



DEPARTMENT OF BUSINESS AND OFFICE ADMINISTRATION

COURSE OUTLINE – Winter 2018

OA1275 A3 EXCEL EXPERT 3 (1.5-0-1.5) 45 HOURS

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OFFICE HOURS: Please contact me anytime to book an appointment

CALENDAR DESCRIPTION:

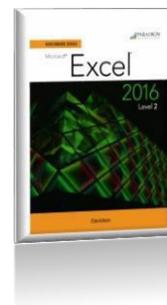
This course covers core to expert level concepts and techniques of Microsoft Excel through lectures, demonstrations, and hands on practical applications. Students will learn how to prepare and format a worksheet, maintain and enhance workbooks, advanced formatting, formulas and data management, and managing and integrating data. Students will be prepared to successfully challenge the Microsoft Office Specialist Excel Certification Exam and attain this globally recognized certificate directly from Microsoft.

PREREQUISITE(S)/COREQUISITE:

NONE

REQUIRED TEXT/RESOURCE MATERIALS:

Benchmark Series: Microsoft Excel 2016 Level 2 - Text and eBook ISBN:
978-0-76386-992-2



DELIVERY MODE(S):

Lecture / Lab / Active Learning A laboratory class is when you do individual work with help, and go over your own answers and weaknesses if any.

COURSE OBJECTIVE:

This course will teach you to design, create, format and maintain spreadsheets and to integrate Excel with other applications.

LEARNING OUTCOMES:

Excel 2016 Level 2, Chapter 1 Advanced Formatting Techniques

Upon completion of this chapter you will be able to:

-  Apply conditional formatting by entering parameters for a rule
-  Apply conditional formatting using a predefined rule
-  Create and apply a new rule for conditional formatting
-  Edit, delete, and clear conditional formatting rules
-  Apply conditional formatting using an icon set, data bars, and color scale
-  Apply conditional formatting using a formula
-  Apply fraction and scientific formatting
-  Apply a special format for a number
-  Create a custom number format
-  Apply wrap text and shrink to fit text control options
-  Modify text using the text functions PROPER, UPPER, LOWER, SUBSTITUTE, RIGHT, MID, and TRIM
-  Filter a worksheet using a custom AutoFilter
-  Filter and sort a worksheet using conditional formatting or cell attributes

Excel 2016 Level 2, Chapter 2 Advanced Functions and Formulas

Upon completion of this chapter you will be able to:

-  Create and use named ranges in formulas
-  Use the functions COUNTA, COUNTIF, and COUNTIFS
-  Use the functions AVERAGEIF and AVERAGEIFS
-  Use the functions SUMIF and SUMIFS
-  Edit a named range
-  Rename and delete a named range
-  Look up data using the lookup functions VLOOKUP and HLOOKUP
-  Analyze loan payments using PPMT
-  Use the conditional logic functions IF, AND, and OR

Excel 2016 Level 2, Chapter 3 Working with Tables and Data

Features Upon completion of this chapter you will be able to:  Create a table in a worksheet

-  Expand a table to include new rows and columns
-  Add a calculated column in a table
-  Format a table by applying table styles and table style options
-  Add a Total row to a table and formulas to total cells 
- Sort and filter a table
-  Split contents of a cell into separate columns
-  Use Flash Fill

-  Remove duplicate records
 -  Restrict data entry by creating validation criteria
 -  Convert a table to a normal range
 -  Create subtotals in groups of related data 
- Group and ungroup data

Excel 2016 Level 2, Chapter 4 Summarizing and Consolidating Data

Upon completion of this chapter you will be able to:

-  Summarize data by creating formulas with range names that reference other worksheets
-  Modify the range assigned to a range name
-  Summarize data by creating 3.D references
-  Create formulas that link to cells in other worksheets or workbooks
-  Edit a link to a source workbook
-  Break a link to an external reference
-  Use the Consolidate feature to summarize data in multiple worksheets
-  Create, edit, and format a PivotTable
-  Filter a PivotTable using Slicers
-  Filter a PivotTable using Timelines
-  Create and format a PivotChart
-  Create and format Sparklines

Excel 2016 Level 2, Chapter 5 Using Data Analysis Features Upon

completion of this chapter you will be able to:

Upon completion of this chapter you will be able to:

