

## Course: Certified Data Analyst

**Duration: 2-Months program**

### Introduction:

The Certified Data Analyst Program is state-of-the-art initiative, developed by Business and Finance People (BFP). This program is designed to equip participants with in-demand analytical skills to meet the growing needs of the corporate, private, and public sectors. The primary objective is to develop competent Data Analysts who not only understand data but can also translate insights into strategic business decisions—whether for organizations or entrepreneurial ventures.

**Because data is the next currency**

Lecture	Course Outline	Learning Outcome
Week - 1		
Introduction to Data Analytics & Excel		
Session 1	<ul style="list-style-type: none"><li>What is Data Analysis?</li><li>Types of Data Analysis</li><li>Data Analysis Process</li><li>Importance of Data Analysis in Business</li><li>Introduction to course tools</li><li>Beginning with Excel</li><li>Excel interface &amp; formatting</li></ul>	<ul style="list-style-type: none"><li>Learners will understand the basics of data analysis and different data types.</li><li>They will gain confidence in using Excel for calculations and cleaning.</li><li>They will learn to prepare small datasets for reporting.</li></ul>
Session 2	<ul style="list-style-type: none"><li>Core formulas (SUM, AVERAGE, COUNT, MIN/MAX)</li><li>Logic &amp; text functions (IF, AND, OR, CONCAT, TRIM)</li><li>Lookup functions (VLOOKUP/XLOOKUP)</li><li>Data cleaning (Remove Duplicates, Text-to-Columns, Conditional Formatting)</li></ul>	
Week - 2		
Excel for Analysis & Dashboarding		
Session 1	<ul style="list-style-type: none"><li>PivotTables &amp; PivotCharts</li><li>Sorting, filtering, and data validation</li><li>KPI creation in Excel</li><li>Slicers &amp; Timelines</li><li>Dashboard layout &amp; design</li></ul>	<ul style="list-style-type: none"><li>Learners will analyze datasets using PivotTables.</li><li>They will create dashboards in Excel to present KPIs and trends.</li></ul>

Session 2	<ul style="list-style-type: none"><li>• Dashboard Creation in Excel</li><li>• Power Query Editor</li><li>• Data Analysis Tool pack and its Usage</li><li>• What is Structured Data</li><li>• Linkage with SQL</li></ul>	<ul style="list-style-type: none"><li>• They will interpret insights from Excel reports for business decisions</li></ul>
Week - 3		
SQL Fundamentals		
Session 1	<ul style="list-style-type: none"><li>• Introduction and Installation of SQL</li><li>• Introduction to databases</li><li>• SQL Basics (SELECT, FROM, WHERE, GROUP BY, etc)</li></ul>	<ul style="list-style-type: none"><li>• Learners will understand relational database concepts.</li><li>• They will write SQL queries to retrieve and summarize data.</li><li>• They will use joins to combine multiple tables for business insights.</li></ul>
Session 2	<ul style="list-style-type: none"><li>• Aggregate Functions (SUM, MIN, MAX, AVG, COUNT, MEDIAN, STDEV, DISTINCT)</li><li>• Joins (INNER, LEFT, RIGHT, OUTER)</li><li>• Nested Query</li><li>• Database Design</li></ul>	
Week - 4		
Power BI		
Session 1	<ul style="list-style-type: none"><li>• Introduction and Installation of Power BI</li><li>• Introduction to data sources</li><li>• Working of Power Query</li><li>• Data Cleaning</li></ul>	<ul style="list-style-type: none"><li>• Learners will clean and model data in Power Query.</li><li>• They will build an interactive Power BI report.</li><li>• They will create KPIs and design effective dashboard layouts.</li></ul>
Session 2	<ul style="list-style-type: none"><li>• Handling and working with DAX</li><li>• Bookmarks &amp; Buttons</li><li>• Filters and slicers</li><li>• Visualizations</li><li>• Creating a Dashboard</li></ul>	
Week - 5		
Python Fundamentals		
Session 1	<ul style="list-style-type: none"><li>• Introduction to Python</li><li>• Python Basics</li><li>• Runing and developing Python Code</li><li>• Basic Functions and Operations</li></ul>	<ul style="list-style-type: none"><li>• Learners will learn the basic of programing to strengthen their coding skills, which will help them in performing analytics using R and Python.</li></ul>
Session 2	<ul style="list-style-type: none"><li>• Lists, dictionaries, and loops (for, while)</li><li>• Functions &amp; libraries</li><li>• Defining Variables</li><li>• Handling datasets</li></ul>	
Week - 6		
Python for Data Analysis		

