Data Analysis Using MS Excel: From Basics to Intermediate

Course Duration: 8Weeks (16 Sessions)  
Course Format: Online Interactive Lectures, Hands-on Exercises, Quizzes  
Prerequisites: No prior experience required. Basic computer literacy is recommended.

Course Description:

This course is designed to provide learners with a strong foundation in Microsoft Excel, covering essential functions, data management, visualization, and advanced analytical tools. By the end of this course, students will be able to create and manage spreadsheets efficiently, perform complex calculations, analyse data, and automate tasks using Excel tools.

Course Modules:

## **Module 1: Introduction to Excel & Basic Operations (Sessions 1-4)**

🔹 Understanding the Excel interface (Ribbon, Cells, Rows, Columns)  
🔹 Creating, saving, and opening workbooks  
🔹 Entering and formatting data (bold, font, alignment, cell colours)  
🔹 Basic keyboard shortcuts for efficiency  
🔹 **Hands-on Assignment:** Create a simple to-do list  
🔹 **Quiz:** Excel fundamentals

**📌 Module 2: Working with Formulas & Functions (Sessions 5-8)**

🔹 Introduction to formulas and cell references  
🔹 Basic functions: **SUM, AVERAGE, MIN, MAX**  
🔹 Logical functions: **IF, AND, OR**  
🔹 Lookup functions: **VLOOKUP, HLOOKUP**  
🔹 **Hands-on Assignment:** Calculate student grades based on marks  
🔹 **Quiz:** Functions & formulas

**📌 Module 3: Data Management & Formatting (Sessions 9-12)**

**🔹** Sorting & filtering data  
🔹 Conditional formatting for visual analysis  
🔹 Data validation (drop-down lists, error handling)  
🔹 Introduction to Pivot Tables for data summarization

🔹 **Hands-on Assignment:** Create a sales report with filtering  
🔹 Quiz: Data organization & analysis

**📌 Module 4: Visualization & Final Project (Sessions 13-16)**

**🔹** Creating bar, pie, and line charts  
🔹 Customizing charts for professional reports  
🔹 Final Project: Create a Personal Budget Tracker (track income & expenses)  
🔹 Final Quiz: Applying Excel skills

Outputs:

By the end of this course, students will:  
✔ Master Excel basics & essential functions  
✔ Organize and analyze data effectively  
✔ Visualize data using charts  
✔ Build a real-world **budget tracker**