

EASTERN ARIZONA COLLEGE

Electronic Spreadsheet with Microsoft Excel

Course Design
2016-2017

Course Information

Division Business
Course Number CMP 161
Title Electronic Spreadsheet with Microsoft Excel
Credits 3
Developed by Lydia Mata
Lecture/Lab Ratio 2 Lecture/2 Lab

Transfer Status

ASU	NAU	UA
Elective Credit	Elective Credit	Elective Credit

Activity Course No
CIP Code 11.0100
Assessment Mode Pre/Post Test (60 Questions/60 Points)
Semester Taught Fall and Spring
GE Category None
Separate Lab No
Awareness Course No
Intensive Writing Course No

Prerequisites

None

It is recommended that one introductory course in computers be completed prior to enrolling in this course.

Educational Value

The primary design of this course is to prepare students to take the Microsoft Office Specialist (MOS) Expert certification test. Additionally, this course covers beginning through advanced electronic spreadsheet techniques as the student becomes aware of the computer as a tool for performing calculations, accumulating, and storing information. Students will gain specific computer skills which will apply to business/financial areas.

Description

Comprehensive, practical applications and techniques using Microsoft Excel with hands-on experience in the computer laboratory. The beginning through advanced spreadsheet procedures taught will prepare the student to pass the Microsoft MOUS Expert Certification test. It is recommended that one introductory course in computers be completed prior to enrolling in this course.

Supplies

USB (Flash) drive is recommended.

Competencies and Performance Standards

1. Explain file management.

Learning objectives

What you will learn as you master the competency:

- a. Manage folders and files.
- b. Open the computer window.
- c. Create and save documents.
- d. Open the documents folder.
- e. Copy files.
- f. Open, edit, and print files.
- g. Move and rename files.
- h. Search for files.
- i. Delete and store files.

Performance Standards

Competence will be demonstrated:

- o through the successful completion of chapter tests and quizzes
- o by successfully completing the final exam

Criteria - Performance will be satisfactory when:

- o learner manages folders and files
- o learner opens the computer window
- o learner creates and saves documents
- o learner opens the documents folder
- o learner copies files
- o learner opens, edits, and prints files
- o learner moves and renames files
- o learner searches for files
- o learner deletes and stores files

2. Create documents using Microsoft Office.

Learning objectives

What you will learn as you master the competency:

- a. Navigate the Office Suite.
- b. Start and exit an Office program.
- c. View the Office user interface.
- d. Create and save a file.
- e. Open a file and save it with a new name.
- f. View and print work.
- g. Use Help and close a file.

Performance Standards

Competence will be demonstrated:

- o through the successful completion of a worksheet project

- o through the successful completion of chapter tests and quizzes
- o by successfully completing the final exam

Criteria - Performance will be satisfactory when:

- o learner navigates the Office Suite
- o learner starts and exits an Office program
- o learner views the Office user interface
- o learner creates and saves a file
- o learner opens a file and saves it with a new name
- o learner views and prints his/her work
- o learner uses Help and closes a file

3. Create documents using Excel.

Learning objectives

What you will learn as you master the competency:

- a. Navigate spreadsheet software.
- b. Tour the Excel window.
- c. Enter labels and values and use AutoSum.
- d. Edit cell entries.
- e. Enter and edit a simple formula.
- f. Switch worksheet views.
- g. Choose print options.

Performance Standards

Competence will be demonstrated:

- o through the successful completion of a worksheet project
- o through the successful completion of chapter tests and quizzes
- o by successfully completing the final exam

Criteria - Performance will be satisfactory when:

- o learner navigates spreadsheet software
- o learner tours the Excel window
- o learner enters labels and values and uses AutoSum
- o learner edits cell entries
- o learner enters and edits a simple formula
- o learner switches worksheet views
- o learner chooses print options

4. Work with formulas and functions.

Learning objectives

What you will learn as you master the competency:

- a. Create a complex formula.
- b. Insert a function.
- c. Type a function.

- d. Copy and move cell entries.
- e. Explain relative and absolute cell references.
- f. Copy formulas with relative cell references.
- g. Copy formulas with absolute cell references.
- h. Round a value with a function.

