

BT-1700: BUSINESS SPREADSHEETS (EXCEL)

Cuyahoga Community College

Viewing: BT-1700 : Business Spreadsheets (Excel)

Board of Trustees:

10/26/2023

Academic Term:

Fall 2024

Subject Code

BT - Business Technology

Course Number:

1700

Title:

Business Spreadsheets (Excel)

Catalog Description:

Study of business spreadsheet concepts. Spreadsheet theory, design, manipulation, and implementation techniques. Hands-on applications, case studies and problem-solving strategies using spreadsheet software for accurate and timely analysis, manipulation, and interpretation of data. Overview of formulas, functions, formatting, sorts/filters, charts, Excel tables/subtotals, PivotTables and What-If Analysis tools.

Credit Hour(s):

3

Lecture Hour(s):

2

Lab Hour(s):

2

Requisites

Prerequisite and Corequisite

IT-1090 Computer Applications, or concurrent enrollment; or IT-109H Computer Applications, or concurrent enrollment; or department approval.

Outcomes

Course Outcome(s):

Apply basic knowledge of spreadsheets when working in a professional environment.

Objective(s):

1. Communicate using the terminology associated with the utilization of electronic spreadsheet software.
2. Identify the primary purposes and functions of electronic spreadsheet software.
3. Utilize the Help System of an electronic spreadsheet application.
4. Navigate within an electronic workbook and associated worksheets.

Course Outcome(s):

Demonstrate proficiency in creating and modifying a workbook.

Objective(s):

1. Utilize file protection, cell protection, and data entry validation techniques.
2. Produce new worksheets from existing templates, themes, and styles.
3. Create and use new templates.
4. Copy and move cell entries.

Course Outcome(s):

Utilize predefined functions for statistical, financial, logical, mathematical, and date and time analysis.

Objective(s):

1. Implement proper function syntax.
2. Determine the appropriate function for analysis of data.
3. Apply functions within cells by various techniques.

Course Outcome(s):

Format numeric and non-numeric worksheet components to produce professional looking, finished spreadsheets, reports, templates, and charts.

Objective(s):

1. Implement formatting techniques from the Office ribbon.
2. Implement formatting techniques from dialog boxes.
3. Implement styles.

Course Outcome(s):

Create professional charts.

Objective(s):

1. Decide which chart type and subtype best represents specific data.
2. Modify existing charts.
3. Print charts.
4. Copy charts to other applications.
5. Apply charting options.

Course Outcome(s):

Analyze data by applying spreadsheet data analysis tools.

Objective(s):

1. Implement sorts and filters.
2. Create subtotals.
3. Create PivotTables.
4. Modify existing PivotTables.
5. Create PivotCharts.
6. Modify existing PivotCharts.
7. Use What-If Analysis Tools to develop data projections on a given scenario.

Methods of Evaluation:

1. Hands-on assessments
2. Exams/Tests (written/hands-on)
3. Objective examinations
4. Class discussion forums
5. Comprehensive lab projects

Course Content Outline:

1. Overview of electronic spreadsheet software features, terminology and applications
 - a. Terminology
 - b. Primary purposes and functions
 - c. Plan a workbook and worksheet design
2. Entering data, editing, saving, and printing a basic worksheet
 - a. Various methods to edit content in cells
 - b. Editing formulas in the formula bar
 - c. Overview of the print preview
 - d. Set margins
 - e. Create headers and footers
 - f. Select sheet options
3. Formatting cells with commands and options
 - a. Ribbon options
 - b. Format cells dialog box options
4. Copying, moving, and pasting techniques
 - a. Copying, pasting, and moving content within the same worksheet
 - b. Copying, pasting, and moving content into other worksheets
5. Inserting and deleting rows and columns
6. Creation of simple formulas
 - a. Create and copy formulas
 - i. Point to create a formula
 - ii. Copy formulas with the fill handle
7. Mathematical operations
 - a. Mathematical operations: addition, subtraction, multiplication, division
 - b. Use symbols (=,-,+,*,/).^)
8. Creation of complex formulas
 - a. Implementing multiple mathematical operations
 - b. Order of precedence to perform calculations
9. Cell reference types
 - a. Relative
 - b. Absolute
 - c. Mixed
10. Manipulation of large spreadsheets
 - a. View options
 - b. Navigation options
 - c. Freeze rows and columns
 - d. Hide and unhide rows, columns, and worksheets
 - e. Printing large worksheets
 - i. Manage page breaks
 - ii. Change page orientation
 - iii. Print a selection
 - iv. Control print page order
11. Spreadsheet keyboard shortcuts
 - a. Function keys
 - b. Keyboard combinations
12. Defined names
 - a. Creation of defined names
 - b. Implementation of defined names in formulas
13. Overview of basic functions
 - a. Predefined functions
 - i. SUM
 - ii. AVERAGE
 - iii. MIN
 - iv. MAX
 - v. COUNT
 - vi. COUNTA
 - vii. MEDIAN
14. Introduction to logical functions

- a. OR function syntax
- 15. Introduction to financial functions
 - a. PMT function
- 16. Introduction to lookup functions
 - a. Vlookup
 - b. Hlookup, Lookup, XLookup
- 17. Charting types, subtypes, and customization
 - a. Column charts
 - b. Bar charts
 - c. Pie charts
 - d. Line charts
 - e. Other charts: doughnut, scatter (XY), stock
 - f. Pivot table charts
 - g. Modifying charts
 - i. Adding data labels
 - ii. Change the fill color for chart elements
 - h. Embedding charts
 - i. Printing charts
- 18. Spreadsheet tables
 - a. Excel data tables
 - b. Basic table management
 - i. Create and use tables
 - ii. Add, edit, or delete records and fields
 - iii. Use find and replace
 - iv. Format the table
 - c. Sorting data
 - i. Sorting in ascending or descending order
 - ii. Perform a multiple level sort
 - d. Filtering and totaling data
 - i. Use auto filters
 - ii. Use multiple auto filters
 - iii. Insert column totals
 - e. Create a summary report with a chart
- 19. Conditional formatting
 - a. Create conditional formatting rules
 - b. Use advanced formatting
 - c. Use formulas in conditional formatting
- 20. Subtotals
 - a. Grouping and subtotaling data
 - i. Group and ungroup data
 - ii. Subtotal data
 - b. PivotTables & PivotCharts
 - i. Creating and deleting pivot tables and PivotCharts
 - ii. Format the pivot table
 - iii. Sort and filter the pivot table
 - iv. Subtotal the pivot table
 - v. Refresh the pivot table and pivot chart
- 21. What-If Analysis tools
 - a. Goal seek
 - b. One and two-variable data tables
 - c. Scenario manager
 - d. Solver

Resources

Mary Ann Poatsy. *Exploring Microsoft 365 Excel 2021*. 1st. Boston:Pearson, 2023.

Patrick Carey. *New Perspectives Collection, Microsoft 365 & Excel 2021*. 1st ed. Boston: Cengage Publishing, 2023.

Elizabeth Eisner Reding, Lynn Wemers. *Illustrated Microsoft Office 365 & Excel 2019: Intermediate*. 1st ed. Boston: Cengage Publishing, 2019.

Resources Other

Microsoft Office Specialist (MOS) 2019 Excel Core
Microsoft Office Specialist (MOS) 365 Excel Associate

Top of page
Key: 4575