Level 5 Diploma in Data Analytics (950) 177 Credits

Unit: Analysing Data with Excel **Exam Paper No.:** 2	**Guided Learning Hours:** 300 **Number of Credits:** 30
Prerequisites: Analytics ability. Knowledge of Windows terminology and mouse techniques.	**Corequisites:** An understanding of online technology and various big data processing tools.
Aim: This course focuses on what 99% of Excel users will most benefit from. The course analyse different steps in data processing from; manipulation (importing, cleaning and parsing data), data analysis (organising, aggregating and summarising data), graphing data. It is often said a picture speaks a thousand words. This is more relevant when it comes to Data Analytics. Data visualisation help tell a compelling story with data using various visualisation techniques. Visualisations are a powerful way of drawing meaning from data. However, it is important to note that sometimes a picture won't do; sometimes we need additional things from our data such as actual numbers, functions, equations and calculations. *This course brings it all together; resulting in Excel for 99%!*	
Required Materials: Recommended Learning Resources.	**Supplementary Materials:** Lecture notes and tutor extra reading recommendations.
Special Requirements: This is a hands-on unit, hence practical use of computers is essential. Requires intensive lab work outside of class time.	
Intended Learning Outcomes:	**Assessment Criteria:**
1. Understand different concepts in data analytics and how Excel can be used as a data analytics tool.	1.1 Describe quantitative and qualitative data 1.2 Define levels of measurement 1.3 Be able to describe different Data Analytics roles 1.4 Compare and contrast Data Analytics vs Data Analysis and Statistics vs Analytics 1.5 Be able to navigate around worksheets 1.6 Explore different Excel data types
2. Understand how to perform simple Excel spreadsheet tasks such as editing data, moving and copying.	2.1 Demonstrate how use Zoom controls and split screen 2.2 Be able to create a simple spreadsheet 2.3 Be able to edit cells, copy and format data 2.4 Demonstrate the use of Excel features; such as Autofill, Custom Lists, Basic Formulas such as (+, -, *, /) 2.5 Be able to perform calculations on COUNT, AVERAGE, MIN, MAX and MEDIAN 2.6 Demonstrate the use of Relative, Absolute and Mixed Cell Referencing
3. Understand the importance of data quality and how to handle data inconstancies.	3.1 Describe five straights of quality data 3.2 Demonstrate how to import data 3.3 Be able to remove duplicate and solve other data inaccurate causes 3.4 Demonstrate Excel Conditional Formatting

	3.5 Be able to format data using (i) change case features (UPPER, LOWER, PROPER) (ii) search and replace (iii) Helper Column / Concatenate (iv) Text to column 3.6 Be able to create a drop-down list
4. Understand how to analyse Excel data using variety of features; including formulas and what-if-analysis.	4.1 Demonstrate sorting and filtering data 4.2 Be able to use data analysis functions (IF/IFS, SUM/SUMIF, Conditional formatting, CountIF, CountA, Date) 4.3 Describe data reference functions and implementation of VLOOKUP and HLOOKUP 4.4 Demonstrate Scenarios/What-If-Analysis, Goal Seek and Data Table
5. Understand the use of Pivot Tables including formatting and calculations.	5.1 Demonstrate formatting data into a table 5.2 Be able to create Pivot Tables 5.3 Describe the use of fields in analysing Pivot Table data 5.4 Be able to perform Pivot Table calculations 5.5 Describe Pivot Table filters, slicers and timeline features
6. Understand the key goal of using Excel; that is; visualising data with charts, plots and graphs.	6.1 Demonstrate creating bar, line and pie charts 6.2 Be able to create advanced charts (treemaps, scatter, histograms, filled map and sparklines) 6.3 Describe the importance of dashboards in presenting data 6.4 Be able to create dashboards
Methods of Evaluation: A 2½-hour written examination paper with five essay questions, each carrying 20 marks. Candidates are required to answer all questions. Candidates also undertake coursework/projects in Excel.	

Recommended Learning Resources: Analysing Data with Excel

Text Books	• Data Analytics Made Easy by Andrea De Mauro, Francesco Marzoni, Andrew J. Walter. ISBN-13 : 978-1801074155 • Data Analytics for Absolute Beginners by Oliver Theobald. ISBN-13 : 978-1081762469 • Data Analytics Basics for Managers. ISBN-10 : 1633694283
Study Manuals	BCE produced study packs
CD ROM	Power-point slides
Software	Excel