| Discipline | Course Number | Title |
|---|---|---|
| Business Office Systems | 184 | BOS 184 02/13/2023-Spreadsheet Software Applications I |
| 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: Use Excel review functionality including spell check and comments.

- Assessment Plan

    o  Assessment Tool: Practical Test

    o  Assessment Date: Fall 2012

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

    o  Number students to be assessed: Random sample of 33% of all students or a minimum of 24 students.

    o  How the assessment will be scored: Answer Key

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

- 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 | 2022 | 2022 |

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

| # of students enrolled | # of students assessed |
|---|---|
| 160 | 53 |

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 33% of total students enrolled in the identified sections of BOS 184. The number of students assessed includes only student completers of BOS 184. 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.

BOS 184 is taught in a face-to-face (on-campus) and a Distance Learning (DL) format. The randomly selected sample includes only course completers to best assess each outcome. The student learning environment is not identified in this assessment; randomly selected students are identified only by number for assessment purposes.

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 3 Project 3 (Application Capstone Project 2 taken from course text, Excel 365 Complete, In Practice 2019, Nordell). This project requires students to complete a workbook by importing a text file, formatting data, filter and sort data, create a PivotTable, build a PivotChart, and insert a sunburst chart. 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:

> o   Type Transactions Data in the Title box; type your name in the Author Box
>     Rubric Item 20b:  Range 0-1
>
> o   Click the Comments box, type First week of September, and return to the
>     workbook.
>     Rubric Item 20c:  Range 0-1
>
> o   Select the PivotTable sheet tab. Change the page orientation to landscape and
>     scale the sheet to fit a single page.
>     Rubric Item 20d:  Range 0-1
>
> o   Select the Transactions sheet and scale it to fit a single page.
>     Rubric Item 20e:  Range 0-1
>
> 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 #1 was met (75% of students will score 75% or higher on practical exam).
>
> o   85% (45 of 53 students) met all rubric items for Outcome 1 with a score of 100%.
>
> o   14% (8 of 53 students) did not score higher than 75% on all rubric items for Outcome #1
>
> o   Students performed well on rubric item 20b where 50 of 53 (94%) scored 100%.
>
> o   Students performed well on rubric item 20c where 48 of 53 (94%) scored 100%.
>
> o   Students performed fair on rubric item 20d where 41 of 53 (77%) scored 100%.
>
> o   Students performed fair on rubric item 20e where 42 0f 53 (79%) scored 100%

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 #1 with 85% of students scoring 100% on all rubric items including finalizing a workbook using spellcheck, entering identifying information in appropriate locations on the spreadsheet, setting page option and document properties, changing page orientation and scaling pages to print on a single page. Each of these skills of Excel functionality demonstrate a high level of 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 85% of students achieved Outcome #1, two areas could be improved:
>
> o Rubric Item #20d: Finalize the workbook by setting page options and document properties.
>
> o Rubric Item #20e: Finalize the workbook by setting page options and document properties.

Outcome 2: Develop various views as appropriate for content.

- Assessment Plan

    o Assessment Tool: Practical Test

    o Assessment Date: Fall 2012

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

    o Number students to be assessed: Random sample of 33% of all students or a minimum of 24 students.

    o How the assessment will be scored: Answer Key

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

    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 | 2022 | 2022 |

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

| # of students enrolled | # of students assessed |
|---|---|
| 160 | 53 |

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 33% of total students enrolled in the identified sections of BOS 184. The number of students assessed includes only student completers of BOS 184. 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.

BOS 184 is taught in a face-to-face (on-campus) and a Distance Learning (DL) format. The randomly selected sample includes only course completers to best assess each outcome. The student learning environment is not identified in this assessment; randomly selected students are identified only by number for assessment purposes.

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 3 Project 3 (Application Capstone Project 2 taken from course text, Excel 365 Complete, In Practice 2019, Nordell). This project requires students to complete a workbook by importing a text file, formatting data, filter and sort data, create a PivotTable, build a PivotChart, and insert a sunburst chart. 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:

- o Sort and filter data: Sort the data in ascending order by Department.
  Rubric Item 10b: Range 0-1

- o Sort and filter date: Filter the table to show only the Bike & Skate data.
  Rubric Item 10d: Range 0-1

- o Create a PivotTable: Show the Department, City, and Transaction fields in the PivotTable Fields task pane, arrange the City field in the Filters area, the Department field in the Rows area, and the Transactions field in the Values area.
  Rubric Item 11c: Range 0-1

