Course Description
This course is an online SQL Server programming course for Microsoft SQL Server versions 2008 and 2008 R2. This course features comprehensive coverage of nearly all things SQL programming related including stored procedures, data types, variables, triggers, views, and functions. We also cover hot topics like object-relational modeling (ORM), common database design issues, and working with .NET and the CLR. This course also makes extensive use of LearnItFirst’s video exercises which include complete walk-throughs of the solutions (and come with the .sql files containing both the problems and the solutions).

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Chapter 6 - Inserting, Updating, and Deleting Data
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Pricing and Multi-User Licensing
LearnItFirst’s courses are priced on a per user, per course basis. Volume discounts start for as few as five users. Please visit our website or call us at +1(877) 630-6708 for more information.

$99.95 per user

- Purchasing this course allows you access to view and download the videos for one full year
- Course may be watched as often as necessary during that time
Who Is This Course Designed For?

This course is designed for someone who has at least a basic understanding of SQL and SELECT statements. This course will help you gain a solid understanding of when to use SQL Server Analysis Services as well as a solid foundation on how to get your first cubes and databases created. Prior working experience with SQL Server 2000, SQL Server 2005, or SQL Server 2008 will help you get the most out of this course.

Pre-Requisites

While a true beginner could take this course, it is actually recommended that you have at least a solid understanding of the SELECT statement prior to taking this course. If you have taken LearnItFirst’s Course 160: ‘Writing Queries for SQL Server’, you are set!

About the Instructor

Scott Whigham is the founder of LearnItFirst.com, one of the web’s most extensive video training libraries focusing on technical training. Scott is also an experienced consultant, trainer, and author with more than a decade of hands-on experience working with SQL Server databases, writing and debugging applications using Visual Studio, and performance tuning. Scott designed the architecture (websites, class libraries, and database) for the LearnItFirst.com websites and, most recently, was involved in upgrading the websites and support applications from Visual Studio 2005 to Visual Studio 2008 and to SQL Server 2008. Before founding LearnItFirst, Scott had been an independent consultant since 1998 focusing on SQL Server and .NET performance tuning and data warehousing. Scott has been asked to speak and train at events in the United States and Europe. As an author, Scott has written courses on SQL Server and C# and VB languages as well as popular articles for top-selling magazines and the MSDN (Microsoft Developer Network) library.

Frequently Asked Questions

• “How do I access the videos?” You can access the videos 24/7 online via our website
• “Do I have to have internet access to watch the videos?” No! Users can download the videos to their hard drive.
• “How long are the videos?” The videos are broken into 10 minute task-oriented segments designed to teach you a single task
• “How many videos are in a course?” It depends on the topic; courses can have anywhere from 20 - 200 videos!

For More Details

Visit http://www.learnitfirst.com/Course/165/SSAS-2008.aspx for more information and to watch free sample videos from this course.
Transact-SQL Programming: SQL Server 2008/R2

- CourseId: 161  •  Skill level: 100-500  •  Run Time: 51+ hours (235 videos)

51+ hours of instructor-led training!

Videos in this course:

**Chapter 1: Course Introduction and How to Get Started**

1.1 - Course Introduction - What Is Covered in this Course?
1.2 - Who Should Take this Course?
1.3 - How to Get the Most Out of this Course, Part 1
1.4 - How to Get the Most Out of this Course, Part 2
1.5 - How the Exercises Are Designed to Help You
1.6 - SQL Coding Conventions and T-SQL Coding Conventions, Part 1
1.7 - SQL Coding Conventions and T-SQL Coding Conventions, Part 2
1.8 - What Versions of SQL Server Does this Course Use?
1.9 - For the Newbies: SQL Server Versions and How to Get/Install

**Chapter 2: T-SQL Fundamentals: Data Types, Conversion, IF, and Variables**

2.1 - Chapter Introduction: What is Included in this Chapter
2.2 - What SQL Is and Isn’t
2.3 - Terms You Should Know Before Taking this Course
2.4 - What is Transact-SQL and How Does It Fit?
2.5 - An Overview of SQL Server Management Studio, Part 1
2.6 - An Overview of SQL Server Management Studio, Part 2
2.7 - Using the SQL Server Configuration Manager (Instances, Aliases, and Protocols)
2.8 - Basics of Transact-SQL: Batches, Scripts, GO, and Statements
2.9 - Writing IF and PRINT Statements
2.10 - Multiple Conditions in IF Statements
2.11 - Exercise 01: Writing Basic SQL
2.12 - SQL Server Data Types: An Overview
2.13 - How to Declare and Initialize Variables
Videos in this course (cont.):

Chapter 2: T-SQL Fundamentals: Data Types, Conversion, IF, and Variables (cont.)

