

# SQL Beginner to Advanced Training Curriculum



## SQL Training Topics

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Database structure

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Order by

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Where

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Having

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- Wildcard conditional operators
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Aggregate functions

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Date functions

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Joins (Left, Right, Inner, and Full)

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Calculated fields

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Text, dates, and numeric data types

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Cast

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Subqueries

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Unions

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Group By

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Case statements

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## Training Syllabus

### Database Structure and Data Types

Overview of relational databases, data flow, and review common SQL terms

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Database, schema, and tables overview

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### Retrieving Data from a Single Table

Retrieve data from a single table via the utilization of **SELECT** and **FROM** statements

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Sorting data using **ORDER BY** statements

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Extract various date-based data from date fields

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### Filtering, Calculating, and Aggregating Data

Utilize conditional operators to filter data using **WHERE** and **HAVING** statements

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Perform mathematical operations on multiple fields via calculated fields

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Calculate formulas using **aggregate functions**

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Summarize aggregated data by categories while using **GROUP BY**

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## Training Syllabus

### Retrieving Data from Multiple Tables

Retrieve data from at least 4 - 8 tables using various forms of **JOINS**

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### Data Conversion

Conversion of various data types via **CAST** (text, dates, numeric, etc.)

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### Appending Multiple Query Results

Utilize **UNION** to combine multiple query results into one consolidated list

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### Embedding Multiple Queries in One Query

Utilize **SUBQUERIES** to write multiple queries into one subset

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### Logic Statements

Apply logic statements (If/then) to table data via **CASE** statements

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**DATA TELLS A STORY. BE THE STORYTELLER**