

Common Course Outline
OFAD 256
Advanced Spreadsheet Applications
3 Semester Hours

The Community College of Baltimore County

Course Description

OFAD 256 – 3 Credits – Advanced Spreadsheet Applications expands on basic spreadsheet skills and teaches students how to create meaningful spreadsheets built on sound mathematical constructs to enable them to organize data, calculate data, audit worksheets, and transform data into information for presentation and decision-making. Students learn advanced analysis and reference functions and advanced features such as macros, data linking, and pivot tables. This course prepares students to take the Microsoft Office Specialist (MOS) Expert level certification exam.

3 credits: 2 lecture, 2 lab hours

Prerequisite: OFAD 246

Overall Course Objectives

Upon successful completion of this course, students will be able to:

1. construct formulas using named ranges and named constants;
2. insert data into a spreadsheet automatically using VLookup and HLookup functions;
3. create a path in a spreadsheet to another data source using a hyperlink;
4. scan a spreadsheet for specific data using the Rows and Index functions;
5. create and save a default template for a worksheet and a workbook;
6. protect and lock a template;
7. establish data validation and conditional formatting settings with comments in a spreadsheet;
8. automate spreadsheet tasks using macros;
9. evaluate and correct formulas with error messages;
10. forecast a range of results using the What-if analysis function;

11. backsolve a formula using the Goal Seek function;
12. consolidate static and dynamic data from multiple worksheets;
13. create a summary workbook with linked data;
14. compare and merge shared workbooks;
15. import data into a spreadsheet from other programs;
16. convert data in a list to a data form;
17. create a data subset using a filter;
18. apply Database functions to Excel statistical functions;
19. build one- and two-variable data tables;
20. generate a pivot table report; and
21. summarize data using pivot tables.

Major Topics

- I. Reference Functions
 - a. Ranges
 - b. VLookup
 - c. HLookup
 - d. Hyperlinks
 - e. Rows and Index function
- II. Worksheet and Workbook Templates
 - a. Default and user templates
 - b. Data validation and conditional formatting
 - c. Template protection
 - d. Workbook protection
- III. Working with Macros
 - a. Running, editing, and recording a macro
 - b. Assigning a macro to a button
 - c. Creating a custom toolbar
 - d. Customizing an Excel toolbar
 - e. Creating a macros workbook
- IV. Auditing Tools
 - a. Troubleshooting errors
 - b. Tracing precedents and dependents
 - c. Using the Watch Window
- V. What-if Analysis
 - a. Creating and managing a scenario
 - b. Forecasting with a trendline
 - c. Using Goal Seek and Solver
- VI. Data Consolidation and Linking
 - a. Static and dynamic data consolidation
 - b. Using functions to consolidate data
 - c. Linking workbooks
 - d. Examining and editing links
 - e. Using a workspace

- VII. Workgroup Features
 - a. Creating a shared workbook
 - b. Tracking changes
 - c. Using the reviewing toolbar
 - d. Comparing and merging workbooks
- VIII. Data from Other Sources
 - a. Using Word and text files
 - b. Importing HTML files
 - c. Importing database files
 - d. Exporting Excel files
 - e. Working with XML
- IX. Lists and Database Features
 - a. Preparing a list
 - b. Sorting data
 - c. Using filters
 - d. Using Database functions
 - e. Creating and editing outlines
- X. Data Tables and Pivot Tables
 - a. One-variable data tables
 - b. Two-variable data tables
 - c. Analyzing data in a pivot table
 - d. Creating a pivot table report
 - e. Using multiple functions, formulas, and custom calculations
 - f. Creating a pivot chart report

Course Requirements

Grading: Grading procedures will be determined by the individual faculty member but will include the following minimum requirements:

1. Lesson application projects (minimum of 20)
2. Minimum of 3 tests
3. Spreadsheet portfolio

Other Course Information

This course is an Office Administration specialty requirement for the Software Specialist degree track and is required for the Business Software Applications certificate. It is also included as an Office Administration elective. This course is a self-paced course and is taught in a computerized classroom environment. It is also offered online.

Individual faculty members may include additional course objectives, major topics, and other course requirements to the minimum expectations stated in the Common Course Outline.