



# DB1000 DB2 SQL for Everyone

Course ID#: 0370-239-ZZ-W

Hours: 21

## Course Content

### Course Description:

Come prepared to master Structured Query Language on the DB2 platform in this fast paced and hands-on course. The course begins with a discussion of relational concepts and terminology and quickly moves into a very practical discussion of data retrieval and manipulation using SQL. Each topic is reinforced with hands-on workshops. The workshops and examples in this course may be used across the DB2 family of products.

This class may be taken in conjunction with the 2-day DB1001 DB2 for z/OS Embedded SQL Programming class. The combined course is, DB1010 DB2 for z/OS SQL & Application Programming.

Upon successful completion of this course, the student will be able to:

- Describe the overall purpose of, and the approaches to manipulating data in a database management system.
- Describe the major objects used by DB2 for data manipulation.
- Translate and code business problems in Structured Query Language.
- State the internal approaches utilized by DB2 for accessing data.

### Target Student:

Programmers, Analysts, Database Administrators, and IT Managers who are exposed to, or are required to perform the activities associated with data stored in a DB2 relational database.

### Prerequisites:

None.

### Topics:

#### Module 1: Relational Database Concepts

- The Relational Model
- Domains
- Integrity and Relationships
- Structured Query Language (SQL)
- Unknown Values (NULL)
- Basic Datatypes

#### Module 2: Basic Data Manipulation

- SELECT Statement
- Using SELECT
- Projecting Columns Onto the Result
- Basic Predicates
- Expressions in the SELECT Clause
- Expressions in the WHERE clause



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## Module 3: Intermediate Data Manipulation

- Compound Conditions
- Other WHERE Clause Operators
  - BETWEEN
  - IN
  - LIKE
  - IS NULL
- Using DISTINCT
- ORDER BY Clause

## Module 4: Built-in Functions

- Working with Datatypes and Casting
- Functions Involving NULLs
- CASE Statements

## Module 5: Aggregation

- SUM, AVG, MIN, MAX & COUNT Functions
- Grouping Results with GROUP BY
- Filtering Groups with HAVING

## Module 6: Joins

- Inner Equi-Join
- Join Classification
- Cartesian Products
- Inner Joins of More than 2 Tables

## Module 7: Data Modification

- INSERT
- UPDATE
- DELETE
- COMMIT and ROLLBACK

## Module 8: Complex Joins

- LEFT / RIGHT / FULL Outer Joins
- Self-Joins

## Module 9: SQL Subqueries

- Non Correlated Subqueries
- Correlated Subqueries
- Scalar Full selects

## Module 10: Set Operations

- Union / Union ALL
- Intersect / Intersect ALL
- Except / Except ALL