2.14 - Overview of SQL Server Data Types: Text, Unicode, and Collations
2.15 - Overview of SQL Server Data Types: Numbers
2.16 - Overview of SQL Server Data Types: Date and Time
2.17 - Overview of SQL Server Data Types: Time Zone Aware Dates
2.18 - Overview of SQL Server Data Types: CLOBs and BLOBs
2.19 - Overview of SQL Server Data Types: User-Defined Data Types
2.20 - Type Conversion: Converting Strings and Unicode Data
2.21 - Type Conversion: Converting Numbers to Strings (and Vice Versa), Part 1
2.22 - Type Conversion: Converting Numbers to Strings (and Vice Versa), Part 2
2.23 - Useful Date and Time Functions to Help with Conversions

Chapter 3: Creating Tables and Other Permanent Objects

3.1 - Chapter Introduction: What is Included in this Chapter
3.2 - GUI vs. Hand-Writing: Why Should I Bother Learning to Script It?
3.3 - Scripting in the GUI: Easy Way to Learn TSQL Scripting?
3.4 - The CREATE TABLE Syntax
3.5 - Collations: What They Are and Why They Matter
3.6 - NULL or NOT NULL?
3.7 - Thoughts on Money and Decimal Data Types
3.8 - Primary Keys: What, Why, and How
3.9 - Identity Columns and Surrogate Keys, Part 1
3.10 - Identity Columns and Surrogate Keys, Part 2
3.11 - Identity Columns and Surrogate Keys, Part 3
3.12 - SQL Server Schemas: What They Are and How to Use Them
Videos in this course (cont.):

Chapter 3: Creating Tables and Other Permanent Objects (cont.)

3.13 - Exercise 01: Creating Tables in T-SQL
3.14 - Modifying Your Table: Adding and Removing Columns
3.15 - Computed Columns (a.k.a. Derived Columns)
3.16 - ALTER TABLE: A Cautionary Tale...
3.17 - Exercise 02: Adding and Removing Columns
3.18 - SQL Constraints: Should You Use Server or Client-Side Constraints?
3.19 - Types of SQL Constraints
3.20 - Creating DEFAULT Constraints
3.21 - Creating CHECK Constraints
3.22 - Should I Use a UNIQUE Constraint or a Primary Key?
3.23 - Foreign Keys: What They Are and How to Use Them, Part 1
3.24 - Foreign Keys: What They Are and How to Use Them, Part 2
3.25 - Creating Database Diagrams to Help Visual Minds
3.26 - Exercise 03: Adding in Server-Side Constraints
3.27 - Exercise 04: Creating Foreign Keys
3.28 - Synonyms in SQL Server
3.29 - Creating and Managing Temporary Tables (a.k.a. Temp Tables)
3.30 - Creating and Managing Table Variables
3.31 - SELECT INTO to Create Tables
3.32 - Implementing EAV Models in SQL (Entity-Attribute-Value)

Chapter 4: Views and User-Defined Functions

4.1 - Chapter Introduction: What is Included in this Chapter
4.2 - What are Views and How Can You Use Them?
4.3 - The Four Steps SQL Server Goes Through to Run Your Query
Transact-SQL Programming: SQL Server 2008/R2

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Videos in this course (cont.):

Chapter 4: Views and User-Defined Functions (cont.)

