



Course Advanced Spreadsheets (2022-2023)

Code / Version COMP1631 (100)

Total Hours 42

Credits 3

PreRequisite(s) COMP1056 (101) Business Computing Applications I

CoRequisite(s)

Course Description

This course is designed to build on introductory spreadsheet concepts. Students participate in hands-on training activities that include the creation of: advanced formulas, templates to automate and validate data entry and using wizards and queries to import data into Excel. A variety of analysis tools will also be explored in this course.

PLAR Eligible: Yes

Eligible for Supplemental: No

Resources

eText Program | eText | Carey/Pinard/Shaffer/Shellman/Vodnick. New Perspectives on Microsoft Office 365 & Excel 2019 Comprehensive. Nelson Education.

Other Resources from Vendor/Publisher | Software | Obtained via links on eConestoga | CENGAGE MINDTAP | Available via eConestoga Course Shell

Course Outcomes

Successful completion of this course will enable the student to:

1. Perform calculations using advanced formulas, nested functions and structured cell references following required function syntax.
2. Analyze data using the most relevant data management tools of current spreadsheet software to compile and summarize relevant information.
3. Create summary workbooks using 3-D references in formulas, templates, and hyperlinks working within the limitations of a worksheet group.
4. Summarize data with PivotTables and PivotChart.
5. Perform a what-if analysis using a variety of spreadsheet analysis tools streamlining business decision making processes.
6. Analyze data with Business Intelligence tools.
7. Develop spreadsheet applications using macros, data validation, range names and comments to facilitate accurate data entry.

Unit Outcomes

Successful completion of the following units will enable the student to:

1.0 Working with Multiple Worksheets and Workbooks

- 1.1 Use worksheet groups to perform a variety of tasks across multiple worksheets.
- 1.2 Consolidate data from several worksheets and workbooks.
- 1.3 Reference cells and ranges in other worksheets or workbooks using 3-D cell references in formulas.
- 1.4 Create and update external references and links.
- 1.5 Create, insert and edit hyperlinks.
- 1.6 Create range names, modify a named range using the Name Manager and apply defines names to existing formulas.
- 1.7 Create, open and use a workbook template.



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2.0 Managing Data with Data Tools

- 2.1 Highlight and remove duplicate values.
- 2.2 Define, identify and create the elements of an Excel table.
- 2.3 Sort data in a table using default and custom sort options.
- 2.4 Add subtotals to a data range
- 2.5 Filter data in a list and using advanced filtering, custom filters and Excel slicers.
- 2.6 Add calculated fields to a table using structured cell references.
- 2.7 Design and Create a Dashboard.

3.0 Summarizing Data with PivotTables

- 3.1 Use a variety of logical and nested functions.
- 3.2 Use lookup functions to find an approximate or exact match in Excel table data.
- 3.3 Use SUMIF, COUNTIF, and AVERAGEIF functions to summarize data based on specific criteria.
- 3.4 Create and format a PivotTable and PivotChart.
- 3.5 Apply a slicer to multiple PivotTables.
- 3.6 Create a timeline slicer.

4.0 Performing What-if Analysis

- 4.1 Determine when to use a What-If Analysis, Data Tables, Scenario Manager.
- 4.2 Discuss cost-volume relationships in an Income Statement and use data tables and charts to identify and visually display the break-even point.
- 4.3 Develop financial scenarios and create scenario reports using Scenario Manager.
- 4.4 Use Solver to find optimal solutions.
- 4.5 Save and load a Solver model and create a Solver answer report.

5.0 Analyzing Data with Business Intelligence Tools

- 5.1 Retrieve data with the Query Editor.
- 5.2 Create and edit a query.
- 5.3 Chart trends and forecast future values.
- 5.4 Add data to the Excel data model.
- 5.5 Manage table relations in Power Pivot.
- 5.6 Create PivotTables from several connected tables.

