

- COURSE CODE:** SQSSQF
- COURSE TITLE:** SQL Server: SQL Fundamentals
- AUDIENCE:** Developers: SQL and Transact-SQL, report authors and report developers.
- PREREQUISITES:** Windows operating system literacy
- DURATION:** 2 days
- SUMMARY:** This developer-oriented presentation uses mainly examples to elaborate on the following SQL features:
- Data retrieval
  - Data aggregation
  - Joins (INNER & OUTER)
  - Data modification
- OBJECTIVES:** Upon completion of this presentation, the participant should have a working knowledge of the topics outlined under 'Core Topics' which follow.

### 1. PREVIEW OF THE SQL SERVER ENVIRONMENT – DEVELOPER'S PERSPECTIVE

- SQL Server Management Studio (SSMS) – purpose
- Using SSMS
- Transact-SQL
- SQL Server object names
- Data Manipulation Language (DML)
- Data Integrity (e.g., RI)
- Tables, Databases, etc.
- Schemas

### 2. RETRIEVING DATA – SELECT STATEMENT

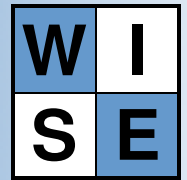
- Syntax
- All columns vs. specific columns
- FROM clause
- WHERE clause
- Search conditions
- Comparison operators
- String comparisons (LIKE)
- Case sensitivity
- BETWEEN operator
- List of values (e.g., IN)
- NULLs and their implication
- Logical operators (e.g., AND, NOT)
- Sorting (ORDER BY)
- Eliminating duplicates (DISTINCT)
- Use of literals
- Workshop

### 3. SUMMARISING DATA (e.g., AVG, COUNT(\*), MAX, SUM)

- Purpose
- Syntax
- NULL considerations
- GROUP BY
- GROUP BY HAVING
- Workshop

### 4. JOINS

- Overview of 3<sup>rd</sup> Normal Form
- When to use
- Syntax
- INNER joins
- OUTER joins (e.g., LEFT, RIGHT & FULL)
- Self joins
- Workshop



### 5. MULTIPLE RESULT SETS

- UNIONS
- CASE expressions
- Workshop

### 6. MODIFYING DATA

- Syntax
- INSERT
- INSERT...SELECT statement
- DELETE
- UPDATE
- Workshop