COURSE SYLLABUS

Data Analytics Technologies Bootcamp (Self-Paced)

Get comfortable with the industry-standard tools and programming languages Data Analysts rely on, including Excel, SQL, and Tableau, through this comprehensive training program. You'll gain hands-on experience working on real-world projects and learn to organize, analyze, summarize, and visualize data to present insights people can actually act on.

> Group classes (Live Online) and onsite training are available for this course. For more information, email corporate@nobledesktop.com or visit: https://www.nobledesktop.com/classes/data-analytics-technologies-self-paced

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Course Outline

This package includes these courses

- Excel Level I: Fundamentals Course Online (Self-Paced) (6 Hours)
- Excel Level II: Intermediate Course Online (Self-Paced) (6 Hours)
- Excel Level III: Advanced Course Online (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 (Self-Paced) (6 Hours)
- Tableau Level II (Self-Paced) (6 Hours)

Excel Level I: Fundamentals Course Online (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

Excel Level II: Intermediate Course Online (Self-Paced)

Learn intermediate Excel functions like VLOOKUP and SUMIFS, and how to summarize data with Pivot Tables, Sort & Filter databases, and split and join text. Gain the skills needed to utilize complex Excel functions and prepare for more advanced training.

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

Excel Level III: Advanced Course Online (Self-Paced)

Learn advanced Excel functions, macros, and data analysis to improve efficiency and manage complex data in any job setting. This advanced course is ideal for Excel power-users.

- 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)

Learn the fundamentals of SQL and relational databases, including syntax, database tables, and query writing. This course covers filtering results, using joins to combine data, and exploring databases through SQL Server Management Studio.

- 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 expands your ability to analyze and manipulate data through advanced querying techniques. Learn to work with joins, data types, aggregate functions, and date/time operations to uncover deeper insights and organize complex datasets.

- 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 and make 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 using the HAVING clause for advanced segmentation

SQL Level III (Self-Paced)

Take your SQL skills to the next level in this advanced course, where you'll explore subqueries, views, variables, functions, stored procedures, and more. Deepen your understanding of SQL techniques to prepare for roles in data analysis, data science, and database management.

- 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 (Self-Paced)

This beginner Tableau course introduces the fundamentals of data visualization and provides hands-on practice creating meaningful charts, dashboards, and stories using Tableau Public. You'll learn how to connect to data, clean and organize it, and transform raw information into visuals that support insight and better decision-making.

- Understand common data types, formats, and sources, and learn how to connect them to Tableau
- Create essential visualizations such as bar charts, line charts, and treemaps using the Show Me panel
- Analyze data with built-in functions and custom calculations directly within your visualizations
- Clean and structure datasets using tools like the Data Interpreter, pivoting, and filters
- Design interactive dashboards and stories by combining multiple views for dynamic storytelling
- Format, publish, and share your work through Tableau Cloud or export visuals for presentations

Tableau Level II (Self-Paced)

This advanced Tableau course is built for users who want to take their data visualization skills further by creating custom charts, interactive dashboards, and rich geographic visualizations. You'll work with complex datasets and learn how to design tailored visuals that support deeper analysis and more compelling data storytelling.

- Format geographic data and create interactive map types such as heat maps, spider maps, and choropleth maps
- Enhance visual design and functionality with background images, polygon data, and Mapbox maps
- Build advanced charts, including dual-axis maps, alluvial diagrams, ranking visuals, and circular area charts
- Add dashboard interactivity with sheet swapping, filtering actions, and dynamic controls
- Visualize time-based trends using map animations and proportional symbols
- Prepare and publish polished map visualizations for presentations, sharing, and Tableau Cloud