DESCRIPTIVE DATA ANALYSIS

UNIT CODE: MATH/CU/AS/CR/03/6/A

Relationship to Occupational Standards
This unit addresses the unit of competency: Perform descriptive data analysis

Duration of Unit: 200 hours

Unit Description
This unit specifies the competencies required to perform descriptive data analysis. The analysis describes the basic features of the data in a study. They provide simple summaries about the sample and the measures used in the data. The unit involves, receive data from primary or secondary source, perform further clean up if from secondary source, apply descriptive statistical tools, record descriptive statistics output, interpret output and prepare report, prepared presentation tools

Summary of Learning Outcomes
1. Receive data from primary or secondary source
2. Perform further clean up if from secondary source
3. Apply descriptive statistical tools
4. Record descriptive statistics output
5. Interpret output and prepare report.
6. Prepared presentation tools

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods

1. Receive data from primary or secondary source	• Preparation for data capture
	  • Indexing
	  • Sorting
	  • Transformation
	  • Data entry
	    • Keying
	    • Scanning
	    • Transcription
	    • Downloading
		• Written test
		• Observation
		• Third party report
		• Oral questioning
		• Interviews

2. Perform further clean up	• Editing, deletion of • Inconsistencies in data • Missing data	• Written test • Observation • Third party report

Learning Outcome	Content	Suggested Assessment Methods
	• Any other, e.g. leading responses	• Oral questioning • Interviews

3. Apply descriptive statistical tools	• Data summaries
	  • Measures of central tendency
	    • Mode, Median and Mean
	      • Grouped
	      • Interval data
	        ▪ Class boundaries
	        ▪ Class limits
	        ▪ Estimation formulae
	  • Measures of variations
	    • Range, Variance & standard deviation
	    • Coefficient of variation (*CV*)
	• Presentation of Results
	  • Tables
	    • Ordinary/Simple tables
	    • Cross tabulation
	    • Custom tables
	  • Charts/Graphs
	    • Histograms/stem & leaf displays
	    • Frequency polygons
	    • Bar and Pie charts
	    • Cumulative frequency curves
	    • Percentiles/Box & Whisker plots
	• Pivot tables
		• Written test
		• Observation
		• Third party report
		• Oral questioning
		• Interviews

Learning Outcome	Content	Suggested Assessment Methods
4. Record descriptive statistics output	• Saving outputs of Analysis • Exporting outputs to other applications, e.g. spread sheets, word processors etc. • Further Analysis/Presentation	• Written test • Observation • Third party report • Oral questioning • Interviews

5. Interpret output and prepare report.	• Interpretation of data
	   • Deductive
	   • Logical
	• Report writing
	   • Types of reports
	      • Informational
	      • Analytical
	   • Report formats
	   • Terms of reference
	• Grammar rules & Usage
		• Written test
		• Observation
		• Third party report
		• Oral questioning
		• Interviews

6. Prepared presentation tools	• PowerPoint preparation	• Written test • Observation • Third party report • Oral questioning • Interviews

Suggested Methods of Instructions
- Projects
- Demonstration by trainer
- Practice by the trainee
- Discussions
- Direct instruction

Recommended Resources

1. Computer
2. Software
3. Stationary
4. Printer
5. Data sets