

COURSE OUTLINE

CMSY-117

Advanced Spreadsheets

1 Credit

HOWARD COMMUNITY COLLEGE

Description

After successful completion of this course, the student will be able to use Microsoft® Excel to apply advanced formatting techniques and functions, perform what-if analysis, create PivotTables, use custom and advanced filters, and audit worksheets. This course may be completed in fewer than 14 weeks and may be started at any time during the school year. All of the work (except tests) may be done outside of class if student has compatible software. Prerequisite: CMSY-101.

Overall Course Objectives

Upon completion of this course, the student will be able to:

1. Retrieve records using AutoFilter and custom filter.
2. Insert automatic subtotals, use lookup functions to locate list entries, and apply database functions to summarize list data that meets specific criteria.
3. Use advanced financial, statistical, logical, text, lookup, and math functions.
4. Track what-if scenarios and generate summary reports using Excel Scenario Manager.
5. Use Goal Seek to perform what-if analysis involving multiple variables.
6. Plan, design, create, update, and change the layout of a PivotTable report.
7. Exchange data between Excel and other Windows programs which includes embedding and linking.
8. Create a shared workbook.
9. Perform a worksheet audit and add comments.
10. Record and run a macro.

Major Topics

- I. Working with Lists
 - A. Sorting a list using multiple criteria
 - B. Creating a custom filter
 - C. Filtering a list with AutoFilters
 - D. Extracting list data
 - E. Creating subtotals using grouping and outlines
 - F. Using data validation
- II. Using Advanced Functions
 - A. Using financial functions: PPMT, NPV, and PV
 - B. Using math and trig functions: SUMIF and RAND
 - C. Using statistical functions: COUNTIF, AVERAGEIF, and SUBTOTAL
 - D. Using database functions: DSUM and DAVERAGE
 - E. Using lookup functions: VLOOKUP and HLOOKUP
 - F. Using logical functions: IF, AND, OR, NOT, and IFERROR
 - G. Using text functions: PROPER, UPPER, LOWER, and SUBSTITUTE
- III. Using Analysis Tools
 - A. Performing a what-if analysis
 - B. Creating scenarios
 - C. Using Goal Seek

- D. Planning, designing, creating, and updating a PivotTable
- E. Creating a PivotTable report
- F. Add and edit comments
- IV. Exchanging Data with Other Programs
 - A. Importing data
 - B. Embedding and linking objects
- V. Collaborating
 - A. Setting up a shared workbook and tracking changes
 - B. Applying and removing passwords
 - C. Applying and removing cell, worksheet, and workbook protection
- VI. Managing and Auditing Worksheets
 - A. Auditing workbooks
 - B. Recording, running, and editing a macro
- VII. Working with Templates and Workbooks
 - A. Creating and editing a template
 - B. Managing workbook properties
 - C. Consolidating data from several worksheets
- VIII. Using Advanced Formatting
 - A. Creating custom formats
 - B. Using conditional formatting
 - C. Using themes
 - D. Using Paste Special

Course Requirements

- Grading/exams:** Specific assignments and procedures for evaluating student performance in the class will be described in the individual class syllabus, but will include the following:
1. Multiple choice, true/false tests
 2. Computer hands-on tests
 3. Projects

Other Course Information

Call 443-518-4876 between 9 a.m. and 3 p.m. for more information about this course.
This course is a business elective.