
COURSE CONTENTS- ADVANCED EXCEL & SQL COURSE

Module 1: Foundations and Bridging the Gap

- **Excel Review and Refresher:**
 - Core formulas and functions (SUM, VLOOKUP, AVERAGE, etc.)
 - Data organization and cleaning techniques
 - Conditional formatting and basic charting

Module 2: Introduction to SQL

- Database concepts (tables, columns, rows)
- Basic SELECT queries and data retrieval
- Filtering and sorting data with WHERE and ORDER BY clauses

Module 3: Connecting Excel and SQL

- Importing data from Excel into SQL databases
- Exporting data from SQL databases to Excel spreadsheets
- Understanding data types and compatibility between tools

Module 4: Deep Dive into Advanced Excel

Formula Mastery

- Nested functions and complex calculations
- Advanced lookup and reference functions (INDIRECT, INDEX/MATCH)
- Custom UDFs for automating repetitive tasks
- Error handling and data validation techniques

Module 5: Data Analysis and Visualization:

- PivotTables and Power Pivot for multi-dimensional data analysis
- Dynamic dashboards and charts with conditional formatting and sparklines
- Advanced charting techniques (waterfall, Gantt, scatter plots)
- Power Query and Get & Transform tools for data cleansing and shaping

Module 6: Diving Deeper into SQL

- **Intermediate SQL Skills:**
 - JOINS (inner, outer, cross) for combining data from multiple tables
 - Subqueries and CTEs for complex data manipulation
 - Functions and aggregates (COUNT, SUM, AVG) for data summarization
 - Grouping and filtering data with GROUP BY and HAVING clauses

Module 7: Putting It All Together

Real-World Data Projects:

- Choose projects that integrate both Excel and SQL skills (financial analysis, market research, etc.)
- Design project scope, objectives, and data requirements
- Utilize advanced Excel formulas and tools for data preparation and cleaning
- Leverage SQL queries to extract and analyze relevant data
- Create clear and insightful reports and visualizations in Excel

Module 8: Project Presentations and Feedback:

- Present project findings and learnings to peers or instructors
- Receive feedback, assess strengths and weaknesses, identify areas for improvement