

Certificate Program in Data Analytics

Syllabus

1. Advanced Excel

- Introduction to Data Analytics & Excel
- Data Cleaning & Data Formatting
- Sorting, Filtering & Data Validation
- Excel Tables & Named Ranges
- Basic & Advanced Formulas
- IF, AND, OR, IFERROR
- SUMIF, SUMIFS, COUNTIF, COUNTIFS
- XLOOKUP / VLOOKUP / INDEX-MATCH
- Text & Date Functions
- Conditional Formatting
- Pivot Tables & Pivot Charts
- Slicers & Timelines
- Data Visualization & Charts
- Excel Dashboard Creation

2. SQL

- Introduction to Databases & SQL
- Database, Table, Row & Column
- SELECT, FROM, WHERE
- DISTINCT, ORDER BY
- Filtering with AND, OR, IN, BETWEEN, LIKE
- Aggregate Functions – SUM, AVG, COUNT, MIN, MAX
- GROUP BY & HAVING
- Primary Key & Foreign Key
- Joins - INNER JOIN, LEFT JOIN, RIGHT JOIN
- Date & String Functions
- ROW_NUMBER, RANK, DENSE_RANK

3. Python

- Introduction to Python & Data Analytics
- Python Environment
- Variables & Data Types
- Operators
- Conditional Statements
- Loops
- Functions
- Lists, Tuples, Sets & Dictionaries
- Introduction to NumPy
- Arrays & Basic Numerical Operations
- Introduction to Pandas
- Series & DataFrames
- Removing Duplicates
- Sorting & Grouping Data
- Merging & Joining Data
- Business Data Analysis using Python

4. Power BI

- Introduction to Business Intelligence & Power BI
- Power BI Desktop Interface
- Importing Data from Excel, CSV & Databases
- Data Cleaning with Power Query
- Data Transformation
- Merge & Append Queries
- Data Types & Data Profiling
- Data Modelling
- Relationships Between Tables
- SUM, COUNT, DISTINCTCOUNT
- Introduction to DAX
- Time Intelligence – Introduction
- Business Dashboard Projects

5. Artificial Intelligence

6. Agile Methodology

7. Business Projects