

# T-SQL using Microsoft SQL Server 2005 (3 Days) GWE10000

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GWE Course # 10000 (release 02/08)

3 Days

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## ***Table of Contents***

[Introduction](#)

[Prerequisites](#)

[Course Description](#)

[Course Summary](#)

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## ***Introduction***

This 3 day instructor led course provides students with a solid understanding of T-SQL. This course concentrates Transact SQL syntax such as Select, Insert, Update, and Delete statements. This course also discusses real world subjects like Stored Procedures, User-defined Functions and more. It is designed as a hands-on, lab intensive course.

[Back to top](#)

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## ***Prerequisites***

- There are no pre-requisites for this class

[Back to top](#)

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## ***Course Description***

At the end of this course, students will be able to recognize and implement Transact SQL (T-SQL) statements including Select, Insert, Update and Delete statements. They will

also be able to determine when critical items like Store Procedures should be used. Students will learn to translate English into T-SQL. Students will also learn to use many of the built-in functions such as string manipulation functions, datetime functions and other useful functions that are available in SQL Server 2005. Students will learn through lecture and intensive hands-on labs. This course will benefit anyone desiring to have a solid working knowledge of Transact SQL (T-SQL).

[Back to top](#)

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## **Course Summary**

The outline for this course contains the following:

### ***Part 1: What we need to know before learning to write queries***

- **Introduction to Microsoft SQL Server 2005**
  - Overview of items we will need for this course:
    - Microsoft SQL Server Management Studio (SSMS)
    - Connecting to a server
    - The Object Explorer
    - The Query Window
    - Creating a Project / Solution
- **Overview of Relational Data**
  - Tables
  - Data types overview
  - Relationships overview
  - Database Diagrams
  - Schemas

### ***Part 2: Retrieving and Manipulating Data***

- **Select Statements**
  - SELECT List
    - Using an Alias for column names
  - FROM Clause
  - WHERE Clause
    - IN operator
    - BETWEEN operator
    - LIKE operator
    - AND / OR / NOT operators
  - ORDER BY Clause
  - TOP keyword

- **Useful T-SQL Functions**
  
- **Joining Multiple Tables**
  - JOIN Operator
  - LEFT / RIGHT / OUTER JOIN
  - UNION
  
- **Grouping and Summarizing Data**
  - Working with Aggregate Functions
  - GROUP BY Clause
  - HAVING Clause
  - COMPUTE and COMPUTE BY
  
- **Using Subqueries**
  - Subqueries as expressions
  - Subqueries as Tables
  - Correlated Queries
  - EXIST Clause

***Part 3: Inserting, Updating and Deleting Data***

- **INSERT statements**
- **UPDATE statements**
- **DELETE statements**

***Part 4: Advanced T-SQL Topics***

- **Stored Procedures**
- **Views**
- **User Defined Functions Overview**
- **Triggers Overview**
- **Advanced T-SQL Functions**

***Part 5: Overview of Microsoft SQL Server 2005 (If Time Permits)***

- **Query Performance Overview**
- **Query Execution Plans**
- **Administration Overview**
- **Implementing Overview**
- **SSRS Described**
- **SSIS Described**
- **SSAS Described**

[Back to top](#)