COURSE SYLLABUS

SQL Level 3

This advanced course will take your SQL skills to the next level, where you will learn about subqueries, views, variables, functions, stored procedures, and more. Gain a deeper understanding of SQL techniques that will better prepare you for roles in data analysis, data science, and working with data in databases.

> Group classes (Live Online) and onsite training are available for this course. For more information, email onsite@graduateschool.edu or visit: https://sdfm.graduateschool.edu/courses/sql-level-3



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Course Outline

Advanced Query Techniques

Subqueries

- Subqueries: Queries within queries
- Single-Value vs Multi-Value vs Table-Value Subqueries

Aggregate Window Functions

Using OVER and PARTITION BY to apply Aggregate Functions

Conditionals with CASE

- Adding If-Else Logic with CASE
- Simple CASE vs Searched CASE
- IIF (Inline IF)

String Functions

- Manipulating text using string functions
- Using SUBSTRING, LEFT/RIGHT, CHARINDEX, UPPER, etc.
- Combining with Inline IF statements (IIF)

Self Join

- How a Self Join is different from other types of joins
- Using a Self Join

Views, Functions, & Stored Procedures

Using Views

- What are Views?

- The Advantages & Disadvantages of using Views
- How to Use & Query a View

User-Defined Functions with Parameters

- Using Scalar-Value (Single-Value) Functions
- Using Table-Value Functions

Executing Stored Procedures

- The difference between Views, Functions, and Stored Procedures
- Using Stored Procedures