- o Create and format a Clustered Column PivotChart: Select cell A4 in the PivotTable and insert a Clustered Column Pivot Chart.
  Rubric Item 12b: Range 0-1

- o Create and format a Clustered Column PivotChart: Position and size the chart object to start at Cell D2 and reach to cell M18.
  Rubric Item 12f: Range 0-1

Outcome #2 Project Total Points Possible = 5

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).<br><br>- o 92% (49 of 53 students) met all rubric items for Outcome #2 with a score of 100%.<br><br>- o 8% (4 of 53 students) did not score higher than 75% on all rubric items for Outcome #2.<br><br>- o Students performed well on all rubric items, with passing scores ranging from 92% - 95% on each rubric item. |

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

| Students demonstrated a high degree of proficiency on Outcome #2. Sorting and filtering data and creating and formatting PivotChart are highly technical requirements. Outcome #2 is representative of the user's high 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 98% of students achieved Outcome #2, one area could be improved:<br><br>- o Rubric Item #12b: Create and format a Clustered Column PivotChart. |
| --- |

Outcome 3: Format cells and spreadsheets.

- Assessment Plan

    - o Assessment Tool: Practical Test

    - o Assessment Date: Fall 2012

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

    - o Number students to be assessed: Random sample of 33% of all students or a minimum of 24 students.

    - o How the assessment will be scored: Answer Key

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

- 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 | 2022 | 2022 |

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

| # of students enrolled | # of students assessed |
|---|---|
| 160 | 53 |

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 33% of total students enrolled in the identified sections of BOS 184. The number of students assessed includes only completers of BOS 184. 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.

> BOS 184 is taught in a face-to-face (on-campus) and a Distance Learning (DL) format. The randomly selected sample includes only course completers to best assess each outcome. The student learning environment is not identified in this assessment; randomly selected students are identified only by number for assessment purposes.

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 3 Project 3 (Application Capstone Project 2 taken from course text, Excel Word 365 Complete, In Practice 2019, Nordell). This project requires students to complete a workbook by importing a text file, formatting data, filter and sort data, create a PivotTable, build a PivotChart, and insert a sunburst chart. 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:
>
> - o Apply formats to cells in Sheet 1: Set the width of each of columns A:C to 15.00 (110 pixels). Rubric Item 7c: Range 0-1

- o Apply formats to cells in Sheet 1: Select cells A1:C3, click the Alignment launcher and apply the Center Across Selection command.
  Rubric Item 7d: Range 0-1

- o Rename the worksheet as Transactions: Rename the worksheet as Transactions.
  Rubric Item 8a: Range 0-1

- o Copy and rename a worksheet: Name the copied sheet as filtered.
  Rubric Item 9b: Range 0-1

- o Copy and rename a worksheet: Make another copy of the Transactions sheet at the end and name it SunBurstDate.
  Rubric Item 9c: Range 0-1

- o Create a PivotTable: Rename the PivotTable sheet as PivotTable.
  Rubric Item 11d: Range 0-1

- o Create and format a Clustered Column PivotChart: Click the total box in the chart and edit the text to display # of Transactions by Department.
  Rubric Item 12a: Range 0-1

- o Create and format a sunburst chart: Select cell A5 and insert a Sunburst chart on its own sheet named SunburstChart.
  Rubric Item 13c: Range 0-1

- o Create and format a sunburst chart: Select cell B4. With the move pointer, drag cell B4 to cell A4 to rearrange the columns so that the City column is column A. The top level in a hierarchy chart should be leftmost in the data.
  Rubric Item 13b: Range 0-1

- o Name a cell range and insert a column: Select cell C5 and type Tax Rate.

- o Rubric Item 14d: Range 0-1

Outcome #3 Project Total Points Possible = 10

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>**

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

- o 96% (51 of 53 students) met all rubric items for Outcome #3 with a score of 100%.

- o 4% (2 of 53 students) did not score higher than 75% on all rubric items for Outcome #3

- o Students performed extremely well on rubric items 8a, 9b, 9c and 11d where 53 of 53 (100%) scored 100%.

- o Students performed well on rubric items 7c and 13b where 51 of 53 (96%) scored 100%.

- o Students performed well on rubric items 12a and 13c where 50 of 53 (94%) scored 100%.

- o Students performed well on rubric item 14d where 49 of 53 (92%) scored 100%

- o Students performed well on rubric item 7d where 45 of 53 (85%) 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 high degree of proficiency on Outcome #3. The formatting of cells and spreadsheets is critical in the development of an effective spreadsheet. Student scores reflect a high degree of proficiency in formatting, renaming, copying cells and spreadsheets, creating various charts, and named ranges

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 96% of students achieved Outcome #3, one area could be improved:

   o  Rubric Item #14d: Name a cell range and insert a column.

