Computer Information Systems (CIS) 1703 Introduction to Spreadsheets—Microsoft Excel (1.5 Units) CSU

Advisory: Eligibility for English 1000 and Reading 1005 strongly recommended

Hours and Units Calculations:
16 hours lecture (32 Outside of class hours) 24 hours lab (72 Total Student Learning Hours) 1.5 Units

Catalog Description: This course is an introduction to spreadsheets in the Microsoft Windows environment. This course will cover the operation and features of Microsoft Excel to solve common problems in a business environment.

Type of Class/Course: Degree credit

Text: Wilson, Rob. *Shelly Cashman Series Microsoft Office 365 2025 & Excel Comprehensive.* 1st ed. Cengage Learning, 2025.

Course Objectives:

By the end of the course, a successful student will be able to utilize Excel to complete the following tasks with a high degree of accuracy and efficiency:

1.   enter, edit, move, and copy cell contents including text, numbers, and formulas,
2.   apply and modify cell formats,
3.   modify row and column settings and formats,
4.   apply styles,
5.   modify page setup options for worksheets,
6.   preview and print worksheets and workbooks,
7.   create and modify formulas,
8.   use absolute cell references in formulas,
9.   use 3-D references in formulas,
10.   use statistical, date and time, financial, table, logical, and database functions,
11.   create, modify, and print charts,
12.   create, modify, and position graphics,
13.   add, delete, and rearrange sheets in a workbook,
14.   add a hyperlink to a worksheet element,
15.   create a worksheet database,
16.   sort and filter database tables, and
17.   create and apply a template.

Course Scope, Content

Unit I   Creating a Worksheet and Chart

           A.   Describe the Excel worksheet
           B.   Enter text and numbers
           C.   Use the Sum function to sum a range of cells
           D.   Copy a cell using the fill handle
           E.   Apply cell styles
           F.   Format a worksheet
           G.   Create a chart
           H.   Change a worksheet name and tab color
           I.   Change document properties
           J.   Preview and print a worksheet
           K.   Correct worksheet errors
           L.   Use Microsoft Office Help

Unit II   Formulas, Functions, and Formatting

           A.   Use Flash Fill
           B.   Enter formulas using the
                        keyboard and Point mode
           C.   Apply the AVERAGE, MAX,
                        and MIN functions
           D.   Apply a theme to a workbook
           E.   Apply a date format
            F.   Apply conditional formatting
            G.   Modify column widths and row
                        heights
           H.   Set margins, headers, and footers
                        in Page Layout View
           I.   Check the spelling on a
                        worksheet

Unit III   Working with Large Worksheets, Charting, and What-If Analysis

           A.   Rotate text in a cell
           B.   Create a series
            C.   Copy, paste, insert, and delete cells
            D.   Format numbers using format symbols
            E.   Display and format the system date
            F.   Use absolute and mixed cell references in formulas
            G.   Use the IF function
            H.   Create Sparkline charts
            I.   Change sparkline chart types and styles
            J.   Use the Format Painter button to format cells
            K.   Create charts on separate sheets
            L.   Use chart filters to display a subset of data in a chart
           M.   Change the chart type and style
            N.   Rearrange worksheet tabs
           O.   Answer what-if questions
            P.   Goal seek to answer what-if questions

Q.   Use Smart Lookup
R.   Understand accessibility features

Unit IV   Financial Functions, Data Tables, and Amortization Schedules

A.   Assign a name to a cell and use the cell name in formulas
B.   Use the financial functions PMT (payment), PV (present value), and FV (future value)
C.   Create a data table to analyze data in a worksheet
D.   Create an amortization schedule
E.   Control the color and thickness of outlines and borders
F.   Add a pointer to a data table
G.   Analyze worksheet data by changing values
H.   Use range names and print sections of a worksheet
I.   Set print options
J.   Protect and unprotect cells in a worksheet
K.   Hide and unhide worksheets and workbooks
L.   Use the formula checking features of Excel

Unit V   Working with Multiple Worksheets and Workbooks

A.   Format a consolidated worksheet
B.   Fill using a linear series
C.   Use date, time, and rounding functions
D.   Apply a custom format code
E.   Create a new cell style
F.   Copy a worksheet
G.   Drill to add data to multiple worksheets at the same time
H.   Select and deselect sheet combinations
I.   Enter formulas that use 3-D cell references
J.   Use the Paste gallery
K.   Format a 3-D pie chart with an exploded slice and lead lines
L.   Save individual worksheets as separate workbook files
M.   View and hide multiple workbooks
N.   Consolidate data by linking separate workbooks

Unit VI   Creating, Sorting, and Querying a Table

A.   Create and manipulate a table
B.   Delete duplicate records
C.   Add calculated columns to a table
D.   Use icon sets with conditional formatting
E.   Use the VLOOKUP function
         Insert a total row
F.   Sort a table on one field or multiple fields
         Sort, query, and search a table using AutoFilter
G.   Remove filters
H.   Create criteria and extract ranges

I.   Apply database and statistical functions
J.   Use the MATCH and INDEX functions to look up a value in a table
K.   Display automatic subtotals
L.   Use Group and Outline features to hide and unhide data
M.   Create a treemap chart

Unit VII   Creating Templates, Importing Data, and Working with SmartArt, Images, and Screenshots

