

## **SQL Server 2008 Course Content:35-40hours**

### Course Outline

- **Introducing SQL Server 2008**
  - What's New in SQL Server?
  - SQL Server Editions
  - Installing SQL Server
  
- **Basics of Database Design**
  - Normalization
  - Denormalization
  - Tools for Normalization in SQL Server
  - Introducing SQL Server Management Studio
  - Creating a Database
  - Adding Tables
  - Creating Indexes and Constraints
  - Building Relations
  
- **T-SQL Basics**
  - What is T-SQL?
  - Syntax Conventions
  - Introducing AdventureWorks2008
  - Executing SQL Statements
  - Identifiers
  - Creating Data Types
  - Operators
  - Variables
  - Functions
  - Using T-SQL to Build and Alter Objects
  
- **SELECT queries**
  - The SELECT Clause

- The FROM Clause
- The WHERE Clause
- The ORDER BY Clause
- Using GROUP BY and HAVING
- Using TOP N and TOP N PERCENT
- UNION Queries
- Full-Text Search
  
- **Action Queries**
  - SELECT INTO queries
  - DELETE queries
  - TRUNCATE TABLE queries
  - INSERT queries
  - UPDATE queries
  - MERGE queries
  
- **Locking and Execution Plans**
  - What is Locking?
  - Monitoring Locks
  - Tuning Locking
  - Deadlocks
  - Tuning Queries
  - Management Data Warehouse
  - Performance Studio
  
- **Views, Stored Procedures, and Functions**
  - Using Views
  - Using Stored Procedures
  - Using Functions
  
- **Advanced Transact-SQL**
  - Transactions
  - Rowset Functions
  - Ranking Functions
  - Cursors
  - Structured Error Handling
  
- **XML and SQL Server**
  - XML Columns and Indexes
  - Querying and Modifying XML Data

- Using OPENXML
- Using FOR XML
  
- **Triggers**
  - Creating DML Triggers
  - Altering DML Triggers
  - Using the Inserted and Deleted Tables
  - Checking Updated Columns
  - Recursive and Nested Triggers
  - Creating DDL Triggers
  
- **.NET inside of SQL Server**
  - Creating CLR User-Defined Functions
  - Creating CLR Stored Procedures
  - Using the Sql Namespace
  - Creating CLR Triggers
  - Creating CLR User-Defined Types
  - Choosing When To Use CLR Objects
  
- **SMO and RMO Programming**
  - Retrieving Server Information
  - Working With Database Objects
  - Generating Scripts
  - Viewing and Modifying Server Configuration
  - Understanding RMO
  
- **Data Protection/Tracking**
  - Understanding Change Data Capture
  - Data Capture Schema and Tables
  - Transparent Data Encryption
  
- **SQL Server 2008 Analysis Services**
  - Understanding Analysis Services
  - Introducing Business Intelligence Development Studio
  - Creating a Data Cube
  - Exploring a Data Cube
  
- **SQL Server 2008 Integration Services**
  - The Import and Export Wizard

- Creating a Package
- Working with Connection Managers
- Building Control Flows
- Building Data Flows
- Creating Event Handlers
- Saving and Running Packages
  
- **SQL Server 2008 Reporting Services**
  - The Reporting Services Architecture
  - Using Report Designer
  - Publishing a Report
  - Using Report Builder
  - Using Report Manager
  
- **Service Broker**
  - Service Broker Terminology
  - Creating a Service Broker Application
  - Processing Messages with Stored Procedures
  - Using Service Broker Across Servers
  
- **Security and SQL Server**
  - Choosing Service Accounts
  - Authentication Modes
  - Roles and Users
  - Permissions
  - Object Ownership