Outcome 4: Use simple formulas in business-oriented spreadsheets.

- Assessment Plan

  o  Assessment Tool: Practical Test

  o  Assessment Date: Fall 2012

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

  o  Number students to be assessed: Random sample of 33% of all students or a minimum of 24 students.

  o  How the assessment will be scored: Answer Key

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

  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 | 2022 | 2022 |

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

| # of students enrolled | # of students assessed |
|---|---|
| 160 | 53 |

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 33% of total students enrolled in the identified sections of BOS 184. The number of students assessed includes only student completers of BOS 184. 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.

> BOS 184 is taught in a face-to-face (on-campus) and a Distance Learning (DL) format. The randomly selected sample includes only course completers to best assess each outcome. The student learning environment is not identified in this assessment; randomly selected students are identified only by number for assessment purposes.

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

> Outcome #4 was assessed using Exam 3 Project 3 (Application Capstone Project 2 taken from course text, Excel 365 Complete, In Practice 2019, Nordell). This project requires students to complete a workbook by importing a text file, formatting data, filter and sort data, create a PivotTable, build a PivotChart, and insert a sunburst chart. 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:
>
> - Build a VLOOKUP formula: Build a VLOOKUP formula to lookup the value in cell A6 in the TaxRates range and display the tax rate. The range lookup argument is not necessary because the data in the table array is sorted.
>   Rubric Item: 15b: Range 0-1
>
> - Build a VLOOKUP formula: Copy the VLOOKUP formula in column C and format the results as Percent Style with 2 decimals.
>   Rubric Item 15c: Range 0-1
>
> - Use order of precedence in a formula: Click Yes.
>   Rubric Item 16f: Range 0-1
>
> - Use of order of precedence and relative references in a formula: Edit the formula to multiply the results by cell C7 for the White Card fee.
>   Rubric Item 19d: Range 0-1
>
> Outcome #4 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: <u>Yes</u> |
|---|
| The standard of success for Outcome #4 was met (75% of students scored 75% or higher on practical exam). <br><br> o 87% (46 of 53 students) met all rubric items for Outcome #4 with a score of 100%. <br><br> o 13% (7 of 53 students) did not score higher than 75% on all rubric items for Outcome #4 <br><br> o Students performed very well on rubric item 16f where 52 of 53 (98%) scored 100%. <br><br> o Students performed well on rubric item 19d where 47 of 53 (89%) scored 100%. <br><br> o Students performed well on rubric items 15b and 15c where 46 of 53 (87%) scored 100%. |

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 #4 with 87% of students scoring 100% on all four outcome items. The ability to use simple formulas in business-oriented spreadsheets is the primary purpose of the Excel program. This outcome is a critical measurement of student understanding and application of the Excel program. The success achieved on Outcome #4 indicates the strength of the instructional delivery and materials. |

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 87% of students achieved 100% for Outcome #4, there are areas for improvement: <br><br> o Rubric Item: 15b, 15c - Build a VLOOKUP formula. <br><br> o Rubric Item 19d: Use of order of precedence and relative references in a formula. |

Outcome 5: Use page layout functions to create clear and readable spreadsheets.

- Assessment Plan
    - o Assessment Tool: Practical Test
    - o Assessment Date: Fall 2012

- o Course section(s)/other population: All sections
- o Number students to be assessed: Random sample of 33% of all students or a minimum of 24 students.
- o How the assessment will be scored: Answer Key
- o Standard of success to be used for this assessment: 75% of students will score 75% or higher on practical exam.
- 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 | 2022 | 2022 |

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

| # of students enrolled | # of students assessed |
|---|---|
| 160 | 53 |

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 33% of total students enrolled in the identified sections of BOS 184. The number of students assessed includes only student completers of BOS 184. 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.

BOS 184 is taught in a face-to-face (on-campus) and a Distance Learning (DL) format. The randomly selected sample includes only course completers to best assess each outcome. The student learning environment is not identified in this assessment; randomly selected students are identified only by number for assessment purposes.

