

**Course Assessment Report
Washtenaw Community College**

Discipline	Course Number	Title
Business Office Systems	284	BOS 284 03/11/2023- Spreadsheet Software Applications II
College	Division	Department
Business and Computer Technologies	Business and Computer Technologies	Business
Faculty Preparer		Joyce Jenkins
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: Apply data functionality such as sorting and filtering to spreadsheets.

- Assessment Plan
 - Assessment Tool: Practical Test
 - Assessment Date: Fall 2012
 - Course section(s)/other population: All sections
 - Number students to be assessed: Random sample of 33% of all students
 - How the assessment will be scored: Answer Key

- Standard of success to be used for this assessment: 75% of students will score 75% or higher on practical exam.
- 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)
2021	2022	2021

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

# of students enrolled	# of students assessed
33	28

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 number of students assessed represents all student completers enrolled in the identified SIMnet companion course for BOS 284. SIMnet is the online resource used to assess student outcomes. Students did not complete the course for a variety of reasons including health, family issues, work conflicts, etc., resulting in a failure to complete course requirements.

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 student completers in all sections were assessed. The course is primarily offered as a Distance Learning (DL) course and all students included in this assessment participated in a DL format.

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

Outcome #1 was assessed using Exam 1 Project 3 (Independent Project 6-5 taken from course text, Excel Word 365 Complete, In Practice 2019, Nordell). This project requires students to edit and update a spreadsheet using SUMIFS and IFS formulas to summarize data. In addition, students calculate insurance statistics and display full names in one cell. Exam projects are completed using the SIMnet® Online program, designed to teach and assess competency in Microsoft Office 2019 and computer concepts. Each project is scored automatically by SIMnet upon student submission using a rubric. Criteria and scoring for the steps used to assess Outcome 1 include:

- Create a nested INDEX and MATCH function to display the number of responses from a city.

Rubric Item 2: Range 0-3

- Use DSUM to summarize mailing data.

Rubric Item 3: Range 0-6

Rubric Total Points Possible = 9

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

Students achieved success on Outcome #1 with 86% of students (24/28) scoring 78% or higher on all rubric items including writing advanced function formulas to display and summarize data.

Students achieved fair success on Outcome #1 with 54% of students scoring 100% on all rubric items including writing advanced function formulas to sort and filter data. These applied Excel skills demonstrate a high level of understanding and application when using the Excel program.

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

Students achieved success on Outcome #1 with 86% of students scoring 78% or higher on all rubric items including writing advanced function formulas to display and summarize data. These applied Excel skills demonstrate a high level of understanding and application when using the Excel program.

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.

While 86% of students achieved Outcome #1, one area could be improved:

- Rubric Item #3: Use DSUM to summarize mailing data.

Outcome 2: Use advanced formulas in business oriented spreadsheets.

- Assessment Plan
 - Assessment Tool: Practical Test

- Assessment Date: Fall 2012
- Course section(s)/other population: All sections
- Number students to be assessed: Random sample of 33% of all students
- How the assessment will be scored: Answer Key
- Standard of success to be used for this assessment: 75% of students will score 75% or higher on practical exam.
- 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)
2021	2022	2021

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

# of students enrolled	# of students assessed
33	28

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 number of students assessed represents all student completers enrolled in the identified SIMnet companion course for BOS 284. SIMnet is the online resource used to assess student outcomes. Students did not complete the course for a variety of reasons including health, family issues, work conflicts, etc., resulting in a failure to complete course requirements.

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 student completers in all sections were assessed. The course is primarily offered as a Distance Learning (DL) course and all students included in this assessment participated in a DL format.

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

Outcome #2 was assessed using Exam 1 Project 3 (Independent Project 6-5 taken from course text, Excel 365 Complete, In Practice 2019, Nordell). This project requires students to edit and update a spreadsheet using SUMIFS and IFS formulas to summarize data. In addition, students calculate insurance statistics and display

full names in one cell. Exam projects are completed using the SIMnet® Online program, designed to teach and assess competency in Microsoft Office 2019 and computer concepts. Each project is scored automatically by SIMnet upon student submission using a rubric. Criteria and scoring for the steps used to assess Outcome 2 include:

- Create an IFS function to display a response rating.
Rubric Item 6: Range 0-2
- Use TEXTJOIN to display names.
Rubric Item 8: Range 0-2

Project Total Points Possible = 4

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

Met Standard of Success: Yes

The standard of success for Outcome #2 was met (75% of students will score 75% or higher on practical exam).

