

# Course Outline | SQL Introduction to Querying

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2 day(s)

## Overview

Students will learn what SQL is and how it can help them query a database to answer business questions.

## Target Student

Students should be familiar with the components that make up the PC, including input, output, and storage devices. They should also be familiar with concepts related to database structure and terminology.

## Benefits

Students will learn how to use SQL statements to query a database.

## Prerequisites

Windows Introduction or equivalent knowledge.

## Course Outline

Introduction to databases and SQL

- Database concepts
- Understanding SQL concepts

Introduction to the SELECT statement

- An overview of the SELECT statement
- Syntax rules you'll want to know

Calculating data

- Aggregate functions
- Column aliases
- Performing calculations
- Date functions

Selecting specific rows

- The WHERE clause
- The ORDER BY clause

Working with other operators

- Searching for text
- Logical operators
- NULLs

Grouping data

- The GROUP BY clause
- The HAVING clause
- Comparing the WHERE and HAVING clauses

Multi-table queries

- Joins
- Joining tables
- Outer joins

Querying a database using Access

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- Connecting to a database
- Querying a database
- Generating a report of the data

## Querying with unions and advanced joins

- Querying multiple tables with unions
- Advanced Joins
- Calculating with COMPUTE

## Querying with subqueries

- Subqueries

## Adding data

- Inserting data
- SELECT INTO

## Updating and removing data

- Updating records
- Deleting records
- Deleting the contents of tables

## Manipulating tables and views

- Creating tables
- Modifying tables
- Deleting tables
- Adding and removing views

## Manipulating indexes

- Adding and removing indexes

## Ensuring data integrity with transactions

- Transactions

## Creating databases

- Creating a database with SQL
- Deleting a database