COURSE SYLLABUS

Data Analytics with Excel, SQL & Tableau Course (Self-Paced)

Master the industry-standard tools and programming languages used by Data Analysts, including Excel, SQL, and Tableau, in this comprehensive classroom training program. Gain hands-on experience working on real-world projects and learn to organize, analyze, summarize, and visualize data to present actionable insights.

> Group classes (Live Online) and onsite training are available for this course. For more information, email onsite@graduateschool.edu or visit: https://www.graduateschool.edu/courses/data-analytics-with-excel-sql-tableau-course-self-paced



support@graduateschool.edu •
(888) 744-4723

Course Outline

This package includes these courses

- Beginner Excel Course (Self-Paced) (6 Hours)
- Intermediate Excel Course (Self-Paced) (6 Hours)
- Advanced Excel Course (Self-Paced) (6 Hours)
- SQL Level I (Self-Paced) (6 Hours)
- SQL Level II (Self-Paced) (6 Hours)
- SQL Level III (Self-Paced) (6 Hours)
- Tableau Level I Course (Self-Paced) (6 Hours)
- Tableau Level II Course (Self-Paced) (6 Hours)

Beginner Excel Course (Self-Paced)

In this beginner Excel workshop, you'll learn the essentials of Microsoft Excel, including calculations, basic functions, graphs, formatting, and printing. This basic Excel class is perfect for those with limited experience looking to expand their proficiency.

- Become familiar with the interface and data entry
- Learn essential formulas and functions
- Format and print your work
- Create charts, including line, column, and pie charts
- Learn tips and tricks for easy workbook management
- Review key concepts in a final project

Intermediate Excel Course (Self-Paced)

- Learn to split and join text, apply data validation, and create named ranges
- Use database functions such as VLOOKUP and HLOOKUP
- Write logical formulas using AND, OR, and IF functions
- Create Pivot Tables to efficiently summarize and analyze large datasets
- Apply statistical functions such as RANK, COUNTIFS, and SUMIFS
- Build advanced combo charts by combining multiple chart types
- Reinforce key concepts through a guided final project

Advanced Excel Course (Self-Paced)

- Cell management, including cell locking, auditing, and hot keys
- Special formatting for calculating dates
- Use advanced functions and advanced analytical tools
- Record macros and relative reference macros for ad hoc reporting

SQL Level I (Self-Paced)

- Understand core database concepts, including tables, rows, columns, and different types of SQL
- Connect to databases and navigate SQL Server Management Studio using tools like Object Explorer and Query Editor
- Write SELECT statements to retrieve data, specify columns, sort results, and remove duplicates
- Use WHERE, AND, OR, IN, and NOT clauses to filter data and apply pattern matching with wildcard characters
- Explore data types, comparison operators, and case sensitivity to refine queries with greater control
- Learn to join tables using INNER JOIN and understand relational database concepts through ER diagrams and table aliases

SQL Level II (Self-Paced)

This intermediate SQL course helps you expand your data analysis and manipulation skills with advanced querying techniques.

- Compare INNER and OUTER JOIN types, and use LEFT, RIGHT, and FULL JOINs to combine data across tables
- Identify and work with NULL values to ensure complete and accurate data analysis
- Use the CAST function to convert data types, making your queries more flexible
- Perform calculations with aggregate functions like SUM, COUNT, AVG, MAX, and MIN to summarize data
- Apply date functions to extract, format, and compare dates for time-based analysis
- Group results using GROUP BY and filter grouped data with the HAVING clause for advanced segmentation

SQL Level III (Self-Paced)

- Write subqueries to create layered queries using single-value, multi-value, and table-value structures
- Use window functions with OVER and PARTITION BY to apply aggregate logic across rows without grouping
- Implement conditional logic with CASE and IIF statements to dynamically transform query results
- Manipulate text data using string functions like SUBSTRING, CHARINDEX, UPPER, and more
- Apply self-joins to compare records within the same table and understand their structure and use cases
- Build and query views, user-defined functions, and stored procedures to modularize your SQL code

Tableau Level I Course (Self-Paced)

- Understand the types, formats, and sources of data, and how to connect them to Tableau
- Create foundational visualizations such as bar charts, line graphs, and treemaps using the “Show Me” panel
- Use built-in functions and custom calculations to analyze and manipulate your data within visualizations
- Clean and organize raw data using tools like the Data Interpreter, pivot features, and filters
- Build interactive dashboards and stories that combine multiple views for dynamic storytelling
- Format and publish your visualizations to Tableau Cloud, or export them for sharing and presentation

Tableau Level II Course (Self-Paced)

This advanced Tableau course is designed for users ready to elevate their data visualization skills with custom charts, interactive dashboards, and powerful geographic mapping tools. Learn to work with complex datasets and tailor your visualizations for deeper insights and dynamic storytelling.

- Format geographic data and build a variety of interactive map types, including heat maps, spider maps, and choropleth maps
- Integrate custom visuals using background images, polygon data, and Mapbox maps for enhanced design and functionality
- Create advanced charts such as dual-axis (layered) maps, alluvial diagrams, ranking visuals, and circular area charts
- Add interactivity to dashboards through sheet swapping, filtering actions, and dynamic content controls
- Track and display time-based data trends spatially using map animations and proportional symbols
- Prepare and publish high-quality map visualizations for presentation, sharing, and Tableau Cloud distribution