

3-Month (12-Week) Data Analyst Course Curriculum

Module 1: Advanced Excel for Data Analysis

Subheading: Data Manipulation, Business Analysis & Reporting

Week 1

- Excel Interface, Shortcuts, Productivity Techniques
- Lookup Functions (VLOOKUP, XLOOKUP, INDEX–MATCH)
- Text, Logical, Date Functions

Week 2

- Pivot Tables & Pivot Charts
 - Conditional Formatting, Data Validation
 - Excel Dashboards & KPI Design
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Module 2: SQL for Data Extraction & Database Querying

Subheading: Relational Databases, Query Writing & Data Retrieval

Week 3

- SQL Basics: SELECT, WHERE, ORDER BY
- JOINS (INNER, LEFT, RIGHT, FULL)
- GROUP BY, HAVING, Aggregations

Week 4

- Subqueries
 - Window Functions (ROW_NUMBER, RANK, LAG, LEAD)
 - CTEs + Real Dataset Hands-On
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Module 3: Python for Data Analysis

Subheading: Data Cleaning, Analysis & Automation Using Python

Week 5

- Python Basics (Syntax, Variables, Loops)
- Pandas & NumPy Fundamentals
- Data Cleaning (Nulls, Duplicates, Outliers)

Week 6

- Data Transformation & Aggregation
 - Exploratory Data Analysis (EDA)
 - Matplotlib & Seaborn Visualizations
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Module 4: Tableau for Data Visualization

Subheading: Dashboarding, Storytelling & Business Reporting

Week 7

- Tableau Interface & Basic Charts
- Filters, Groups, Sets, Parameters
- Calculated Fields & Joins/Blends

Week 8

- Advanced Charts (Maps, Tree Maps, Dual Axis)
 - Dashboard Design Principles
 - Storytelling & Business Insights
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Module 5: Power BI for Business Intelligence

Subheading: Data Modeling, DAX & Interactive Reporting

Week 9

- Power Query & Data Cleaning
- Data Modeling & Relationships
- DAX Basics (SUM, CALCULATE, FILTER)

Week 10

- Time Intelligence DAX
- Slicers, Filters, Bookmarks
- Designing Interactive Reports

Module 6: Case Studies & Capstone Project

Subheading: End-to-End Business Analytics & Portfolio Building

Week 11

- Real-World Case Study (Excel + SQL + Python + BI tool)
- KPI Analysis & Insights Generation
- Mock Interviews + Resume Building

Week 12

- Capstone Project (End-to-End Data Analysis Pipeline)
- Dashboard Presentation (Power BI/Tableau)
- Final Evaluation + Portfolio Submission