Performance Standards

Competence will be demonstrated:

- o through the successful completion of a worksheet project
- o through the successful completion of chapter tests and quizzes
- o by successfully completing the final exam

Criteria - Performance will be satisfactory when:

- o learner creates a complex formula
- o learner inserts a function
- o learner types a function
- o learner copies and moves cell entries
- o learner explains relative and absolute cell references
- o learner copies formulas with relative cell references
- o learner copies formulas with absolute cell references
- o learner rounds a value with a function

5. Format a worksheet.

Learning objectives

What you will learn as you master the competency:

- a. Format values.
- b. Change font and font size.
- c. Change attributes and alignment.
- d. Adjust column width.
- e. Insert and delete rows and columns.
- f. Apply colors, patterns, and borders.
- g. Apply conditional formatting.
- h. Name and move a sheet.
- i. Check spelling.

Performance Standards

Competence will be demonstrated:

- o through the successful completion of a worksheet project
- o through the successful completion of chapter tests and quizzes
- o by successfully completing the final exam

Criteria - Performance will be satisfactory when:

- o learner formats values
- o learner changes font and font size
- o learner changes attributes and alignment

- o learner adjusts column width
- o learner inserts and deletes rows and columns
- o learner applies colors, patterns, and borders
- o learner applies conditional formatting
- o learner names and moves a sheet
- o learner checks spelling

6. Create, manipulate, and format charts.

Learning objectives

What you will learn as you master the competency:

- a. Plan a chart.
- b. Create a chart.
- c. Move and resize a chart.
- d. Change the chart design.
- e. Change the chart layout.
- f. Format a chart.
- g. Annotate and draw on a chart.
- h. Create a pie chart.

Performance Standards

Competence will be demonstrated:

- o through the successful completion of a worksheet project
- o through the successful completion of chapter tests and quizzes
- o by successfully completing the final exam

Criteria - Performance will be satisfactory when:

- o learner plans a chart
- o learner creates a chart
- o learner moves and resizes a chart
- o learner changes the chart design
- o learner changes the chart layout
- o learner formats a chart
- o learner annotates and draws on a chart
- o learner creates a pie chart

7. Analyze data using formulas.

Learning objectives

What you will learn as you master the competency:

- a. Format data using text functions.
- b. Sum a data range based on conditions.
- c. Consolidate data using a formula.
- d. Check formulas for errors.
- e. Construct formulas using named ranges.

- f. Build a logical formula with the IF function.
- g. Build a logical formula with the AND function.
- h. Calculate payments with the PMT function.

Performance Standards

Competence will be demonstrated:

- o through the successful completion of a worksheet project
- o through the successful completion of chapter tests and quizzes
- o by successfully completing the final exam

Criteria - Performance will be satisfactory when:

- o learner formats data using text functions
- o learner sums a data range based on conditions
- o learner consolidates data using a formula
- o learner checks formulas for errors
- o learner constructs formulas using named ranges
- o learner builds a logical formula with the IF function
- o learner builds a logical formula with the AND function
- o learner calculates payment with the PMT function

8. Manage workbook data.

Learning objectives

What you will learn as you master the competency:

- a. View and arrange worksheets.
- b. Protect worksheets and workbooks.
- c. Save custom views of a worksheet.
- d. Add a worksheet background.
- e. Prepare a workbook for distribution.
- f. Insert hyperlinks.
- g. Save a workbook for distribution.
- h. Group worksheets.

Performance Standards

Competence will be demonstrated:

- o through the successful completion of a worksheet project
- o through the successful completion of chapter tests and quizzes
- o by successfully completing the final exam

Criteria - Performance will be satisfactory when:

- o learner views and arranges worksheets
- o learner protects worksheets and workbooks
- o learner saves custom views of a worksheet
- o learner adds a worksheet background
- o learner prepares a workbook for distribution
- o learner inserts hyperlinks

- o learner saves a workbook for distribution
- o learner groups worksheets

9. Analyze and manipulate data in a table structure.

Learning objectives

What you will learn as you master the competency:

- a. Plan a table.
- b. Create a table.
- c. Add table data.
- d. Find and replace table data.
- e. Delete table data.
- f. Sort table data.
- g. Use formulas in a table.
- h. Print a table.

