

# GWE10704: Microsoft SQL Server 2005 Bootcamp: T-SQL and SQL Programming

## Microsoft SQL Server 2005 Bootcamp: T-SQL and SQL Programming

### Course Description:

This 5-day, instructor-led bootcamp provides students with a solid understanding of T-SQL combined with the knowledge and skills needed to implement a SQL Server 2005 database. This training is for individuals who are new to 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 bootcamp.

### Who Should Attend:

This course is intended for IT Professionals who want to become skilled on T-SQL and SQL Server 2005 product features and technologies for implementing a database.

### Course Modules:

(T-SQL)

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

#### **Introduction to Microsoft SQL Server 2005**

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

**(Implementing a SQL Server 2005 Database)**

#### **Creating Databases and Database Files**

Creating Databases  
Creating Filegroups

Creating Schemas  
Creating Database Snapshots  
Lab : Creating Databases and Database Files  
Creating a Database  
Creating Schemas  
Creating a Database Snapshot

### **Creating Data Types and Tables**

Creating Data Types  
Creating Tables  
Creating Partitioned Tables

### **Using XML**

Retrieving XML by Using FOR XML  
Shredding XML by Using OPENXML  
Introducing XQuery  
Using the xml Data Type

### **Creating and Tuning Indexes**

Planning Indexes  
Creating Indexes  
Optimizing Indexes  
Creating XML Indexes

### **Implementing Data Integrity by Using Constraints**

Data Integrity Overview  
Implementing Constraints

### **Implementing Data Integrity by Using Triggers and XML Schemas**

Implementing Triggers  
Implementing XML Schemas

### **Implementing Views**

Introduction to Views  
Creating and Managing Views  
Optimizing Performance by Using Views

### **Implementing Stored Procedures**

Implementing Stored Procedures  
Creating Parameterized Stored Procedures  
Working With Execution Plans  
Handling Errors

### **Implementing Functions**

Creating and Using Functions  
Working with Functions

Controlling Execution Context

**Managing Transactions and Locks**

Overview of Transactions and Locks

Managing Transactions

Understanding SQL Server Locking Architecture

Managing Locks