-  Switch data arranged in columns to rows and vice versa
-  Perform a mathematical operation during a paste routine
-  Populate a cell using Goal Seek
-  Save and display various worksheet models using Scenario Manager
-  Create a scenario summary report
-  Create a one-variable data table to analyze various outcomes
-  Create a two-variable data table to analyze various outcomes
-  View relationships between cells in formulas
-  Identify Excel error codes and troubleshoot a formula using formula auditing tools
-  Circle invalid data
-  Use the Watch Window to track a value

Excel 2016 Level 2, Chapter 6 Protecting and Sharing Workbooks

Upon completion of this chapter you will be able to:

-  Add information to a workbook's properties

-  Add comments containing additional information or other notes to the reader
-  Share a workbook with other people and view other users who have the shared workbook open at the same time
-  Edit a shared workbook and resolve conflicts with changes
-  Print a history of changes made to a shared workbook
-  Stop sharing a workbook
-  Save and share a workbook using SkyDrive
-  Protect cells within a worksheet to prevent changes
-  Add a password to open a workbook
-  Track changes made to a workbook
-  Modify and resolve tracked changes

Excel 2016 Level 2, Chapter 7 Automating Repetitive Tasks and Customizing Excel

Upon completion of this chapter you will be able to:

-  Record, run, and edit a macro
-  Save a workbook containing macros as a macro-enabled workbook
-  Create a macro that is run using a shortcut key combination
-  Pin and unpin a frequently used file to the Recent Workbooks list
-  Customize the display options for Excel
-  Hide the ribbon to increase space in the work area
-  Customize the ribbon by creating a custom tab and adding buttons
-  Add and remove buttons for frequently used commands to the Quick Access toolbar
-  Create and apply custom views
-  Create and use a template
-  Customize save options for AutoRecover files

Excel 2016 Level 2, Chapter 8 Importing, Exporting, and Distributing Data Upon

completion of this chapter you will be able to:

-  Import data from an Access table, website, and text file
-  Append data from an Excel worksheet to an Access table
-  Embed and link data in an Excel worksheet to a Word document
-  Copy and paste data in an Excel worksheet to a PowerPoint presentation 
-  Export data as a text file
-  Scan and remove private or confidential information from a workbook
-  Mark a workbook as final
-  Check a workbook for features incompatible with earlier versions of Excel
-  View Trust Center settings

- Save an Excel workbook as a PDF or XPS file
- Save an Excel worksheet as a web page

Course Objectives:

The course will teach the students:

- Create and edit spreadsheets of varying complexity
- Format cells, columns, and rows as well as entire workbooks in a uniform, attractive style
- Analyze numerical data and project outcomes to make informed decisions
- Plan, research, create, revise, and publish worksheets and workbooks to meet specific communications needs
- Given a workplace scenario requiring a numbers based solution, assess the information requirements and then prepare the materials that achieve the goal efficiently and effectively
- Gain MOS Excel Certification

EVALUATIONS AND GRADING CRITERIA:

Text Assignments	30%
Unit Tests (2)	40%
Microsoft Office Certification (MOS) Excel ★ or Final Exam	30%

***NOTE: MICROSOFT OFFICE CERTIFICATION (MOS) EXCEL.** All course work must be completed in order to qualify to take the MOS EXCEL Exam. There is a cost component to the MOS Test and tests must be booked after the last assignment is completed. All tests can be booked with Grace Walton gwalt@grc.ab.ca and payment is due prior to writing the exam. MOS exams are 50 minutes in length and students will receive MOS Certificate from Microsoft which is a globally recognized certification. This test is only available on-site at the GPRC campus unless a MOS Testing Centre is located in your local area. Therefore, if distance students wish to select this option for their final exam appointment, special onsite arrangements can be made with your instructor for the practice test and on-site test.

COURSE POLICIES:

Attendance: more than 3 missed classes may result in a recommendation of “Debarred from the Midterm and Final Exam”

Exams: Any missed exams will result in a grade of 0% without prior arrangements. Quizzes: Any missed quizzes will be written during the next scheduled class with a 25% penalty

Projects/Assignments/Other:

DUE DATE: Due without penalty at end of scheduled class.

LATE DATE: Beginning of next scheduled class period after Due Date: 25% Penalty.