4.4 - The Basics of Execution Plans and SHOWPLAN
4.5 - Viewing Execution Statistics
4.6 - Why Are We Talking About This Now?
4.7 - Using Views for Cell-Based and Row-Level Security
4.8 - Exercise 01: Creating Views
4.9 - User-Defined Functions: What They Are and Why I Love ‘Em, Part 1
4.10 - User-Defined Functions: What They Are and Why I Love ‘Em, Part 2
4.11 - Creating Scalar UDFs: The Syntax and Basics
4.12 - Passing Parameters to UDFs
4.13 - Using Scalar Functions in CHECK and DEFAULT Constraints
4.14 - Real World Scalar UDFs: Working with Dates
4.15 - Real World Scalar UDFs: Working with Strings
4.16 - Exercise 02: Creating Scalar UDFs
4.17 - Inline UDFs: The Syntax and Basics
4.18 - Inline UDF or a View: Which Should You Use?
4.19 - Multistatement UDFs: The Syntax and Basics
4.20 - Real World Multistatement UDF: Building a Time Table-Valued Function
4.21 - Real World Multistatement UDF: Building a Numbers UDF and a Split() Function
4.22 - Exercise 03: Creating Table-Valued UDFs: Inline
4.23 - Exercise 04: Creating Table-Valued UDFs: Multistatement
4.24 - ORDER BY in Table UDFs and Views
4.25 - How to Encrypt Your Source Code

Viewed?
## Videos in this course (cont.):

**Chapter 5: Indexes and Statistics: Design, Creation, and Maintenance**

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<thead>
<tr>
<th>Video</th>
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<tbody>
<tr>
<td>5.1</td>
<td>Chapter Introduction: What is Included in this Chapter</td>
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<tr>
<td>5.2</td>
<td>What are Statistics in SQL Server?</td>
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<td>5.3</td>
<td>How to View the Stats In Your Database</td>
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<tr>
<td>5.4</td>
<td>How to Create Statistics Automatically and Manually</td>
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<td>5.5</td>
<td>Introduction to Indexes</td>
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<td>5.6</td>
<td>Clustered Indexes, Nonclustered Indexes, and Heaps</td>
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<td>5.7</td>
<td>How SQL Server Uses Indexes in Queries</td>
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<td>5.8</td>
<td>What Effect Does Adding a Nonclustered Index Have?</td>
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<td>5.9</td>
<td>How to Know Which (If Any) Index a Query Is Using</td>
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<td>5.10</td>
<td>CREATE INDEX Syntax</td>
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<td>5.11</td>
<td>SARGability: How to Determine What Indexes You Need, Part 1</td>
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<td>5.12</td>
<td>SARGability: How to Determine What Indexes You Need, Part 2</td>
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<td>5.13</td>
<td>Nonclustered Index Design: Uniqueness and Included Columns</td>
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<td>5.14</td>
<td>Tools for Creating “Missing” Indexes</td>
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<td>Scripts for Viewing “Missing” and Unused Indexes</td>
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<td>5.16</td>
<td>How Many Indexes Is Too Many?</td>
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<td>5.17</td>
<td>Clustered Index Design</td>
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<td>5.18</td>
<td>Exercise 01: Creating Indexes</td>
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<td>5.19</td>
<td>How to View Index Fragmentation</td>
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<td>5.20</td>
<td>Techniques for Defragmenting, Rebuilding, and Reorganizing Indexes</td>
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<tr>
<td>5.21</td>
<td>How to View the Contents of Data and Index Pages</td>
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<tr>
<td>5.22</td>
<td>Techniques for Keeping Statistics Up To Date</td>
</tr>
<tr>
<td>5.23</td>
<td>In_Row_Data, Lob_Data, and Row_Overflow_Data</td>
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</tbody>
</table>
Transact-SQL Programming: SQL Server 2008/R2

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Videos in this course (cont.):

Chapter 6: Inserting, Updating, and Deleting Data

6.1 - Chapter Introduction: What is Included in this Chapter
6.2 - The Basics of INSERT
6.3 - Three Syntaxes for INSERT
6.4 - IDENTITY Columns and Inserts
6.5 - The OUTPUT Clause
6.6 - UPDATE Statements
6.7 - DELETE and TRUNCATE TABLE
6.8 - The MERGE Statement
6.9 - New Shortcut Syntax +=, =-, etc.
6.10 - While Loops and Numbers/Dates Tables
6.11 - INSERTing and UPDATing through Views and Functions

