SOA TITLE: Data Analytics (RET-RAN-2002-1.1)

COURSE DURATION

16 hours

COURSE SYNOPSIS

The course will help learners to apply data analysis techniques using Microsoft Excel with focus on those in the retail trade. In this course, participants will learn how to use Excel to create formulas and functions that will generate retail KPIs for measurement of performance as well as create visualization of market information for business.

COURSE OBJECTIVES

By the end of this course, learners will be able to:

- Understand company's data collection and analysis strategy for metrics and measurement based on business products and services.

- Organize data sets for strategic measurement of retail KPIs.

- Aware of trending and emerging data analytics visualization tools and technology.

- Collect measurements and information to determine effectiveness of the tools and technology deployed.

- Create different analytical reports to analyse consumer segmentation, predictive modelling, contextual targeting, churn analysis, revenue growth and cost optimization.

- Conduct Data Analytics of Trending Customer Activities and Behaviours.

- Prepare and update reports and dashboards illustrating trends and insights for business questions and issues.

TARGET AUDIENCE (OPERATIONAL, SUPERVISORY & MANAGERIAL)

This training is relevant to retail executives, retail managers and retail supervisors. This is also relevant to all persons employed in the retail industry and keen to expand their knowledge into data analysis and dashboard creation for the retail business.

ASSUMED SKILLS

- Learners must be able to read, write, speak and listen to English at secondary school level

- Learners to have minimum GCE 'O' level or ITE certificate education.

- Learner should have at least 1 year's working experience in any industry.

- Learners must be able to operate a personal computer, use keyboard and mouse.

TRAINING METHODOLOGIES

Lectures, demonstration and hands-on activities designed to provide practical experiences with skills being taught.

COURSE CONTENT

Learning Unit 1: Metrics and Measurements for Data Analytics

- What is Retail Analytics?
- What is Market Intelligence?
- Types of Data Collection Tools and Data Collection Techniques
- How Data Collected is Used for Market Intelligence?

Learning Unit 2: All About Data Models and Data Linkages

- Importing Data into Excel (Spreadsheets, CSV, Database)
- Create Tables and Basic Analysis
- Create Pivot Table with Aggregation and Built-in Calculations
- Create Calculated Items and Calculated Fields
- Introduction to PowerPivot
- Understanding Relationships
- Create Data Models
- Difference between Calculated Items and Calculated Fields
- Importing data from multiple sources
- Create Data Models with relationships
- Create Pivot Table

Learning Unit 3: Data Analytics and Data Visualization Trends

- Creating Pivot Charts
- Formatting Pivot Charts
- Creating DAX Measures
- Understanding DAX syntax
- Creating pivot charts
- Formatting of pivot charts
- Creating DAX measures in pivot tables

Learning Unit 4: Effectiveness of Data Analytical Tools

- How to evaluate effectiveness of data analytical tools?
- Power Pivot vs Pivot Table
- Excel vs Power BI Desktop

Learning Unit 5: Analysing Key Performance Metrics to Manage Business Performance

- Identifying retail business performance metrics like churn analysis, revenue growth, cost optimization, predictive modelling
- Identifying Excel functions/ DAX measures to generate metrics

Learning Unit 6: Analysing Customer Activities and Behaviour

- Using visualizations to create dashboard with slicers
- Observing business trends based on interactivity of visualization
- How to observe trends? E.g. using trend lines and patterns
- Provide an example and discuss what are the trends observed and if there are any patterns observable?

Learning Unit 7: Address Business Questions Through Analysing Reports and Dashboards

- Identifying types of reports required for retail e.g. sales analysis, churn analysis, revenue growth, consumer segmentation
- Analysis from market intelligence