



## **Course Title: Data Analysis and Data Science Masterclass**

**Course Duration: 15 Weeks**

### **Week 1-2: Introduction to Data Analysis and Tools**

- Introduction to Data Analysis
- Importance of Data in Decision Making
- Overview of Excel, Tableau, Power BI, SQL, and Python
- Setting up the Data Analysis Environment

### **Week 3-5: Excel for Data Analysis**

- Excel Basics and Data Entry
- Data Cleaning and Preparation
- Formulas and Functions for Data Analysis
- Data Visualization in Excel
- Data Analysis with PivotTables and PivotCharts
- Real-world Excel Data Analysis Projects

## **Week 5-7: Introduction to SQL**

- Understanding Relational Databases
- SQL Syntax and Queries
- Filtering and Sorting Data
- Aggregating Data with SQL
- Joining Multiple Tables
- SQL for Data Retrieval and Analysis

## **Week 8-10: Data Visualization with Tableau**

- Introduction to Tableau
- Connecting to Data Sources
- Creating Basic Visualizations
- Advanced Data Visualization Techniques
- Interactive Dashboards and Storytelling
- Practical Projects in Tableau

## **Week 11-12: Power BI for Business Intelligence**

- Introduction to Power BI
- Data Transformation and Modeling
- Building Reports and Dashboards
- Data Insights and Interactive Features
- Integrating Power BI with Excel and Other Tools
- Real-world Business Intelligence Projects

## **Week 13-15: Introduction to Python for Data Science and Business Analysis**

- Introduction to Python
- Data Structures in Python
- Data Analysis Libraries (NumPy, Pandas)
- Data Visualization with Matplotlib and Seaborn
- Introduction to Machine Learning with Python
- Final Data Science and Business Analysis Projects

### **Throughout the Course:**

- Hands-on Practical Exercises
- Real-world Case Studies and Projects
- Group Discussions and Collaboration
- Data Ethics and Privacy
- Best Practices in Data and Business Analysis

### **Course Conclusion:**

- Review and Recap of Key Concepts
- Certification
- Career Guidance and Job Placement Assistance
- Continuous Learning and Resources for Staying Updated in the Field