Course Title: Data Analytics with Excel

Course Description: This course is designed to provide participants with a comprehensive understanding of data analytics using Microsoft Excel. Through hands-on exercises and real-world examples, students will learn how to manipulate and analyze data effectively, visualize insights, and derive meaningful conclusions. Topics covered include data cleaning, data manipulation, basic and advanced analytics techniques, and data visualization.

Course Outline:

1. Introduction to Data Analytics with Excel
    - ☐ Overview of data analytics
    - ☐ Importance of Excel in data analysis
    - ☐ Setting up Excel for data analytics
2. Data Cleaning and Preparation
    - ☐ Understanding data types
    - ☐ Importing and exporting data
    - ☐ Data cleaning techniques (removing duplicates, handling missing values, etc.)
    - ☐ Data Cleaning Functions; CLEAN, TRIM, SUBSTITUTE, AND VALUE
    - ☐ Data transformation and formatting
3. Exploratory Data Analysis (EDA)
    - ☐ Data summarization techniques

- ☐ Data visualization basics (charts, graphs, histograms)

4. Data Manipulation & Modeling with Excel Functions
    - ☐ Introduction to Excel functions (SUM, AVERAGE, COUNT, etc.)
    - ☐ Cell Referencing
    - ☐ Named Ranges
    - ☐ Structured Referencing
    - ☐ Advanced functions for data manipulation (VLOOKUP, INDEX-MATCH, IF statements, etc.)
    - ☐ Text functions (CONCATENATE, LEFT, RIGHT, etc.)
5. Basic Analytics Techniques
    - ☐ PivotTables and PivotCharts
    - ☐ Filtering and sorting data
    - ☐ Conditional formatting
6. Advanced Analytics Techniques
    - ☐ Data forecasting techniques
    - ☐ Advanced Excel functions for analytics (SUMPRODUCT, SUMIFS, etc.)
7. Data Visualization
    - ☐ Creating interactive dashboards
    - ☐ Customizing charts and graphs

8. Case Studies and Real-World Applications

    - ☐ Analyzing real-world datasets
    - ☐ Solving business problems with data analytics
    - ☐ Presenting findings and insights

9. Project Work

    - ☐ Hands-on project to apply learned concepts
    - ☐ Analyzing a given dataset and presenting insights
    - ☐ Peer review and feedback