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 3 Project 3 (Application Capstone Project 2 taken from course text, Excel 365 Complete, In Practice 2019, Nordell). This project requires students to complete a workbook by importing a text file, formatting data, filter and sort data, create a PivotTable, build a PivotChart, and insert a sunburst chart. 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:

- o Apply formats to cells in Sheet 1: Select cells A4:C60 and format the cells as an Excel table with Blue, Table Style Medium 2.
  Rubric Item 7a: Range 0-1

- o Apply formats to cells in Sheet 1: Select cell A1:A3 and set the font size to 14 pt.
  Rubric Item 7b: Range 0-1

- o Sort and filter data: Show the Total row for the table.
  Rubric Item 10c: Range 0-1

- o Complete borders: Select cell A4 and apply a Left Border.
  Rubric Item 17b: Range 0-1

- o Complete borders: Apply a Right Border to cell D4.
  Rubric Item 17c: Range 0-1

- o Use SUMPRODUCT to calculate fees by location: Format cells C15:F15 as Accounting Number Format with zero decimal places.
  Rubric Item 18f: Range 0-1

- o Use order of precedence and relative references in a formula: Format cells E22:E25 as Accounting Number Format with zero decimal places.
  Rubric Item 19f: Range 0-1

- o Use order of precedence and relative references in a formula: Select cells D7:G10 and ap ply Comma Style with zero decimal places.
  Rubric Item 19g: Range 0-1

Outcome #5 Project Total Points Possible = 8

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 scored 75% or higher on practical exam).<br><br>- o 94% (50 of 53 students) met all rubric items for Outcome #5 with a score of 100%.<br><br>- o 6% (3 of 53 students) did not score higher than 75% on all rubric items for Outcome #5 |

o   Students performed very well on rubric items 7a where 52 of 53 (98%) scored 100%.

o   Students performed very well on rubric items 18f and 19g where 51 of 53 (96%) scored 100%.

o   Students performed well on rubric item 17b where 50 of 53 (94%) scored 100%.

o   Students performed well on rubric items 7b and 17c where 49 of 53 (92%) scored 100%.

o   Students performed well on rubric items 10c and 19f where 48 of 53 (91%) scored 100%.

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

Students achieved high success on Outcome #5 with 94% of students meeting 100% of all eight rubric items. Using page layout functions to create clear and readable spreadsheets is a key skill as effective message design can boost or thwart results in a business setting.

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 94% of students achieved Outcome #5, three areas could be improved:

▪   Rubric Item 7b: Apply formats to cells.

▪   Rubric Item 10c: Sort and filter data.

▪   Rubric Item 17c: Complete borders.

Outcome 6: Demonstrate relative, mixed, and absolute addresses in formulas.

*   Assessment Plan

    o   Assessment Tool: Practical Test

    o   Assessment Date: Fall 2012

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

    o   Number students to be assessed: Random sample of 33% of all students or a minimum of 24 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) |
|---|---|---|
| 2022 | 2022 | 2022 |

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

| # of students enrolled | # of students assessed |
|---|---|
| 160 | 53 |

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 33% of total students enrolled in the identified sections of BOS 184. The number of students assessed includes only student completers of BOS 184. 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.

BOS 184 is taught in a face-to-face (on-campus) and a Distance Learning (DL) format. The randomly selected sample includes only course completers to best assess each outcome. The student learning environment is not identified in this assessment; randomly selected students are identified only by number for assessment purposes.

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 3 Project 3 (Application Capstone Project 2 taken from course text, Excel 365 Complete, In Practice 2019, Nordell). This project requires students to complete a workbook by importing a text file, formatting data, filter and sort data, create a PivotTable, build a PivotChart, and insert a sunburst chart. 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:

- o Name a cell range and insert a column: Select cells A2:B5 and name the range TaxRates. Note that the first column of data is sorted in ascending order.
  Rubric Item 14b: Range 0-1

- o Use order of precedence in a formula: Copy the formula to complete the data.
  Rubric Item 16g: Range 0-1

- o Use SUMPRODUCT to calculate fees by location: Copy the formula to cells D15:F15.
  Rubric Item 18e: Range 0-1

- o Use order of precedence and relative references in a formula: Copy the formula to cells E23:E25.
  Rubric Item 19e: Range 0-1

Outcome #6 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 #6 was met (75% of students scored 75% or higher on practical exam).

- o 96% (51 of 53 students) met all rubric items for Outcome #6 with a score of 100%.

- o 4% (2 of 53 students) did not score higher than 75% on all rubric items for Outcome #6

- o Students performed very well on rubric item 16g where 52 of 53 (98%) scored 100%.

- o Students performed very well on rubric item 14b where 50 of 53 (94%) scored 100%.

- o Students performed well on rubric item 19e where 45 of 53 (85%) scored 100%.