86% of students (24/28) scored 75% or higher, meeting the standard of success.

- 36% (10 students) met all rubric items for Outcome 2 with a score of 100%.
- 14% (4 students) did not score higher than 75% on all rubric items for Outcome #2
- Students performed well on rubric item 6 where 14 of 28 (50%) scored 74% or higher.
- Students performed quite on rubric item 8 where 26 of 28 (93%) scored 100%.

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

Students demonstrated a good degree of proficiency on Outcome #2 with 86% of all students meeting the outcome by scoring 75% or higher. Using advanced formulas in business-oriented worksheets reflects a primary purpose of using a spreadsheet application. Outcome #2 is representative of the user's level of skill using the Excel program.

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.

While 86% of students achieved Outcome #2, one area could be improved:

Rubric Item #6: Create an IFS function to display a response rating.

Outcome 3: Manipulate data for analysis and collaboration.

- Assessment Plan
 - Assessment Tool: Practical Test
 - Assessment Date: Fall 2012
 - Course section(s)/other population: All sections
 - Number students to be assessed: Random sample of 33% of all students
 - How the assessment will be scored: Answer Key
 - Standard of success to be used for this assessment: 75% of students will score 75% or higher on practical exam.
 - 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)
2021	2022	2021

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

# of students enrolled	# of students assessed
33	27

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 number of students assessed represents all student completers enrolled in the identified SIMnet companion course for BOS 284. SIMnet is the online resource used to assess student outcomes. Students did not complete the course for a variety of reasons including health, family issues, work conflicts, etc., resulting in a failure to complete course requirements.

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 student completers in all sections were assessed. The course is primarily offered as a Distance Learning (DL) course and all students included in this assessment participated in a DL format.

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

Outcome #3 was assessed using Exam 2 Project 1 (Independent Project 7-6 taken from course text, Excel 365 Complete, In Practice 2019, Nordell). This project requires students to create a template, set validation, enter formulas, insert a combo box control, and create a new workbook from the template. Exam projects are completed using the SIMnet® Online program, designed to teach and assess competency in Microsoft Office 2019 and computer concepts. Each project is scored automatically by SIMnet upon student submission using a rubric. Criteria and scoring for these steps include:

- Select cells and set data validation to use the list of activity names on the Data sheet. Do not use an input message or an error alert.
Rubric Item 9: Range 0-1
- Select cells and set data validation to use a Date that is less than or equal to TODAY. Include a Stop error alert with a title of Check Date and a message of Date must be today or in the past.
Rubric Item 11: Range 0-1
- Select cells and remove the Locked cell property.
Rubric Item 12: Range 0-1
- Draw a combo box control to cover a cell, open its Format Control Dialog box, select cells for the input range, and enter cell address in Cell link box.
Rubric Item 14: Range 0-1
- Select the Data sheet, select Third from the combo box, and return to the Hospital Seminars sheet to see the results.
Rubric Item 18: Range 0-1
- Select non-adjacent cells and remove the Locked property.
Rubric Item 19: Range 0-1

- Protect the Hospital Seminars sheet and the Calorie Tracking sheet, both without passwords.
Rubric Item 23: Range 0-1

Total Project Rubric Points = 9

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

Met Standard of Success: Yes

The standard of success for Outcome #3 was met (75% of students will score 75% or higher on practical exam).

85% of students (23/27) scored 75% or higher, meeting the standard of success.

- 56% (15 students) met all rubric items for Outcome #6 with a score of 100%.
- 15% (4 students) did not score higher than 75% on all rubric items for Outcome #2.

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

Students demonstrated a good degree of proficiency on Outcome #3, especially when using combo box functions to increase functionality of the spreadsheet.

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.

While 85% of students achieved Outcome #3, three areas could be improved:

Rubric Item #12: Select cells and remove the locked cell property.

Rubric Item #19: Select non-adjacent cells and remove the locked property.

Rubric Item #23: Protect sheets without passwords.

Outcome 4: Publish to Excel services on SharePoint.

- Assessment Plan

- Assessment Tool: Practical Test
- Assessment Date: Fall 2012
- Course section(s)/other population: All sections
- Number students to be assessed: Random sample of 33% of all students
- How the assessment will be scored: Answer Key
- Standard of success to be used for this assessment: 75% of students will score 75% or higher on practical exam.
- 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)
2021	2022	2021

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

# of students enrolled	# of students assessed
33	28

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 number of students assessed represents all student completers enrolled in the identified SIMnet companion course for BOS 284. SIMnet is the online resource used to assess student outcomes. Students did not complete the course for a variety of reasons including health, family issues, work conflicts, etc., resulting in a failure to complete course requirements.

