

# 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 in Live Online and onsite training is available for this course. For more information, email [onsite@graduateschool.edu](mailto: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