Chapter 7: Transactions and Locking

7.1 - Chapter Introduction: What is Included in this Chapter
7.2 - Transactions: Committing and Rolling Back Changes
7.3 - ACID Properties and Relational Databases
7.4 - Can You Nest Transactions?
7.5 - Savepoints within Transactions
7.6 - Locking in SQL Server
7.7 - SQL Server Lock Modes
7.8 - Transaction Isolation Levels, Row Versioning, and Snapshots
7.9 - How to Detect Locking and Blocking Problems
7.10 - Table Hints and Locking Hints (Hint: NOLOCK!)
7.11 - Strategies for Dealing with Blocking and Locking
7.12 - Deadlocks: What They Are and Why You Hate Them with a Passion!
Videos in this course (cont.):

Chapter 7: Transactions and Locking (cont.)
- 7.13 - Design Tips for Preventing Deadlocks
- 7.14 - How Transactions Affect the Transaction Log

Chapter 8: Working with DDL and DML Triggers
- 8.1 - Chapter Introduction: What is Included in this Chapter
- 8.2 - What Are Triggers and Why Are They So Popular?
- 8.3 - AFTER Triggers: Timing and Examples
- 8.4 - More on the Virtual Tables and Detecting Column Changes
- 8.5 - Real World Code: Audit Trail Trigger to Store Previous Value in a New Column
- 8.6 - Real World Code: Audit Trail Trigger to Audit Changes to a Separate Table
- 8.7 - Real World Code: Business Rules that Go Beyond Constraints
- 8.8 - Multiple AFTER Triggers for the Same Operation on a Table
- 8.9 - INSTEAD OF Triggers: Timing and Examples
- 8.10 - Real World Code: Ghost Deletes
- 8.11 - Real World Code: Corrections and Error Prevention with Audit Trail
- 8.12 - DDL Triggers: Auditing Changes to the Table Schema (and more)

Chapter 9: Stored Procedure Design: Returning Data
- 9.1 - Chapter Introduction: What is Included in this Chapter
- 9.2 - What are Stored Procedures and How are They Used?
- 9.3 - Basics of Stored Procedure Syntax: Returning Data to the Client
- 9.4 - Stored Procedure Parameters: Input and Default Parameters
- 9.5 - Control-of-Flow and GOTO Statements
- 9.6 - The RETURN Statement and Returning Values
- 9.7 - Naming Conventions, System Stored Procedures, and the Master Database
Videos in this course (cont.):

Chapter 9: Stored Procedure Design: Returning Data (cont.)

9.8 - Exercise 01: Creating Stored Procedures
9.9 - Output Parameters: Understanding the Syntax
9.10 - O/R Mapping and CRUD
9.11 - Exercise 02: Stored Procedures with OUTPUT Parameters
9.12 - Consuming Stored Procedure Result Sets
9.13 - Stored Procedures for working with EAV Tables
9.14 - How to Decide Between a View, Function, or Stored Procedure
9.15 - What to Do When Users Have Lots of Parameter Choices
9.16 - Using Dynamic SQL in Stored Procedures

Chapter 10: Stored Procedure Design: Returning Data

10.1 - Chapter Introduction: What is Included in this Chapter
10.2 - Why You Should Use Stored Procedures to Perform Actions
10.3 - Implementing CRUD for a Member Object
10.4 - How Stored Procedures Handle Errors
10.5 - Controlling Transactions with Stored Procs and Triggers
10.6 - The Basics of TSQL Debugging
10.7 - Exercise 01: The Create Stored Procedure for the Member Object
10.8 - How to Create Custom SQL Server Error Messages
10.9 - The Old Way of Handling Errors: The Three Rs
10.10 - The New Way of Handling Errors: TRY/CATCH
10.11 - Exercise 02: Adding Error Handling to the Create Stored Procedure
10.12 - How to Marshall Result Sets from One Stored Procedure to Another
10.13 - Looping through Records and Result Sets: Table Variables
10.14 - Looping through Records and Result Sets: Temp Tables
Videos in this course (cont.):

**Chapter 10: Stored Procedure Design: Returning Data (cont.)**

10.15 - Looping through Records and Result Sets: Cursors
10.16 - Dynamic SQL 101: Using Stored Procedures to Stop Attacks
10.17 - EXECUTE AS and Ownership Chains