Performance Standards

Competence will be demonstrated:

- o through the successful completion of a worksheet project
- o through the successful completion of chapter tests and quizzes
- o by successfully completing the final exam

Criteria - Performance will be satisfactory when:

- o learner plans a table
- o learner creates a table
- o learner adds table data
- o learner finds and replaces table data
- o learner deletes table data
- o learner sorts table data
- o learner uses formulas in a table
- o learner prints a table

10. Analyze table data.

Learning objectives

What you will learn as you master the competency:

- a. Filter a table.
- b. Create a custom filter.
- c. Filter a table with Advanced Filter.
- d. Extract table data.
- e. Look up values in a table.
- f. Summarize table data.
- g. Validate table data.
- h. Create subtotals.

Performance Standards

Competence will be demonstrated:

- through the successful completion of a worksheet project
- through the successful completion of chapter tests and quizzes
- by successfully completing the final exam

Criteria - Performance will be satisfactory when:

- learner filters a table
- learner creates a custom filter
- learner filters a table with Advanced Filter
- learner extracts table data
- learner looks up values in a table
- learner summarizes table data
- learner validates table data
- learner creates subtotals

11. Automate worksheet tasks.**Learning objectives**

What you will learn as you master the competency:

- a. Plan a macro.
- b. Enable a macro.
- c. Record a macro.
- d. Run a macro.
- e. Edit a macro.
- f. Use shortcut keys with macros.
- g. Use the Personal Macro Workbook.
- h. Assign a macro to a button.

Performance Standards

Competence will be demonstrated:

- through the successful completion of a worksheet project
- through the successful completion of chapter tests and quizzes
- by successfully completing the final exam

Criteria - Performance will be satisfactory when:

- learner plans a macro
- learner enables a macro
- learner records a macro
- learner runs a macro
- learner edits a macro
- learner uses shortcut keys with macros
- learner uses the Personal Macro Workbook
- learner assigns a macro to a button

12. Enhance charts.

Learning objectives

What you will learn as you master the competency:

- a. Customize data series.
- b. Change a data source and add data labels.
- c. Format the axes of a chart.
- d. Add a data table to a chart.
- e. Rotate a chart.
- f. Enhance a chart with WordArt.
- g. Add a picture to a chart.
- h. Identify data trends.

Performance Standards

Competence will be demonstrated:

- through the successful completion of a worksheet project
- through the successful completion of chapter tests and quizzes
- by successfully completing the final exam

Criteria - Performance will be satisfactory when:

- learner customizes data series
- learner changes a data source and adds data labels
- learner formats the axes of a chart
- learner adds a data table to a chart
- learner rotates a chart
- learner enhances a chart with WordArt
- learner adds a picture to a chart
- learner identifies data trends

13. Perform what-if analysis.

Learning objectives

What you will learn as you master the competency:

- a. Define a what-if analysis.
- b. Track a what-if analysis with Scenario Manager.
- c. Generate a scenario summary.
- d. Project figures using a data table.
- e. Use Goal Seek.
- f. Set up a complex what-if analysis with Solver.
- g. Run Solver and summarize the results.
- h. Analyze data using the Analysis ToolPak.

Performance Standards

Competence will be demonstrated:

- through the successful completion of a worksheet project
- through the successful completion of chapter tests and quizzes

- by successfully completing the final exam

Criteria - Performance will be satisfactory when:

- learner defines a what-if analysis
- learner tracks a what-if analysis with Scenario Manager
- learner generates a scenario summary
- learner projects figures using a data table
- learner uses Goal Seek
- learner sets up a complex what-if analysis with Solver
- learner runs Solver and summarizes the results
- learner analyzes data using the Analysis ToolPak

14. Analyze data with PivotTables.

Learning objectives

What you will learn as you master the competency:

- Plan and design a PivotTable report.
- Create a PivotTable report.
- Change a PivotTable's summary function and design.
- Filter and sort PivotTable data.
- Update a PivotTable report.
- Change the structure and format of a PivotTable report.
- Create a PivotChart report.
- Use the GETPIVOTDATA function.

