

## Data Analyst Course - Syllabus

### 1: Introduction to Data Analytics

- What is Data Analytics?
- Types of Analytics (Descriptive, Diagnostic, Predictive, Prescriptive)
- Role of a Data Analyst
- Data Analytics lifecycle
- Real-world applications

### 2: Excel for Data Analysis

- Basic Excel functions (SUM, AVERAGE, IF, COUNT)
- Advanced formulas (VLOOKUP, HLOOKUP, INDEX, MATCH)
- Pivot Tables & Pivot Charts
- Data cleaning in Excel
- Creating dashboards

### 3: Python for Data Analysis

- Python basics (variables, loops, functions)
- NumPy
- Pandas (DataFrames, data cleaning)
- Data visualization (Matplotlib, Seaborn)
- Working with CSV & Excel files

### 4: SQL for Data Analysis

- Database concepts
- SELECT, WHERE, ORDER BY
- GROUP BY, HAVING
- JOINS (INNER, LEFT, RIGHT)
- Subqueries
- Working with MySQL/PostgreSQL

## 5: Statistics for Data Analysts

- Mean, Median, Mode
- Variance & Standard Deviation
- Probability basics
- Correlation & Regression
- Hypothesis testing

## 6: Data Visualization Tools

- Introduction to Power BI
- Creating dashboards
- Data storytelling
- KPI creation

## 7: Data Cleaning & Preparation

- Handling missing values
- Removing duplicates
- Data transformation
- Feature engineering basics
- ETL concepts

## 8: Real-Time Projects

- Sales data analysis project
- Customer segmentation project
- HR analytics project
- Financial analysis dashboard
- Capstone project