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 student completers in all sections were assessed. The course is primarily offered as a Distance Learning (DL) course and all students included in this assessment participated in a DL format.

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

Current curriculum was examined for evidence or examples of Outcome #4 skill, Publish to Excel services on SharePoint. No evidence of the Outcome #4 skill was available to assess.

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

No assessment data available.

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

Outcome 4 (Publish to Excel services on SharePoint) was not assessed as this process is no longer included in the curriculum for this course.

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.

Because this process is no longer included in the curriculum for this course, it is the recommendation of this review to delete this outcome.

Outcome 5: Perform personal, business, and payroll bank reconciliations.

- Assessment Plan
 - Assessment Tool: Practical Test
 - Assessment Date: Fall 2012
 - Course section(s)/other population: All sections
 - Number students to be assessed: Random sample of 33% of all students
 - How the assessment will be scored: Answer Key
 - Standard of success to be used for this assessment: 75% of students will score 75% or higher on practical exam.
 - 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)
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2021	2022	2021
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2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
33	29

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 number of students assessed represents all student completers. Students did not complete the course for a variety of reasons including health, family issues, work conflicts, etc., resulting in a failure to complete course requirements.

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 student completers in all sections were assessed. The course is primarily offered as a Distance Learning (DL) course and all students included in this assessment participated in a DL format.

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

Outcome #5 was assessed using Exam 1 Project 1 (Independent Project 5-4 taken from course text, Excel 365 Complete, In Practice 2019, Nordell). This project requires students to complete a summary of cash flow for various businesses and then consolidating this data. In addition, supporting hyperlinks are inserted on each worksheet. SIMNET assess competency in Microsoft Office 2019 and computer concepts. Each project is scored automatically by SIMnet upon student submission using a rubric. Criteria and scoring for these steps include:

- Build a static consolidation for the Cash flow from operations section.

Rubric Item 5: Range 0-1

- Build a static consolidation for the Cash flow from banking and investment sections in specific cells. Delete the references in the Consolidate dialog box and use Sum as the function.

Rubric Item 6: Range 0-1

- Build a static consolidation for the Cash balance at the beginning of the quarter amounts in a specific cell with Sum as the function.

Rubric Item 7: Range 0-1

Project Rubric Total = 3 Points

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

Met Standard of Success: Yes

The standard of success for Outcome #5 was met (75% of students will score 75% or higher on practical exam).

86% of students (25/29) scored 75% or higher, meeting the standard of success.

- 86% (25 students) met all rubric items for Outcome 6 with a score of 100%.
- 14% (4 students) did not score higher than 75% on all rubric items for Outcome #6.

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

Students achieved success on Outcome #5 with 86% of students meeting 100% of all three rubric items. Consolidating data between specific cells and using the SUM function to reconcile a spreadsheet demonstrate a very good level of user skill.

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.

While 86% of students achieved Outcome #5, two areas could be improved:

- Rubric Item 6: Build a static consolidation for the cash flow, delete reference in the dialog box and use SUM as the function.
- Rubric Item 7: Build a static consolidation for the cash balance at the beginning of the quarter amounts in a specific cell with SUM as the function.

Outcome 6: Calculate business net profit margins and analyze income statements.

- Assessment Plan

- Assessment Tool: Practical Test
- Assessment Date: Fall 2012
- Course section(s)/other population: All sections
- Number students to be assessed: Random sample of 33% of all students
- How the assessment will be scored: Answer Key
- Standard of success to be used for this assessment: 75% of students will score 75% or higher on practical exam.
- 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)
2021	2022	2021

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

# of students enrolled	# of students assessed
33	28

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 number of students assessed represents all student completers enrolled in the identified SIMnet companion course for BOS 284. SIMnet is the online resource used to assess student outcomes. Students did not complete the course for a variety of reasons including health, family issues, work conflicts, etc., resulting in a failure to complete course requirements.

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 student completers in all sections were assessed. The course is primarily offered as a Distance Learning (DL) course and all students included in this assessment participated in a DL format.