6.0 Developing Excel Application

- 6.1 Select and apply data validation rules to control data input.
- 6.2 Apply worksheet and workbook protection to reduce or eliminate data entry errors.
- 6.3 Hide error values with the IFERROR function.
- 6.4 Create, run, and edit a macro using the macro recorder and the visual basic editor.
- 6.5 Assign a macro to a keyboard shortcut or macro button.

Evaluation

The minimum passing grade for this course is 55 (D).

In order to successfully complete this course, the student is required to meet the following evaluation criteria:



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Description	Quantity	Percentage
1. Practical Lab	6	12.00 %
2. Individual Project	7	26.00 %
3. Assigned Task(s)	6	12.00 %
4. Assignment(s) - Practical	1	10.00 %
5. Mid-Term Exam(s)		20.00 %
6. Final Exam		20.00 %
		<hr/> 100.00 %

Evaluation Mapping

1. Perform calculations using advanced formulas, nested functions and structured cell references following required function syntax.

Practical Lab (12.00%), Quantity: 6

Individual Project (26.00%), Quantity: 7

Assigned Task(s) (12.00%), Quantity: 6

Assignment(s) - Practical (10.00%), Quantity: 1

Mid-Term Exam(s) (20.00%)

2. Analyze data using the most relevant data management tools of current spreadsheet software to compile and summarize relevant information.

Practical Lab (12.00%), Quantity: 6

Individual Project (26.00%), Quantity: 7

Assigned Task(s) (12.00%), Quantity: 6

Assignment(s) - Practical (10.00%), Quantity: 1

Mid-Term Exam(s) (20.00%)

3. Create summary workbooks using 3-D references in formulas, templates, and hyperlinks working within the limitations of a worksheet group.

Practical Lab (12.00%), Quantity: 6

Individual Project (26.00%), Quantity: 7

Assigned Task(s) (12.00%), Quantity: 6

Assignment(s) - Practical (10.00%), Quantity: 1

Mid-Term Exam(s) (20.00%)

4. Summarize data with PivotTables and PivotChart.

Practical Lab (12.00%), Quantity: 6

Individual Project (26.00%), Quantity: 7

Assigned Task(s) (12.00%), Quantity: 6

Mid-Term Exam(s) (20.00%)



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Final Exam (20.00%)

5. Perform a what-if analysis using a variety of spreadsheet analysis tools streamlining business decision making processes.

Practical Lab (12.00%), Quantity: 6

Individual Project (26.00%), Quantity: 7

Assigned Task(s) (12.00%), Quantity: 6

Final Exam (20.00%)

6. Analyze data with Business Intelligence tools.

Practical Lab (12.00%), Quantity: 6

Individual Project (26.00%), Quantity: 7

Assigned Task(s) (12.00%), Quantity: 6

Final Exam (20.00%)

7. Develop spreadsheet applications using macros, data validation, range names and comments to facilitate accurate data entry.

Practical Lab (12.00%), Quantity: 6

Individual Project (26.00%), Quantity: 7

Assigned Task(s) (12.00%), Quantity: 6

Final Exam (20.00%)

Web-based Tools

This course may be using web-based services with data centres outside of Canada. Students may be expected to complete assessments where information is transmitted outside of Canada. Students who do not wish to submit their information to other countries have the right to opt-out. It is the responsibility of the student to notify the instructor in the first week of term if they have any concerns. The alternative may require the student to attend the campus testing centre at a designated time.

Notes

Software to Detect Academic Offences: Software may be used to screen assignments or invigilate exams in this course. It is the responsibility of the professor to notify students of any such technologies in advance of their use. It is the responsibility of the student to notify the professor if they, at the time assignment details are provided, wish to opt-out and be provided with an alternate process.

Academic integrity is expected and required of all Conestoga students. It is a student's responsibility to maintain compliance with Conestoga's Academic Integrity Policy at all times.

Conestoga College is committed to providing academic accommodations for students with documented disabilities.

An Instructional Plan will be available at the beginning of the course and will be referred to in conjunction with this course outline.

Prepared By Liping Ren

School Business

Date 2022-10-21

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