DEAD DATE: Score of 0% for any work not handed in based on the above timelines.

Instructor has the right to alter this date based on circumstances.

COURSE SCHEDULE/TENTATIVE TIMELINE:

Week	Topic	Chapters
1	Excel 2016 Level 2, Chapter 1 Advanced Formatting Techniques	L2C1
2 - 3	Excel 2016 Level 2, Chapter 2 Advanced Functions and Formulas	L2C2

4 - 5	Excel 2016 Level 2, Chapter 3 Working with Tables and Data Features	L2C3
6 - 7	Excel 2016 Level 2, Chapter 4 Summarizing and Consolidating Data	L2C4
8 - 9	Excel 2016 Level 2, Chapter 5 Using Data Analysis Features	L2C5
10 - 11	Excel 2016 Level 2, Chapter 6 Protecting and Sharing Workbooks	L2Ch6
12	Excel 2016 Level 2, Chapter 7 Automating Repetitive Tasks and Customizing Excel	L2Ch7
13	Excel 2016 Level 2, Chapter 8 Importing, Exporting, and Distributing Data	L2Ch8
14	MOS EXAM PREPARATION	ALL include L1 Ch18 and L2 Ch1 - 8
15	FINAL EXAM STARTS OR MOS CHALLENGE	
14 – 15	FINAL EXAM WEEK MOS EXCEL CERTIFICATION EXAM AS SCHEDULED	
16	FINAL EXAM WEEK MOS EXCEL CERTIFICATION EXAM AS SCHEDULED	

STUDENT RESPONSIBILITIES:

To read, understand and comply with GPRC academic policies. **Note: all Academic and Administrative policies are available at <https://www.gprc.ab.ca/about/administration/policies/>

STATEMENT ON PLAGIARISM AND CHEATING:

Refer to the College Policy on Student Misconduct: Plagiarism and Cheating at https://www.gprc.ab.ca/files/forms_documents/Student_Misconduct.pdf

****Note:** all Academic and Administrative policies are available at
<https://www.gprc.ab.ca/about/administration/policies/>

Certification: Microsoft Office Specialist

With the release of Office 2016, Microsoft has developed a new set of certification objectives, which are available at <http://www.microsoft.com/learning/en/us/mos-certification.aspx>. The following books in the Benchmark Series have been validated and approved by ProCert Labs (www.procert.com) as courseware covering the Core-level objectives in the Microsoft Office Specialist Certification exam.

- *Benchmark Series Microsoft Word 2016 Levels 1 & 2*
- *Benchmark Series Microsoft Excel 2016 Levels 1 & 2*
- *Benchmark Series Microsoft Access 2016 Levels 1 & 2*
- *Benchmark Series Microsoft PowerPoint 2016*

The following table correlates the *Benchmark Excel 2016 Levels 1 & 2* text with the certification exam objectives.

Benchmark Excel Levels 1 & 2 and Microsoft Office Specialist Certification Exam (77-420) Correlation

Certification Exam Objective	Text Reference
1.0 Create and Manage Worksheets and Workbooks	
1.1 Create Worksheets and Workbooks	
1.1.1 create new blank workbooks	L1C1, pgs. 5-9
1.1.2 create new workbooks use templates	L1C6, pgs. 217-219
1.1.3 import files	L2C8, pgs. 270-277
1.1.4 open non-native files directly in Excel	L2C8, pgs. 276-277
1.1.5 add worksheets to existing workbooks	L1C5, pgs. 153-154
1.1.6 copy and move worksheets	L1C6, pgs. 200-203
1.2 Navigate through Worksheets and Workbooks	
1.2.1 search for data within a workbook	L1C4, pgs. 120-124
1.2.2 insert hyperlinks	L1C6, pgs. 212-217
1.2.3 change worksheet order	L1C5, pgs. 160-161
1.2.4 demonstrate how to use Go To	L1C1, pgs. 7, 10-11; L1C3, pg. 86
1.2.5 demonstrate how to use Name Box	L1C5, pgs. 167-168, L2C2, pg. 42, L2C4, pgs. 107-108
1.3 Format Worksheets and Workbooks	
1.3.1 change worksheet tab color	L1C5, pgs. 160-161
1.3.2 modify page setup	L1C4, pgs. 101-107
1.3.3 insert and delete columns and rows	L1C3, pgs. 66-69
1.3.4 change workbook themes	L1C3, pgs. 73-74
1.3.5 adjust row height and column width	L1C3, pgs. 63-66
1.3.6 insert watermarks	L1C8, pgs. 286-287
1.3.7 insert headers and footers	L1C4, pgs. 112-117
1.3.8 set data validation	L2C3, pgs. 84-89
1.4 Customize Options and Views for Worksheets and Workbooks	
1.4.1 hide worksheets	L1C5, pgs. 162-163
1.4.2 hide columns and rows	L1C3, pgs. 86-87
1.4.3 customize the Quick Access toolbar	L2C7, pgs. 240, 245-247