A.   Create and use a template
B.   Import data from a text file, an Access database, a Web page, and a Word document
C.   Use text functions
D.   Paste values and paste text
E.   Transpose data while pasting it
F.   Convert text to columns
G.   Replicate formulas
H.   Use the Quick Analysis gallery
I.   Use Find and Replace commands
J.   Insert and format a bar chart
K.   Insert and modify a SmartArt graphic
L.   Add pictures to a SmartArt graphic
M.   Apply text effects
N.   Insert a hyperlinked screen shot
O.   Use ALT text
P.   Differentiate ways to link and embed

Course Scope and Content:(Laboratory)

Unit I   Creating a Worksheet and Chart

A.   Design and create an Excel worksheet
B.   Format worksheet elements using cell styles
C.   Format numeric entries using buttons on the Home tab
D.   Create an embedded chart
E.   Change the worksheet name and tab color
F.   Change document properties
G.   Preview and print a worksheet
H.   Correct worksheet errors

Unit II   Formulas, Functions, and Formatting

A.   Design and create an Excel worksheet
B.   Enter worksheet formulas using the keyboard and Point mode
C.   Apply the AVERAGE, MAX, and MIN functions
D.   Apply a theme to a workbook
E.   Add borders to worksheet elements
F.   Apply conditional formatting
G.   Modify column widths and row heights
H.   Set margins, headers, and footers in Page Layout View

Unit III   Working with Large Worksheets, Charting, and What-If Analysis
- A.   Design and create an Excel worksheet
- B.   Rotate text in a cell when entering column titles
- C.   Use the fill handle to create a series
- D.   Use format symbols when entering assumptions
- E.   Display and format the system date
- F.   Use absolute and mixed cell references in formulas
- G.   Use the IF function
- H.   Insert a Sparkline Column chart
- I.   Apply background shading and borders
- J.   Create charts on separate sheets
- K.   Rearrange and color worksheet tabs

Unit IV   Financial Functions, Data Tables, and Amortization Schedules

- A.   Design and create amortization schedule and retirement savings worksheets
- B.   Add colored borders to the worksheets
- C.   Assign cell names and use the cell names when entering formulas
- D.   Use the financial functions PMT (payment) and FV (future value)
- E.   Create a data table to analyze data in the retirement savings worksheet
- F.   Add a pointer to a data table using conditional formatting
- G.   Analyze worksheet data by changing values
- H.   Protect and unprotect worksheet ranges
- I.   Hide and unhide cell gridlines, rows, columns sheets, and workbooks

Unit V   Working with Multiple Worksheets and Workbooks

- A.   Use a master sheet to create a multiple-sheet workbook
- B.   Add a worksheet to a workbook
- C.   Create and apply custom format codes
- D.   Define, apply, and remove a style
- E.   Use the ROUND, SUM, and AVERAGE functions
- F.   Create formulas using 3-D cell references
- G.   Add data to multiple worksheets at the same time
- H.   Add a header or footer, modify margins, and insert a page break

Unit VI   Creating, Sorting, and Querying a Table

- A.   Create an Excel worksheet designed to be used as a database table
- B.   Delete workbook sheets
- C.   Use icon sets with conditional formatting
- D.   Use the VLOOKUP function
- E.   Add and delete records and change field values in a table
- F.   Perform single and multiple sorts on records in a table
- G.   Perform several queries on a table
- H.   Create criteria and extract ranges
- I.   Apply database functions, the SUMIF function, and the COUNTIF function
- J.   Display automatic subtotals

K.   Use Group and Outline features to hide and unhide data

Unit VII   Creating Templates, Importing Data, and Working with SmartArt, Images, and Screen Shots

A.   Create and use a template
B.   Import data from a text file, an Access database, a Web page, and a Word document
C.   Use text functions
D.   Paste values and text
E.   Transpose data while pasting it
F.   Convert text to columns
G.   Replicate formulas
H.   Insert and format a bar chart
I.   Insert and modify a SmartArt graphic
J.   Add pictures and icons to a SmartArt graphic
K.   Insert a hyperlinked screen shot
L.   Use ALT text

Learning Activities Required Outside of Class:

The students in this class will spend a minimum of 2 hours per week outside of the regular class time doing the following:

1.   completing assigned reading in the textbook and online course materials,
2.   completing lab activities,
3.   answering assigned questions, and
4.   participating in discussion activities.

Methods of Instruction:

1.   Lecture, demonstration, class discussion, and problem solving.
2.   Assigned reading from the textbook and online course materials.
3.   Assigned hands-on lab activities.
4.   Assigned independent final project.

Methods of Evaluation:

1.   Computational or non-computational problem-solving demonstrations, including:
    a.   Demonstrated ability to use Microsoft Excel through satisfactory completion of lab activities
2.   Other examinations, including:
    a.   Demonstrated ability to use software tools

3.   Evaluation of discussion activities.

Supplemental Data:

TOP Code:	0514.00: Office Technology/Office Computer Applications

SAM Priority Code:	C: Clearly Occupational
Distance Education:	Online; Offline
Funding Agency:	Y: Not Applicable(funds not used)
Program Status:	1: Program Applicable
Noncredit Category:	Y: Not Applicable, Credit Course
Special Class Status:	N: Course is not a special class
Basic Skills Status:	N: Course is not a basic skills course
Prior to College Level:	Y: Not applicable
Cooperative Work Experience:	N: Is not part of a cooperative work experience education program
Eligible for Credit by Exam:	E: Credit By Exam
Eligible for Pass/No Pass:	C: Pass/No Pass
Taft College General Education:	NONE
Discipline:	Office Technologies