



Data Analytics: Introduction to SQL using Healthcare Data (SSMS)

Course Purpose: Master SQL using healthcare data while becoming comfortable within Microsoft SQL Server Management Studio

Section 1: Introductions

- What you will learn in this course
- Introduction to SQL
- Cheat Sheet

Section 2: Downloading Software

- Downloading SQL Server Management Studio (SSMS)

Section 3: Servers and Databases

- Connecting to server in SSMS
- Creating Databases
- Dropping Databases
- Using Databases

Section 4: Creating and Inserting tables

- Table Structure
- Data Types
- Creating tables
- Dropping Tables
- Inserting Data
- Tables with null values
- Creating Tables with Primary keys
- If Object_ID

Section 5: Retrieving Data

- Select Statements
 - Top 100, Distinct
- Where clause
 - And, Or, Not, Null, Not Null
 - Like, In, Between
- Common Wildcard Symbols
- Order by and Group by
- Aggregate Functions
- Alias names
- Having
- Case When

Section 6: Jumping back to Inserting Data (Section 4)

- Updating Data
- Deleting Data
- Truncating Data
- Select Into
 - With Conditions
- Temporary Tables

Section 7: Joining Tables

- Primary Key Review
- Relational Databases
- One to One
- One to Many
- Many to Many
- Inner Join
- Left and Right Joins
- Union

Section 8: Other Functions

- Round, Cast, Convert, Format
- Isnull, Nullif
- Upper, Lower, Trim, Left, Right
- Inner queries, Constraints
- Stored Procedures, Declaring Variables

Section 9: Real-world practice using Healthcare Data

- Review in Excel
- Review Entity Relationship Diagram
- Upload data into SSMS
- Introduction to Healthcare Finance

Section 10: Practice, Practice, Practice

This Section is chalk full of practice questions. You will practice writing SQL syntax with real-world questions.