1.4.4	customize the Ribbon	L2C7, pgs. 240-245
1.4.5	manage macro security	L2C7, pgs. 231-233, L2C8, pgs. 296-297
1.4.6	change workbook views	L1C4, pgs. 104-107; 112-114, L2C7 pgs. 237-238, 248-250
1.4.7	record simple macros	L2C7, pgs. 227-229, 231-233
1.4.8	add values to workbook properties	L2C6, pgs. 187-189
1.4.9	demonstrate how to use zoom	L1C5, pgs. 164-166
1.4.10	display formulas	L1C2, pg. 49, L2C5, pgs. 170-171
1.4.11	freeze panes	L1C5, pgs. 165-166

Certification Exam Objective	Text Reference
1.4.12 assign shortcut keys	L2C7, pgs. 227, 231-233
1.4.13 split the window	L1C5, pgs. 165-166
1.5 Configure Worksheets and Workbooks to Print or Save	
1.5.1 set a print area	L1C4, pgs. 110-111
1.5.2 save workbooks in alternate file formats	L2C8, pgs. 298-301
1.5.3 print individual worksheets	L1C4, pgs. 117-118; L1C5, ps. 163-164
1.5.4 set print scaling	L1C4, pgs. 108-109
1.5.5 repeat headers and footers	L1C4, pgs. 112-117
1.5.6 maintain backward compatibility	L2C8, pgs. 294-295
1.5.7 configure workbooks to print	L1C4, pgs. 107-111; 117-118
1.5.8 save files to remote locations	L1C1, pgs. 8-9; L2C6, pgs. 199-202
2.0 Create Cells and Ranges	
2.1 Insert Data in Cells and Ranges	
2.1.1 append data to worksheets	L1C5, pgs. 154-160, L2C8, pgs. 271-272
2.1.2 find and replace data	L1C4, pgs. 120-124
2.1.3 copy and paste data	L1C5, pgs. 154-160
2.1.4 demonstrate how to use AutoFill tool	L1C1, pgs. 13, 15-17
2.1.5 expand data across columns	L1C1, pgs. 21-22
2.1.6 insert and delete cells	L1C3, pgs. 66-69
2.2 Format Cells and Ranges	
2.2.1 merge cells	L1C3, pgs. 70-72
2.2.2 modify cell alignment and indentation	L1C3, pgs. 70-72; 78-80
2.2.3 change font and font styles	L1C3, pgs. 69-72; 78-81

2.2.4	use Format Painter	L1C3, pg. 86
2.2.5	wrap text within cells	L1C3, pgs. 71, 78, L2C1 pg. 22
2.2.6	apply Number formats	L1C3, pgs. 74-78, L2C1, pgs. 16-22
2.2.7	apply highlighting	L1C3, pgs. 70, 72, 75, 84-85 (fill color)
2.2.8	apply cell styles	L1C6, pgs. 204-211
2.2.9	change text to WordArt	L1C8, pgs. 293-294
2.3	Order and Group Cells and Ranges	
2.3.1	apply conditional formatting	L2C1, pgs. 6-16
2.3.2	insert sparklines	L2C4, pgs. 130-132
2.3.3	transpose columns and rows	L2C5, pgs. 156-158
2.3.4	create named ranges	L1C5, pgs. 167-168, L2C2, pgs. 41-42
2.3.5	create outlines	L2C3, pgs. 89-94
2.3.6	collapse groups of data in outlines	L2C3, pgs. 89-94
2.3.7	insert subtotals	L2C3, pgs. 89-93
3.0 Create Tables		
3.1	Create a Table	
3.1.1	move between tables and ranges	L2C3, pgs. 74-75, 89-92

