

# Data Analytics Course Content

1. Introduction to Data Analytics
2. Excel for Analytics (Hands on)
3. SQL for Data Analysis (Hands on)
4. Python for Data Analytics (Hands on)
5. Statistics for Analytics
6. Exploratory Data Analysis and Visualization (Hands on)
7. Power BI (Hands on)
8. Tableau (Hands on)
9. Data Warehousing and ETL (Concepts)
10. Capstone Projects

## Introduction to Data Analytics

- Types of Analytics: Descriptive, Diagnostic, Predictive, Prescriptive
- Data Analytics Lifecycle, Roles in Data Teams
- Tools Overview and Business Use Cases

## Excel for Analytics (Hands on)

- Formulas, Lookups, Pivot Tables, Charts
- Data Cleaning, Power Query, Conditional Formatting
- Dashboards in Excel

## SQL for Data Analysis (Hands on)

- SELECT, Filtering, Sorting, Aggregations, Group By
- Joins, Subqueries, CTEs, Window Functions
- Data Definition and Manipulation, Query Optimization

## Python for Data Analytics (Hands on)

- Python Basics, Data Structures, Functions, File Handling
- NumPy, Pandas: Series, DataFrames, Merging, Reshaping
- Data Cleaning, Missing Values, Outlier Treatment

## Statistics for Analytics

- Descriptive Statistics, Probability, Distributions
- Hypothesis Testing, Confidence Intervals, A/B Testing

- Correlation and Regression Basics

### **Exploratory Data Analysis and Visualization (Hands on)**

- Matplotlib, Seaborn, Plotly
- Univariate, Bivariate, and Multivariate Analysis
- Storytelling with Data

### **Power BI (Hands on)**

- Data Import and Transformation, Data Modeling, Relationships
- DAX: Measures, Calculated Columns, Time Intelligence
- Reports, Dashboards, Publishing, Row Level Security

### **Tableau (Hands on)**

- Connecting Data, Dimensions and Measures
- Calculated Fields, LOD Expressions, Parameters
- Dashboards and Stories

### **Data Warehousing and ETL (Concepts)**

- OLTP vs OLAP, Star and Snowflake Schemas
- ETL and ELT Concepts, Data Lakes
- Cloud Analytics Overview

### **Capstone Projects**

- Sales, Marketing, HR, and Finance Analytics Projects
- Resume Building, Case Studies, and Interview Preparation