniques.

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

Students show weakness both in the lab and on the written exam.

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.

Troubleshooting is a complicated concept. Students need more time practicing troubleshooting. Perhaps we could include a troubleshooting portion in every lab experience.

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.

There is no previous report. This is the first assessment report for this course.

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 assessment revealed weaknesses in the areas of:

Planning various installations of the operating system

Authorization, Authentication, and Accounting (AAA)

File sharing and NTFS permissions

Security

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

This will be shared at a department meeting.

4. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Assessment Tool	Add questions and modify questions on the final exam.	More questions are needed for each objective, to get more statistically significant numbers.	2020
Objectives	The objectives do not adequately reflect the skills and knowledge required to implement a Small Office/Home Office (SOHO) network.	Two of the current objectives focus on planning the installation and installing the operating system. We need objectives that focus more on the configuration of	2020

		the operating system.	
Course Materials (e.g. textbooks, handouts, on-line ancillaries)	New lectures and new labs.	Some lectures and labs could be eliminated, to make time available for more important topics. More emphasis must be placed on the following areas: File sharing and NTFS permissions Securing the operating system, including AAA Troubleshooting	2020
Course Materials (e.g. textbooks, handouts, on-line ancillaries)	Additional material related to Windows operating system features.	Based on the current assessment report, students could use more time in this area.	2020

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

6.

III. Attached Files

[Assessment Data](#)

Faculty/Preparer: John Trame **Date:** 05/19/2020

Department Chair: Cyndi Millns **Date:** 05/22/2020

Dean: Eva Samulski **Date:** 05/26/2020

Assessment Committee Chair: Shawn Deron **Date:** 07/21/2020