- o Students performed well on rubric item 18e where 44 of 53 (83%) scored 100%.

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

Students achieved excellent success on Outcome #6 with 96% of students scoring 100% on all 4 rubric items. Demonstrating understanding and application of relative, mixed, and absolute addresses in Excel formulas is 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 96% of students achieved Outcome #6, two areas could be improved:

- o Rubric Item 18e: Use SUMPRODUCT to calculate fees by location.
- o Rubric Item 19e: Use order of precedence and relative references in a formula.

## 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 184 is effectively supporting student learning, demonstrated through the successful design and development of a spreadsheets for business applications utilizing a variety of tools and features using Microsoft Excel. I believe BOS 184 is meeting the needs of students. For many students, this course represents a first introduction to spreadsheets. Each skill in the course builds upon a previous skill, requiring students to quickly gain and apply these new concepts. Based upon student feedback, while often challenging and sometimes frustrating, the projects result in a very positive emotion of achievement. As reflected in the data collected, all course outcomes were met and numerous 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 current number of outcomes to four. Proposed change:<br><br>1. Use Excel to create and edit workbooks.<br><br>2. Use Excel to create and edit formulas and functions.<br><br>3. Use Excel to create and edit charts.<br><br>4. Use Excel to format, organize, import and export data. | 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 improvements and future assessments to better reflect the current Excel application, industry expectations, and student needs. The proposed change will reduce the course outcomes from six to four. | 2023 |
| Objectives | Reduce current 14 course objectives to 12. Proposed changes:<br><br>1. Create, save, close, open, edit and print a workbook.<br>2. Build and edit simple formulas.<br>3. Work with function formulas.<br>4. Create, edit, and print charts.<br>5. Sort and filter data and apply conditional formatting.<br>6. Import and export various file formats.<br>7. Build and format a PivotTable. | The number and language of current Course Objectives (14) 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 fourteen to seven. | 2023 |
| Course Assignments | Outcome #1: | Finalizing the Excel workbook is a specific and new process for many | 2023 |

| | | | |
|---|---|---|---|
| | Rubric Item #20d: Finalize the workbook by setting page options and document properties.<br><br>Rubric Item #20e: Finalize the workbook by setting page options and document properties.<br><br>Provide additional resources/examples/practice. | students. Additional resources/examples/practice would likely prove helpful | |
| Course Assignments | Outcome #2:<br><br>Rubric Item #12b: Create and format a Clustered Column PivotChart.<br><br>Provide additional examples/videos/instructions for students on the course site to further illustrate and explain the PivotChart feature. | The suggested changes listed here are intended to enhance current instructional design and current course resources. | 2023 |
| Course Assignments | Outcome #3<br><br>Rubric Item #14d: Name a cell range and insert a column.<br><br>Additional supporting documents/information will be added to the student course site regarding naming cell ranges. | The suggested changes listed here are intended to enhance current instructional design and current course resources. | 2023 |
| Course Assignments | Outcome #4<br><br> Rubric Item: 15b, 15c - Build a VLOOKUP formula.<br><br>Additional supporting documents/information will be added to the student course site regarding VLOOKUP formulas. | The suggested changes listed here are intended to enhance current instructional design and current course resources. | 2023 |
| Course Assignments | Outcome #5 | The suggested changes listed here are intended to enhance current | 2023 |

| | | | |
|---|---|---|---|
| | Rubric Item 7b: Apply formats to cells.<br><br>Rubric Item 10c: Sort and filter data<br><br>Rubric Item 17c: Complete borders:<br><br>Additional supporting documents/information will be added to the student course site regarding formatting and sorting options. | instructional design and current course resources. | |
| Course Assignments | Outcome #6<br><br>Rubric Item #3: Insert formulas to add and average expenses.<br><br>Rubric Item #4: Create and customize a new table style.<br><br>Additional supporting documents/information will be added to the student course site regarding inserting formulas and customizing table styles. | The suggested changes listed here are intended to enhance current instructional design and current course resources. | 2023 |

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

> 6.

## III. Attached Files

[BOS 184 Assessment Data Spreadsheet](#)
[BOS 184 Capstone Project Instructions](#)
[BOS 184 Capstone Project Rubric](#)

**Faculty/Preparer:**      Joyce Jenkins **Date:** 03/21/2023
**Department Chair:**      Joyce Jenkins **Date:** 03/21/2023
**Dean:**      Eva Samulski **Date:** 03/22/2023
**Assessment Committee Chair:** Shawn Deron **Date:** 04/27/2023