Session 1	<ul style="list-style-type: none"><li>• Pandas, Numpy Libraries</li><li>• ETL</li><li>• Operations (sorting, filtering, merging, pivoting)</li><li>• Feature extraction: working with dates, text, categories</li></ul>	<ul style="list-style-type: none"><li>• Learners will perform data analysis using Python’s pandas. They will clean datasets programmatically. They will generate simple visualizations for insights.</li></ul>
Session 2	<ul style="list-style-type: none"><li>• Descriptive statistics &amp; correlation analysis</li><li>• Data visualization with matplotlib &amp; seaborn (line, bar, scatter, heatmap)</li></ul>	
Week - 7		
R Programing Language		
Session 1	<ul style="list-style-type: none"><li>• Installation and Introduction to R</li><li>• What is R &amp; R Studio</li><li>• Basic Indexing</li><li>• Basic Functions on Variables</li><li>• Sub-setting in R</li><li>• Filters using Commands</li></ul>	<ul style="list-style-type: none"><li>• Learners will understand R’s role in data analysis.</li><li>• They will import and manipulate small datasets.</li><li>• They will learn Data Science and Model interpretations using Regression in R.</li></ul>
Session 2	<ul style="list-style-type: none"><li>• Histogram and Visuals</li><li>• What is Model</li><li>• Linear Regression</li><li>• Abline and R plot</li><li>• Intercept in Regression</li></ul>	
Week - 8		
R Data Analysis, & Final Project		
Session 1	<ul style="list-style-type: none"><li>• Cluster Analysis (Methodology)</li><li>• PCA (Methodology)</li><li>• Advance Analysis Algorithms (Methodology)</li></ul>	<ul style="list-style-type: none"><li>• This will help learner to identify the use case of R language in various business cases.</li></ul>
Session 2	<b>Project</b> <ul style="list-style-type: none"><li>• Power BI Interactive Dashboard Project</li></ul>	<ul style="list-style-type: none"><li>• They will build and present a professional Power BI dashboard.</li></ul>

**Who should apply:**

- Individuals and organizations motivated towards business and management.
- Open to professionals, diploma holders and graduates from all major sectors including Engineering, Banking, IT, Energy, FMCG, Education sector and many more.

- Those who wish to earn the diploma certification from an organization which is proudly accredited from IACUS (International Accredited Center of United States) and approved provider of the CPD group UK.
- “This certification is a life-long investment”, every manager could reap better benefits out of this specialized diploma program.

#### **Course Duration and timings (tentative):**

- Duration: 2 months (Available both online and in-class. In-class lectures will be held at AKTI, Bahria Town campus Lahore.)
- Weekend program, every Saturday and Sunday at 6:00 PM Pakistan Standard Time or 5:00 PM Dubai standard time)
- Starting 20<sup>th</sup> September, 2025.
- Evening program with each class duration of 1 hr. 45 min (inclusive mini breaks).
- This program will be instructed by experienced corporate sector instructors.

#### **Fee Procedure:**

- Fee: Rs 38,000. (for local participants).
- Fee should be paid prior to the start of program. The course fee is “non-refundable” under any circumstances.
- Payment instructions and account details will be shared upon successful registration confirmation.
- Specialized Certification will not be issued till all outstanding dues are cleared.
- There are no hidden charges other than the above-mentioned charges.

#### **Diploma Accreditation:**

*This diploma is awarded as part of the flagship program of “**Arfa Kareem**” in collaboration with “**Business and Finance People**”. Graduates of this prestigious program will be officially recognized as “**Certified Business Development Executive**”, gaining enhanced consideration for professional opportunities and advanced career development. Business and Finance People is accredited from “**IACUS**” (International Accreditation Center of United States) as well as the approved provider of the “**CPD group UK**” and their respective badges will be included on the final certificates as well.*



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