

School of Computing and Information Sciences

Course Title: Computer Data Analysis

Date: August 3, 2018

Course Number: CGS-2518

Number of Credits: 3

Subject Area: Service Course

Subject Area Coordinator: Jill Weiss
email: jweiss@cis.fiu.edu

Catalog Description: A hands-on study of how to use a modern spreadsheet program to analyze data, including how to perform queries, summarize data, and solve equations. For non-technical students. Not acceptable for CS students.

Textbook:

Parsons, Oja, Ageloff, Carey, DesJardins, New Perspectives on Microsoft Excel 2013: Introductory, 1st Ed (978-1-285-16936-1) or New Perspectives Microsoft Office 365 & Excel 2016: Comprehensive, 1st Ed (978-1-337-01706-0)

Prerequisite Courses: None

Corequisites Courses: None

Type: General Elective

Prerequisite Topics: (none)

Course Outcomes:

- O1. Identify the common interface components of all Microsoft Office programs
- O2. Work with Excel formulas, functions, tables, and lists
- O3. Create charts and graphics in Excel
- O4. Work with multiple worksheets and workbooks
- O5. Import and export data to and from Excel
- O6. Perform financial analysis on data

Outline

Topic	Number of Lecture Hours	Outcome
1. Getting Started with Excel 2013 What is Excel Used for Using the menu system The Quick Access Toolbar The structure of a worksheet or workbook Using the Formula bar Using the Status bar Navigation and mouse pointers Shortcut menus and the Mini toolbar Using the built-in help Creating new files	2	O1
2. Entering Data Exploring data entry and editing techniques Entering data with AutoFill Working with dates and times Using Undo and Redo Adding comments Using Save or Save As	2	O2
3. Creating Formulas and Functions Creating simple formulas: Totals and averages Copying a formula for adjacent cells Calculating year-to-date profits Creating a percentage-increase formula Working with relative, absolute, and mixed references Using SUM and AVERAGE Using other common functions	3	O2, O6
4. Formatting Exploring font styles and effects Adjusting row heights and column widths Working with alignment and Wrap Text Designing borders Exploring numeric and special formatting Formatting numbers and dates Conditional formatting Creating and using tables Inserting shapes, arrows, and other visual elements	2	O2
5. Adjusting Worksheet Layout and Data Inserting and deleting rows and columns Hiding and unhiding rows and columns Moving, copying, and inserting data Finding and replacing data	2	O4
6. Printing Exploring the Page Layout tab and view Previewing page breaks Working with Page Setup and Printing controls	1	O1

<p>7. Introduction to Charting</p> <ul style="list-style-type: none"> Creating charts Exploring chart types Formatting charts Working with axes, labels, gridlines, and other chart elements Creating in-cell charts with sparklines 	5	O3
<p>8. Adjusting Worksheet Views</p> <ul style="list-style-type: none"> Freezing and unfreezing panes Splitting screens horizontally and vertically Showing necessary information with the outlining feature 	2	O4
<p>9. Multiple Worksheets and Workbooks</p> <ul style="list-style-type: none"> Displaying multiple worksheets and workbooks Renaming, inserting, and deleting sheets Moving, copying, and grouping sheets Using formulas to link worksheets and workbooks Locating and maintaining links 	2	O4
<p>10. IF, VLOOKUP, and Power Functions</p> <ul style="list-style-type: none"> Using IF functions and relational operators Getting approximate table data with the VLOOKUP function Getting exact table data with the VLOOKUP function Using the COUNTIF family of functions 	6	O2,O6
<p>11. Security and Sharing</p> <ul style="list-style-type: none"> Unlocking cells and protecting worksheets Protecting workbooks Assigning passwords to workbooks Sharing workbooks Tracking changes 	1	O1
<p>12. Database Features</p> <ul style="list-style-type: none"> Sorting data Inserting subtotals in a sorted list Using filters Splitting data into multiple columns Removing duplicate records 	3	O5,O6
<p>13. Pivot Tables</p> <ul style="list-style-type: none"> Creating PivotTables Manipulating PivotTable data Grouping by date and time Grouping by other factors Using slicers to clarify and manipulate fields Using PivotCharts 	3	O5
<p>14. Data Analysis Tools</p> <ul style="list-style-type: none"> Using Goal seek Using Solver Using Scenario Manager Using Data Tables 	2	O6

Course Outcomes Emphasized in Laboratory Projects / Assignments

Projects and assignments will interactive lessons presented by students, as well as programming, projects done individually and collaboratively. Teaching demonstrations should be completed in a laboratory environment that includes short lectures by the instructor.

- O1. Identify the common interface components of all Microsoft Office programs
- O2. Work with Excel formulas, functions, tables, and lists
- O3. Create charts and graphics in Excel
- O4. Work with multiple worksheets and workbooks
- O5. Import and export data to and from Excel
- O6. Perform financial analysis on data

Outcome	
O1	Identify the common interface components of all Microsoft Office programs
O2	Students will create Excel spreadsheets that use Excel formulas, functions, tables, and lists
O3	Students will create charts and graphics in Excel
O4	Students will work with multiple worksheets and workbooks
O5	Students will import and export data to and from Excel
O6	Students will perform financial analysis on data

Oral and Written Communication:

- N/A

Theoretical Contents:

- N/A

Problem Analysis Experiences:

- Weekly tutorial labs and worksheets

Solution Design Experiences:

- Weekly tutorial labs and worksheets