LONDON CAPITAL COMPUTER COLLEGE

Advanced Diploma in Information Technology (104) – Advanced Excel

Prerequisites: Good knowledge of file management.	**Corequisites:** A pass or higher in Diploma in Information Technology or equivalence.
Aim: This course introduce candidates to the advanced features of Excel and prepare candidates for major topics which include: creation and manipulation of business-formatted worksheets and charts using appropriate functions and formulas in Excel; creation of worksheets utilising data tables, hyperlinks, databases, templates, and consolidated capabilities; integration of graphics, Word, Access, and Excel data into appropriate business reports, etc.; using Visual Basic for Applications code to create procedures for specific worksheets; using advanced techniques to audit and validate data, solve problems using Excel's Solver, Scenario Manager, Pivot Table, Pivot Chart, and data Map utilities; importing and exporting data and collaborating on worksheets tracking data changes. At the end of the course, candidates will be able to: create and use templates, conditional formatting, data validation, protection, import / export, macros, including advanced printing options. Also included are working with multiple worksheets; creating formulas and formatting across sheets; consolidating data; formula auditing; advanced functions including **Round**, **If** and **V Lookup**.	
Required Materials: Recommended Learning Resources.	**Supplementary Materials:** Recommended textbooks and lecture notes.
Special Requirements: This is a hands-on course, hence practical use of computers is essential. Requires intensive lab work outside of class time.	
Intended Learning Outcomes:	**Assessment Criteria:**
1 Describe how to design a workbook using Excel's sorting, filtering and grouping features. Define how to create pivot tables and pivot charts, freezing rows and columns and using folders for workbook storage.	1.1 Explore a structured range of data 1.2 Describe how to freeze rows and columns 1.3 Illustrate how to plan and create an Excel table 1.4 Describe how to rename and format an Excel table 1.5 Describe how to add, edit, and delete records in an Excel table 1.6 Describe how to sort data and Filter data 1.7 Describe how to insert a Total row to summarise an Excel table 1.10 Describe how to insert subtotals into a range of data 1.11 Describe how to create and modify a PivotTable 1.12 Describe how to apply PivotTable styles and formatting 1.13 Describe how to filter and sort a PivotTable 1.14 Describe Group PivotTable items 1.15 Describe how to create a PivotChart 1.16 Demonstrate using the Outline buttons to show or hide details
2 Describe how to use Advanced functions, conditional formatting and filtering. Discover how to provide data validation, using the logical if function and writing the index function.	2.1 Demonstrate how to evaluate a single condition using the IF function 2.2 Demonstrate how to evaluate multiple conditions using the AND function 2.3 Describe how to calculate different series of outcomes by nesting IF functions

	2.4 Illustrate testing whether one or more conditions are true with the OR function 2.5 Describe how to return values from a table with the VLOOKUP function 2.6 Describe how to check for duplicate values using conditional formatting 2.7 Describe how to cCheck for data entry errors using the IFERROR function 2.8 Demonstrate summarizing data using the COUNTIF, SUMIF, and AVERAGEIF functions 2.9 Review the COUNTIFS, SUMIFS, and AVERAGEIFS functions 2.10 Illustrate how to use advanced filters 2.11 Be able to summarise data using Database functions
3 Describe Excel Applications. Define how to protect a workbook. Identify the auditing toolbar, sharing a workbook with others and publishing workbooks to the web.	3.1 Describe how to create, edit, and delete defined names for cells and ranges 3.2 Describe how to paste a list of defined names as documentation 3.3 Describe how to use defined names in formulas 3.4 Describe how to add defined names to existing formulas 3.5 Describe how to create validation rules for data entry 3.6 Describe how to protect the contents of worksheets and workbooks 3.7 Describe how to aAdd, edit, and delete comments 3.8 Discuss about macro viruses and Excel security features 3.9 Demonstrate creating a macro using the macro recorder 3.10 Demonstrate editing a macro using the Visual Basic Editor 3.11 Demonstrate assigning a macro to a keyboard shortcut and a button 3.12 Describe how to save a workbook in macro enabled format
4 Describe financial analysis. Analyse the costs given various estimated rates of interest. Understand how to create and use one-variable data tables, excel scenarios and scenario report.	4.1 Work with financial functions to analyse loans and investments 4.2 Describe how to create an amortization schedule 4.3 Describe how to calculate a conditional sum 4.4 Describe how to interpolate and extrapolate a series of values 4.5 Describe how to calculate a depreciation schedule 4.6 Describe how to determine a payback period 4.7 Describe how to calculate a net present value 4.8 Describe how to calculate an internal rate of return 4.9 Describe how to trace a formula error to its source

5 Define how to use Excel's solver to unravel complex tasks. Perform What-If Analysis.	5.1 Explore the principles of cost-volume-profit relationships 5.2 Demonstrate how to perform a basic what-if analysis 5.3 Describe how to use Goal Seek to calculate a solution 5.4 Describe how to create a one-variable data table 5.5 Describe how to create a two-variable data table 5.6 Describe how to create and apply different Excel scenarios 5.7 Describe how to generate a scenario summary report 5.8 Describe how to generate a scenario PivotTable report 5.9 Explore the principles of price elasticity 5.10 Describe how to run Solver to calculate optimal solutions 5.11 Describe how to create and apply constraints to a Solver model 5.12 Describe how to save and load a Solver model
6 Define external data connection. Describe how to import text files into Excel and copying a worksheet from one workbook to another.	6.1 Demonstrate importing data from a text file 6.2 Demonstrate working with connections and external data ranges 6.3 Define a trusted location 6.4 Describe databases and queries 6.5 Analyse how to use the Query Wizard to import data from several tables 6.6 Describe how to Edit a query 6.7 Describe how to import data into a PivotTable and PivotChart 6.8 Describe how to create a Web query 6.9 Describe how to retrieve data from the World Wide Web 6.10 Describe how to use hyperlinks in a workbook 6.11 Describe how to access data from an XML document 6.12 Demonstrate working with XML data maps
7 Define the importance of incorporating Excel with Visual Basic. Describe the Visual Basic editor, how to save macros and setting macro security levels.	7.1 Describe how to create a macro using the macro recorder 7.2 Demonstrate working with the Project Explorer and Properties window of the VBA Editor 7.3 Describe how to edit a sub procedure 7.4 Describe how to run a sub procedure 7.5 Describe how to work with VBA objects, properties, and methods 7.6 Describe how to create an input box to retrieve information from the user 7.7 Describe how to create and run If-Then control structures 7.8 Describe how to work with comparison and logical operators 7.9 Describe how to create message boxes 7.10 Describe how to customise the Quick

	Access Toolbar 7.11 Demonstrate customising Excel

Recommended Learning Resources: Advanced Excel

Text Books	• Illustrated Course Guide: Microsoft Office Excel 2007 Advanced by Lynn Wermers. ISBN-10: 1423905369 • Excel 2007 Formulas (Mr. Spreadsheet's Bookshelf) by John Walkenbach. ISBN-10: 0470044020
Study Manuals 	BCE produced study packs
CD ROM 	Power-point slides
Software 	Microsoft Excel