



COURSE : **MS SQL SERVER 2005 - FUNDAMENTALS**

This 2 day course is intended for IT Professionals wanting to become skilled on SQL Server 2005 product features and technologies. The course is also suitable to any IT Professionals wanting to update their skills from SQL 2000 to SQL 2005.

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| DATE: | As per schedule |
| TIMES: | As per schedule |
| DURATION: | 2 Days |
| VENUE: | As per quotation |
| COURSE TYPE: | Facilitator lead, hands on sessions |
| GROUP SIZE: | Grouped according to skill level with a maximum number of 8 delegates |
| COURSE DOCUMENTATION: | User Guide |
| TARGET AUDIENCE: | Professionals wanting to become skilled on SQL Server 2005 product features and technologies for maintaining a SQL 2005 database |
| AUDIENCE LEVEL: | Basic to intermediate |
| PREREQUISITES: | Basic knowledge of Microsoft Windows; Transact-SQL; working knowledge of relational databases; some experience with database design. |
| COST PER DELEGATE: | As per quotation |

Module 1: Introduction to Transact-SQL

The following topics are covered in this module:

- The Transact-SQL Programming Language
- Types of Transact-SQL Statements
- Transact-SQL Syntax Elements
- Using SQL Server Books Online

After completing this module, you will be able to:

- Differentiate between Transact-SQL and ANSI-SQL.
- Describe the basic types of Transact-SQL.
- Describe the syntax elements of Transact-SQL.

Module 2: Using Transact-SQL Querying Tools

The following topics are covered in this module:

- SQL Query Analyzer
- Using the Object Browser Tool in SQL Query Analyzer
- Using the osql Utility
- Executing Transact-SQL Statements
- Creating and Executing Transact-SQL Scripts
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After completing this module, you will be able to:

- Describe the basic functions of SQL Query Analyzer.
- Describe how to use the Object Browser tool in SQL Query Analyzer.
- Describe how to use the templates in SQL Query Analyzer.
- Describe how to use the osql command-line utility.
- Execute Transact-SQL statements in various ways.

Module 3: Retrieving Data

The following topics are covered in this module:

- Retrieving Data by Using the SELECT Statement
- Filtering Data
- Formatting Result Sets
- How Queries Are Processed
- Performance Considerations
- Retrieving Data and Manipulating Result Sets

After completing this module, you will be able to:

- Retrieve data from tables by using the SELECT statement.
- Filter data by using different search conditions to use with the WHERE clause.
- Format result sets.
- Describe how queries are processed.
- Describe performance considerations that affect retrieving data

Module 4: Grouping and Summarizing Data

The following topics are covered in this module:

- Listing the TOP n Values
- Using Aggregate Functions
- GROUP BY Fundamentals
- Generating Aggregate Values Within Result Sets
- Using the COMPUTE and COMPUTE BY Clauses
- Grouping and Summarizing Data

After completing this module, you will be able to:

- Use the TOP n keyword to retrieve a list of the specified top values in a table.
- Generate a single summary value by using aggregate functions.
- Organize summary data for a column by using aggregate functions with the GROUP BY and HAVING clauses.
- Generate summary data for a table by using aggregate functions with the GROUP BY clause and the ROLLUP or CUBE operator.
- Generate control-break reports by using the COMPUTE and COMPUTE BY clauses.

Module 5: Joining Multiple Tables

The following topics are covered in this module:

- Using Aliases for Table Names
- Combining Data from Multiple Tables
- Combining Multiple Result Sets
- Querying Multiple Tables

After completing this module, you will be able to:

- Use aliases for table names.
- Combine data from two or more tables by using joins.
- Combine multiple result sets into one result set by using the UNION operator.

Module 6: Working with Sub-queries

The following topics are covered in this module:

- Introduction to Sub-queries
- Using a Sub-query as a Derived Table
- Using a Sub-query as an Expression
- Using a Sub-query to Correlate Data
- Using the EXISTS and NOT EXISTS Clauses
- Working with Sub-queries

After completing this module, you will be able to:

- Describe when and how to use a sub-query.
- Use sub-queries to break down and perform complex queries.

Module 7: Modifying Data

The following topics are covered in this module:

- Using Transactions
- Inserting Data
- Deleting Data
- Updating Data
- Performance Considerations
- Modifying Data

After completing this module, you will be able to:

- Describe how transactions work.
- Write INSERT, DELETE, and UPDATE statements to modify data in tables.
- Describe performance considerations related to modifying data.

Module 8: Querying Full-Text Indexes

The following topics are covered in this module:

- Introduction to Microsoft Search Service
- Microsoft Search Service Components
- Getting Information About Full-Text Indexes
- Writing Full-Text Queries

- Querying Full-Text Indexes

After completing this module, you will be able to:

- Describe Microsoft Search service function and components.
- Write full-text queries.
- Get information about full-text indexes.

Module 9: Introduction to Programming Objects

The following topics are covered in this module:

- Displaying the Text of a Programming Object
- Introduction to Views
- Advantages of Views
- Creating Views
- Introduction to Stored Procedures
- Introduction to Triggers
- Introduction to User-defined Functions
- Working with Views

After completing this module, you will be able to:

- Display the text of a programming object.
- Describe the concepts of views.
- List the advantages of views.
- Describe stored procedures.
- Describe triggers.
- Describe user defined functions.

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