Performance Standards

Competence will be demonstrated:

- through the successful completion of a worksheet project
- through the successful completion of chapter tests and quizzes
- by successfully completing the final exam

Criteria - Performance will be satisfactory when:

- learner plans and designs a PivotTable report
- learner creates a PivotTable report
- learner changes a PivotTable's summary function and design
- learner filters and sorts PivotTable data
- learner updates a PivotTable report
- learner changes the structure and format of a PivotTable report
- learner creates a PivotChart report
- learner uses the GETPIVOTDATA function

15. Exchange data with other programs.

Learning objectives

What you will learn as you master the competency:

- Plan a data exchange.

- b. Import a text file.
- c. Import a database table.
- d. Insert a graphic file in a worksheet.
- e. Embed a workbook in a Word document.
- f. Link a workbook to a Word document.
- g. Link an Excel chart to a PowerPoint slide.
- h. Import a table into Access.

Performance Standards

Competence will be demonstrated:

- o through the successful completion of a worksheet project
- o through the successful completion of chapter tests and quizzes
- o by successfully completing the final exam

Criteria - Performance will be satisfactory when:

- o learner plans a data exchange
- o learner imports a text file
- o learner imports a database table
- o learner inserts a graphic file in a worksheet
- o learner embeds a workbook in a Word document
- o learner links a workbook to a Word document
- o learner links an Excel chart to a PowerPoint slide
- o learner imports a table into Access

16. Share Excel files and incorporate Web information.

Learning objectives

What you will learn as you master the competency:

- a. Share Excel files.
- b. Set up a shared workbook for multiple users.
- c. Track revisions in a shared workbook.
- d. Apply and modify passwords.
- e. Work with XML schemas.
- f. Import and export XML data.
- g. Run Web queries to retrieve external data.
- h. Import and export HTML data.

Performance Standards

Competence will be demonstrated:

- o through the successful completion of a worksheet project
- o through the successful completion of chapter tests and quizzes
- o by successfully completing the final exam

Criteria - Performance will be satisfactory when:

- o learner shares Excel files
- o learner sets up a shared workbook for multiple users

- learner tracks revisions in a shared workbook
- learner applies and modifies passwords
- learner works with XML schemas
- learner imports and exports XML data
- learner runs Web queries to retrieve external data
- learner imports and exports HTML data

17. Customize Excel and apply advanced worksheet management techniques.

Learning objectives

What you will learn as you master the competency:

- a. Audit a worksheet.
- b. Control worksheet calculations.
- c. Group worksheet data.
- d. Use cell comments.
- e. Create custom AutoFill lists.
- f. Customize Excel workbooks.
- g. Customize Excel options.
- h. Create a template.

Performance Standards

Competence will be demonstrated:

- through the successful completion of a worksheet project
- through the successful completion of chapter tests and quizzes
- by successfully completing the final exam

Criteria - Performance will be satisfactory when:

- learner audits a worksheet
- learner controls worksheet calculations
- learner groups worksheet data
- learner uses cell comments
- learner creates custom AutoFill lists
- learner customizes Excel workbooks
- learner customizes Excel options
- learner creates a template

18. Program with Excel.

Learning objectives

What you will learn as you master the competency:

- a. View VBA code.
- b. Analyze VBA code.
- c. Write VBA code.
- d. Add a conditional statement.
- e. Prompt the user for data.

- f. Debug a macro.
- g. Create a main procedure.
- h. Run a main procedure.

Performance Standards

Competence will be demonstrated:

- o through the successful completion of a worksheet project
- o through the successful completion of chapter tests and quizzes
- o by successfully completing the final exam

Criteria - Performance will be satisfactory when:

- o learner views VBA code
- o learner analyzes VBA code
- o learner writes VBA code
- o learner adds a conditional statement
- o learner prompts the user for data
- o learner debugs a macro
- o learner creates a main procedure
- o learner runs a main procedure

Types of Instruction

Lecture/Demonstration/Hands-on Projects

Grading Information

Grading Rationale

Grades will be weighted in the following way:

Assignments/Projects = 50%

Exams = 20%

Quizzes = 30%

The final exam will count as the post-test and will represent 10% of the final grade.

Grading Scale

- A 90% - 100%
- B 80%-89%
- C 70%-79%
- D 60%-69%
- F Below 60%