Certification Exam Objective		Text Reference
3.1.2	add and remove cells within tables	L2C3, pgs. 75-76, 82-84, 86-89
3.1.3	define titles	L2C3, pgs. 76-78
3.2	Modify a Table	
3.2.1	apply styles to tables	L2C3, pgs. 76-78
3.2.2	band rows and columns	L2C3, pgs. 76-78
3.2.3	insert total rows	L2C3, pgs. 76-78
3.2.4	remove styles from tables	L2C3, pgs. 77-78, 89-92
3.3	Filter and Sort a Table	
3.3.1	filter records	L1C4, pgs. 127-129, L2C3, pgs. 78-79
3.3.2	sort data on multiple columns	L1C4, pgs. 125, 127, L2C3, pgs. 78-79, 90-92
3.3.3	change sort order	L1C4, pgs. 125-127, L2C3 pgs. 80-81
3.3.4	remove duplicates	L2C3, pgs. 82-84
4.0 Apply Formulas and Functions		
4.1	Apply Cell Ranges and References in Formulas and Functions	

4.1.1 demonstrate how to use references (relative, mixed, absolute)	L1C2, pgs. 50-53
4.1.2 define order of operations	L1C2, pgs. 40-42
4.1.3 reference cell ranges in formulas	L1C2, pgs. 40, 42, 44, 46-48,
4.2 Summarize Data with Functions	
4.2.1 demonstrate how to apply the SUM function	L1C1, pgs. 18-19
4.2.2 demonstrate how to apply the MIN and MAX functions	L1C2, pgs. 46-48
4.2.3 demonstrate how to apply the COUNT function	L1C2, pgs. 45, 48
4.2.4 demonstrate how to apply the AVERAGE function	L1C1, pgs. 19; L1C2, pgs. 45-46
4.3 Apply Conditional Logic in Functions	
4.3.1 demonstrate how to apply the SUMIF function	L2C2, pgs. 49-50
4.3.2 demonstrate how to apply the AVERAGEIF function	L2C2, pgs. 46-47
4.3.3 demonstrate how to apply the COUNTIF function	L2C2, pgs. 43-44
4.4 Format and Modify Text with Functions	
4.4.1 demonstrate how to use the RIGHT, LEFT and MID functions	L2C1, pgs. 23-24, 26
4.4.2 demonstrate how to use the TRIM function	L2C1, pgs. 23-24, 26
4.4.3 demonstrate how to use the UPPER and LOWER functions	L2C1, pgs. 23-25,
4.4.4 demonstrate how to use the CONCATENATE function	L2C3, pgs. 81-83
5.0 Create Charts and Objects	
5.1 Create a Chart	
5.1.1 create charts and graphs	L1C7, pgs. 232-251
Certification Exam Objective	
Text Reference	
5.1.2 add additional data series	L1C7, pgs. 233, 235-236
5.1.3 switch between rows and columns in source data	L1C7, pgs. 240-241
5.1.4 demonstrate how to use Quick Analysis	L2C1, pgs. 6-7, 11, L2C3, pgs. 74
5.2 Format a Chart	
5.2.1 add legends	L1C7, pgs. 236-237, 242-243, 246
5.2.2 resize charts and graphs	L1C7, pgs. 233-235
5.2.3 modify chart and graph parameters	L1C7, pgs. 236-238 (filter)
5.2.4 apply chart layouts and styles	L1C7, pgs. 239-241, 243
5.2.5 position charts and graphs	L1C7, pgs. 233, 235, 242-244
5.3 Insert and Format an Object	
5.3.1 insert text boxes	L1C8, pgs. 284-286
5.3.2 insert SmartArt	L1C8, pgs. 288-292
5.3.3 insert images	L1C8, pgs. 275-279
5.3.4 add borders to objects	L1C8, pgs. 276, 279

5.3.5	add styles and effects to objects	L1C8, pgs. 276-277, 279, 281-283
5.3.6	change object colors	L1C8, pgs. 276-277; 283, 290
5.3.7	modify object properties	L1C8, pgs. 278-279
5.3.8	position objects	L1C8, pgs. 276-277, 283, 289, 294