

QuadSync Tech Solutions

Synchronizing Innovations with Success

BECOME JOB READY IN 60 DAYS

Industry-Oriented Structured Training Program

Data Analyst

(08 Weeks)

Content

Sr. No	Syllabus
1.	Excel with AI
2.	SQL
3.	Python
4.	Python for Data Visualization
5.	Power BI
6.	2 Industry Project

Excel :

Chapter No	Topic Name	Days
Chapter 1.	Excel Basics – Interface, Ribbon, Shortcuts, Data Entry, Cell Referencing, Basic Formulas (SUM, AVERAGE, COUNT, MIN, MAX)	Day 1
Chapter 2.	Formatting & Excel Essentials – Cell Formatting, Conditional Formatting, Data Validation, Sort, Filter & Tables	Day 1
Chapter 3.	Data Cleaning – Remove Duplicates, TRIM, CLEAN, Flash Fill, Text to Columns, Find & Replace	Day 2
Chapter 4.	Logical & Text Functions – IF, IFS, AND, OR, IFERROR, LEFT, RIGHT, MID, LEN, CONCAT & TEXTJOIN	Day 2
Chapter 5.	Statistical, Date & Lookup Functions – COUNTIF, SUMIF, AVERAGEIF, RANK, TODAY, DATEDIF, VLOOKUP, XLOOKUP, INDEX & MATCH	Day 3
Chapter 6.	Pivot Tables & Dashboards – Pivot Tables, Pivot Charts, Grouping, Slicers, Timelines, KPI Cards, Interactive Dashboards & Report Design	Day 3
Chapter 7.	Excel with AI – Microsoft Copilot, Analyze Data, AI Formula Generation, ChatGPT for Excel & AI Dashboards	Day 4
Chapter 8.	Project - Based on Excel	Day 4

SQL :

Chapter No	Topic Name	Day
Chapter 1.	SQL Basics – Introduction, DBMS vs RDBMS, MySQL Setup, Creating Databases & Tables	Day 5
Chapter 2.	CRUD Operations – CREATE, INSERT, SELECT, UPDATE & DELETE	Day 5
Chapter 3.	Keys & Constraints – Primary Key, Foreign Key, Unique, NOT NULL, CHECK, DEFAULT & ALTER	Day 6
Chapter 4.	Filtering & Sorting – WHERE, Operators, ORDER BY, LIMIT, DISTINCT & Aliases	Day 6
Chapter 5.	SQL Functions – String, Numeric, Date, Aggregate Functions & GROUP BY, HAVING	Day 7
Chapter 6.	CASE Expressions & Conditional Queries	Day 7
Chapter 7.	Joins – INNER, LEFT, RIGHT, FULL, SELF & CROSS JOIN	Day 8
Chapter 8.	Window Functions – ROW_NUMBER(), RANK(), DENSE_RANK(), LEAD(), LAG(), PARTITION BY	Day 8
Chapter 9.	Set Operations & Advanced Queries – UNION, UNION ALL, INTERSECT, EXCEPT, Subqueries & CTEs	Day 9
Chapter 10.	Pivot & Unpivot, Views, Indexes & Query Optimization Basics	Day 9
Chapter 11.	SQL with AI – ChatGPT for SQL, AI Query Generation, Query Optimization, AI Data Analysis	Day 10
Chapter 12.	Project – Based on Excel	Day 10

Python Programming Fundamentals:

Chapter No	Topic Name	Day
Chapter 1.	Python Basics – Installation, Variables, Data Types, Input/Output & Basic Syntax	Day 11
Chapter 2.	Operators, User Input, Type Casting, Expressions & Decision Making	Day 12
Chapter 3.	Conditional Statements – if, elif, else, Nested Conditions & Logical Operators	Day 13
Chapter 4.	Loops – for, while, break, continue, Nested Loops & Loop Control	Day 14
Chapter 5.	Strings – String Methods, Indexing, Slicing, Formatting & String Operations	Day 15
Chapter 6.	Collections – Lists, Tuples, Sets, Dictionaries, Modules & Built-in Functions	Day 16
Chapter 7.	Functions – User-Defined Functions, Lambda, Recursion, Scope & Function Arguments	Day 17
Chapter 8.	File Handling, Exception Handling, Packages & Working with Files	Day 18
Chapter 9.	Object-Oriented Programming – Classes, Objects, Inheritance, Polymorphism & Virtual Environments	Day 19
Chapter 10.	Project – Build a Real-World Python Application using Core Python Concepts	Day 20

Python for Data Analytics (EDA), Visualization & AI:

Chapter No	Topic Name	Day
Chapter 1.	NumPy Basics – Arrays, Indexing, Slicing, Reshaping & Mathematical Operations	Day 21
Chapter 2.	NumPy Advanced – Broadcasting, Aggregation, Statistics, Random Module & Linear Algebra	Day 22
Chapter 3.	Pandas Basics – Series, DataFrames, Import/Export, Indexing & Selection	Day 23
Chapter 4.	Pandas Advanced – Data Cleaning, Missing Values, Filtering, GroupBy, Merge & Pivot Tables	Day 24
Chapter 5.	Matplotlib – Line, Bar, Pie, Scatter, Histogram & Chart Customization	Day 25
Chapter 6.	Seaborn – Statistical Plots, Heatmaps, Pair Plots, Box Plots & Correlation Analysis	Day 26
Chapter 7.	Exploratory Data Analysis (EDA) – Data Cleaning, Descriptive Statistics, Outlier Detection & Feature Analysis	Day 27
Chapter 8.	Data Visualization – Dashboards, Interactive Charts, KPI Visualization & Data Storytelling	Day 28
Chapter 9.	Python with AI – ChatGPT for Python, AI Code Generation, Prompt Engineering & AI Insights	Day 29
Chapter 10.	Project – Build a Real-World Data Analytics Project using Python, NumPy, Pandas, Matplotlib, Seaborn & AI	Day 30

PowerBI:

Chapter No	Topic Name	Day
Chapter 1.	Power BI Basics – Installation, Interface, Data Sources, Import Data & Power BI Workflow	Day 31
Chapter 2.	Data Transformation – Power Query Editor, Data Cleaning, Shaping, Merging & Appending Data	Day 31
Chapter 3.	Formatting & Visuals – Report Formatting, Themes, Tables, Cards & Basic Visualizations	Day 32
Chapter 4.	Charts & Visualizations – Waterfall, Funnel, Scatter, Treemap, Gauge, Line, Pie, Maps, Matrix, KPI Cards & Custom Visuals	Day 32
Chapter 5.	DAX Fundamentals – Calculated Columns, Measures, Variables & Common DAX Functions	Day 33
Chapter 6.	Advanced DAX – CALCULATE, FILTER, Time Intelligence, Ranking & Context Functions	Day 33
Chapter 7.	Data Modeling – Relationships, Star Schema, Hierarchies, Drill Down, Drill Through & Tooltips	Day 34
Chapter 8.	Interactive Dashboards – Slicers, Bookmarks, Selections, Navigation Buttons, Report Design & Dashboard Optimization	Day 34
Chapter 9.	Power BI Service – Publishing, Sharing, Workspaces, Scheduled Refresh, Collaboration & Row-Level Security (RLS)	Day 35
Chapter 10.	Project – Build an Interactive Dashboard using Power BI, DAX & Power BI Service	Day 35