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

Outcome #6 was assessed using Exam 1 Project 3 (Independent Project 6-5 taken from course text, Excel 365 Complete, In Practice 2019, Nordell). This project

requires students to edit and update a spreadsheet using SUMIFS and IFS formulas to summarize data. In addition, students calculate insurance statistics and display full names in one cell. Exam projects are completed using the SIMnet® Online program, designed to teach and assess competency in Microsoft Office 2019 and computer concepts. Each project is scored automatically by SIMnet upon student submission using a rubric. Criteria and scoring for the steps used to assess Outcome 1 include:

- Use SUMIFS to total insurance claims and dependents by city and department.
Rubric Item 7: Range 0-2

Project Total Points Possible = 2

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

Met Standard of Success: Yes

The standard of success for Outcome #6 was met (75% of students will score 75% or higher on practical exam).

86% of students (24/28) scored 75% or higher, meeting the standard of success.

- 79% (22 students) met all rubric items for Outcome 6 with a score of 100%.
- 21% (6 students) did not score higher than 75% on all rubric items for Outcome #6.

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

Students achieved good success on Outcome #6 with 75% of students scoring 100% on the rubric item. Demonstrating understanding and application of business net profit calculations and analysis are reflective of a user's understanding of foundational spreadsheet structure and development.

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.

While 85% of students achieved success in Outcome #6, the single rubric item used to measure this outcome could be improved:

Rubric Item #7: Use SUMIFS to total insurance claims and dependents by city and department.

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.

This course has never been assessed.

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?

Based upon all supporting data, BOS 284 is effectively supporting student learning, demonstrated through the successful design and development of spreadsheets for business applications utilizing a variety of tools and advanced features using Microsoft Excel. I believe BOS 284 is meeting the needs of students. The second (and final) WCC course in the use of Microsoft Excel, students are experienced with both content and course expectations. As a result, interest and motivation are high, resulting in superior quality work on all projects and exams. As reflected in the data collected, all course outcomes were met and individual items met at a high percentage

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

Once approved, the assessment results will be shared with BOS instructors for additional discussion and comments.

4. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Outcome Language	Reduce and rewrite course outcomes from six to four.	The number and language of current Course Outcomes (6) do not accurately reflect the course content. Fewer and more clearly stated Course Outcomes will permit course	2024

		improvements and future assessments to better reflect the current Excel application, industry expectations, and student needs. The proposed change will reduce Course Outcomes from six to four	
Objectives	Reduce currently listed course objectives from 19 to approximately 12.	The number and language of current Course Objectives (19) do not accurately reflect the course content. Fewer and better stated Course Objectives will permit course improvements and future assessments to better reflect the current Excel application, industry expectations, and student needs. The proposed change will reduce objectives from 19 to approximately 12.	2024
Course Assignments	Outcome #1 Rubric Item #3: Use DSUM to summarize mailing data. Additional supporting documents/information added to the student	The suggested changes listed here are intended to enhance current instructional design and current course resources.	2024

	course site regarding DSUM formulas.		
Course Assignments	<p>Outcome #2</p> <p>Rubric Item #6: Create an IFS function to display a response rating.</p> <p>Additional supporting documents/information added to the student course site regarding the IFS function.</p>	The suggested changes listed here are intended to enhance current instructional design and current course resources.	2024
Course Assignments	<p>Outcome #3</p> <p>Rubric Item #19: Select non-adjacent cells and remove the Locked property.</p> <p>Rubric Item #23: Protect the Hospital Seminars sheet and the Calorie Tracking sheet, both without passwords.</p> <p>Additional supporting documents/information added to the student course site regarding these Excel skills.</p>	The suggested changes listed here are intended to enhance current instructional design and current course resources.	2024
Course Assignments	<p>Outcome #6</p> <p>Rubric Item #7: Use SUMIFS to total insurance claims and dependents by city and department.</p> <p>Additional supporting documents/information added to the student course site regarding</p>	The suggested changes listed here are intended to enhance current instructional design and current course resources	2024

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

6.

III. Attached Files

[BOS 284 Assessment Data](#)

[IP 5-4 Project Instructions](#)

[IP 6-5 Project Instructions](#)

[Rubric IP 5-4](#)

[IP 7-6 Project Instructions](#)

[Rubric IP 6-5](#)

[Rubric IP 7-6](#)

Faculty/Preparer: Joyce Jenkins **Date:** 03/28/2023

Department Chair: Douglas Waters **Date:** 03/28/2023

Dean: Eva Samulski **Date:** 03/30/2023

Assessment Committee Chair: Shawn Deron **Date:** 04/27/2023