COURSE SYLLABUS

SQL Server Certification (Self-Paced)

Gain practical SQL skills in this hands-on certification program, where you'll learn to write queries, manage data, and analyze results using Microsoft SQL Server.

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/sql-server-certification-self-paced



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Course Outline

This package includes these courses

- SQL Level I (Self-Paced) (6 Hours)
- SQL Level II (Self-Paced) (6 Hours)
- SQL Level III (Self-Paced) (6 Hours)

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