**Chapter 11: Optimization and Performance Tuning Tips**

11.1 - Chapter Introduction: What is Included in this Chapter
11.2 - Tools for Performance Tuning SQL Server
11.3 - Working with SQL Profiler and Traces: Overview
11.4 - Working with SQL Profiler and Traces: Capturing Long Running Statements
11.5 - Working with SQL Profiler and Traces: Filters and Exporting
11.6 - Working with SQL Profiler and Traces: Aggregating and Reporting on the Results
11.7 - Using the Database Engine Tuning Advisor, Part 1
11.8 - Using the Database Engine Tuning Advisor, Part 2
11.9 - DMVs and DMFs: The Basics You Need to Know
11.10 - DMVs and DMFs Demo
11.11 - DMVs and DMFs: Handy Scripts You Can Use
11.12 - Query Hints, Table Hints, Locking Hints, Index Hints
11.13 - Optimizing for Ad-Hoc Workloads and Simple vs. Forced Parameterization
11.14 - Plan Guides
11.15 - Parameter Sniffing and Recompiles, Part 1
11.16 - Parameter Sniffing and Recompiles, Part 2
11.17 - DBCC FREEPROCCACHE - It Can Do Quite a Bit
11.18 - How to Create and View Plan Guides
11.19 - Optimizing Data Types: Vardecimal and Compression
11.20 - Optimizing Data Types: LOBs and Text/Image Data
Transact-SQL Programming: SQL Server 2008/R2
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Videos in this course (cont.):

Chapter 11: Optimization and Performance Tuning Tips (cont.)
11.21 - Partitions and Partitioning
11.22 - Tips on Bulk Loading Data, Part 1
11.23 - Tips on Bulk Loading Data, Part 2
11.24 - Indexed Views and SchemaBinding
11.25 - Be Wise to this Sneaky UDF Performance Stealer
11.26 - Using Perfmon (Performance Monitor)

Chapter 12: Introduction to Working with XML Data
12.1 - Chapter Intro, New Features, Why Use XML
12.2 - An Overview of the FOR XML Clause: FOR XML RAW and AUTO
12.3 - More on Working with FOR XML: FOR XML PATH and XPath
12.4 - Using XQuery with the XML Data Type
12.5 - XML Schema Collections
12.6 - OPENXML and Using LET

Chapter 13: Introduction to CLR Programming
13.1 - Chapter Intro and an Intro to Using SQL CLR
13.2 - What Type of Objects Work Well with SQL CLR?
13.3 - Scenario Walkthroughs: Should You Use T-SQL or the CLR?
13.4 - Creating CLR Assemblies and Configuring SQL Server
13.5 - CLR Security and Permissions - SAFE, UNSAFE, and EXTERNAL_ACCESS
Videos in this course (cont.):

Chapter 14: Introduction to Working with Geospatial Data
- 14.1 - Chapter Intro and an Intro to Spatial Data
- 14.2 - The Geography and Geometry Data Types
- 14.3 - Data Visualization Using Maps in SSRS 2008 R2

Chapter 15: Introduction to Encryption in Transact-SQL
- 15.1 - Chapter Intro and a Discussion of Encryption Options
- 15.2 - What Can You Encrypt?
- 15.3 - The Basics of Encryption and Cryptography
- 15.4 - How SQL Server Key and Certificate Encryption Works, Part 1
- 15.5 - How SQL Server Key and Certificate Encryption Works, Part 2

Chapter 16: The Basics of Working with CLOBs and BLOBs
- 16.1 - Chapter Intro and the Challenges LOBs Present
- 16.2 - Understanding Full-Text Search
- 16.3 - Options for Storing and Accessing LOB Data

Chapter 17: Misc Tips and Techniques
- 17.1 - How to Search Through Source Code for Object References
- 17.2 - HierarchyID: What It Is and How to Use It
- 17.3 - Discussion of Unit Testing Transact-SQL
- 17.4 - Source Code Management
- 17.5 - PowerShell and SqlCmd

About LearnItFirst.com: LearnItFirst is a leader in online video training for the Microsoft community. With nearly 400 hours of classroom-quality video training online, LearnItFirst has one of the largest online training video libraries on the web today. LearnItFirst’s online courses are a cross between a “live” instructor-led class and a “how to” book. Customers get the affordability and portability of a book and the “Watch and Learn” of having a live instructor. All courses feature full-screen resolution videos with high quality audio to ensure the very best possible training experience. LearnItFirst.com LLC was founded in 2004 and is based in Dallas, Texas.