# Advanced SQL Programming (TTSQL005)

**Category:** Software Development & Programming | **Vendor:** Trivera Tech

**Duration:** 16.00 hours (2 days) **13.0 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

## Course Information

**Delivery Format:** Instructor Led - Online

## Course Overview

A company's success hinges on responsible, accurate database management. Organizations rely on highly available data to complete all sorts of tasks, from creating marketing reports and invoicing customers to setting financial goals. Data professionals like analysts, developers and architects are tasked with creating, optimizing, managing and analyzing data from databases with little room for error. When databases aren t built or maintained correctly, it's easy to mishandle or lose valuable data. Our SQL Programming and Database Training Series provides students with the skills they require to develop, analyze and maintain data and in correctly structured, modern and secure databases. Next Level SQL explores how to identify and use advanced querying techniques to manipulate and index tables. All hands-on work in this course is ANSI SQL compliant and should work with most SQL databases such as Oracle, SQL Server, MySQL, MS Access, Informix, Sybase, or any other ANSI SQL compliant database.

## About This Course

SQL, or Structured Query Language, is the essential language that allows you to communicate with and manipulate databases. Advanced SQL Programming not only adds flair to basic database management but opens up new avenues for data retrieval, analysis, and optimization.

Geared for experienced SQL users, Advanced SQL Programming is a two-day course designed to transform your SQL skills, leading to enhanced data retrieval, analysis, and optimization. You'll explore techniques that enable them to solve complex challenges and contribute to organizational efficiency and innovation.

This course includes interactive discussions, group activities, and a balanced approach of lectures and hands-on labs. Expect to build, design, and troubleshoot complex SQL queries, create robust data manipulation techniques, and explore the intricate world of triggers, all under the guidance of a seasoned industry expert. You'll apply these skills in a practical context, simulating real-world projects and utilizing innovative tools and techniques. You'll exit this course able to design and execute intricate SQL queries, manage data with unprecedented accuracy, and implement unique functions and procedures, ready to apply these skills on the job.

## Who Should Attend

This intermediate and beyond skill level course is suited for experienced SQL developers and database professionals who are eager to expand their expertise into more complex areas of database manipulation and analysis. This includes Data Analysts, Database Administrators, Software Developers, and IT Professionals who work with databases regularly and seek to infuse their projects with innovative techniques and higher efficiency.

### Prerequisites & Entry Requirements

**General Prerequisites:**

Basic SQL Programming experience. This course is not for students new to SQL. TTSQL002 Introduction to SQL Programming Basics 3 days

TTSQL003 Introduction to Writing SQL Queries 3 days

## Learning Outcomes

**Upon successful completion of this course, participants will be able to:**

Working in a hands-on learning environment led by our expert practitioner, attendees will explore:
-Advanced Query Techniques: Dive into Inner and Outer Joins, Subqueries, and Aggregate Functions. Mastering these will allow for precise data extraction and comprehensive analysis, forming a solid foundation for developing complex SQL queries.
-Manipulating Table Data Using SQL's DML: Learn techniques like Inserting, Updating, Deleting Records, and Transactions. These skills enable control over data integrity and efficient data manipulation, essential for maintaining high-quality database operations.
-User-Defined Functions: Create and manage Scalar vs. Table Functions. By understanding these, you can craft customized solutions, leading to flexible and dynamic data handling.
-Stored Procedures: Explore Variables, Parameters, and Program Flow. With these, you can streamline repetitive tasks, promoting efficient database management.
-Triggers: Grasp the creation and management of Triggers. Triggers automate tasks within the database, enhancing responsiveness and making systems more robust.

## Detailed Course Outline

Advanced Query Techniques

Inner Joins

Outer Joins (Left, Right, Full)

Performing Self-Joins

Subqueries

Simple

Correlated

Using the EXISTS Operator

Tips for Developing Complex SQL Queries

Using Aggregate Functions

AVG, COUNT

SUM

MIN

MAX

Performing Set Operations

UNION

INTERSECT

EXCEPT/MINUS

Aggregating Results Using GROUP BY

Restricting Groups with the HAVING Clause

Creating Temporary Tables

Manipulating Table Data Using SQL's Data Manipulation Language (DML)

Inserting Data into Tables

Updating Existing Data

Deleting Records

Truncating Tables

Implementing Data Integrity with Transactions

Beginning Explicit Transactions

Committing Transactions

Rolling Back Transactions

User-Defined Functions

Definition and Benefits of Use

CREATE FUNCTION

Syntax

RETURN Clause and the RETURNS Statement

Scalar vs. Table Functions

Comparison with Stored Procedures

Returning Scalar Values and Tables

ALTER and DROP FUNCTION

Stored Procedures

Definition and Benefits of Use

CREATE PROCEDURE

Syntax

Variables and Parameters

Control of Program Flow

ALTER and DROP PROCEDURE

Implementation Differences

Triggers

Definition and Benefits of Use

Alternatives (e.g., Constraints)

CREATE TRIGGER

Syntax

Trigger Types

"Inserted" (or "NEW") and "Deleted" (or "OLD") Tables

Event Handling and Trigger Execution

ALTER and DROP TRIGGER

# Additional Course Details

Nexus Humans Advanced SQL Programming (TTSQL005) training program is a workshop that presents an invigorating mix of sessions, lessons, and masterclasses meticulously crafted to propel your learning expedition forward.

This immersive bootcamp-style experience boasts interactive lectures, hands-on labs, and collaborative hackathons, all strategically designed to fortify fundamental concepts.

Guided by seasoned coaches, each session offers priceless insights and practical skills crucial for honing your expertise. Whether you're stepping into the realm of professional skills or a seasoned professional, this comprehensive course ensures you're equipped with the knowledge and prowess necessary for success.

While we feel this is the best course for the Advanced SQL Programming (TTSQL005) course and one of our Top 10 we encourage you to read the course outline to make sure it is the right content for you.

Additionally, private sessions, closed classes or dedicated events are available both live online and at our training centres in Dublin and London, as well as at your offices anywhere in the UK, Ireland or across EMEA.

# Frequently Asked Questions

### Q: What delivery options are available for Advanced SQL Programming (TTSQL005)?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

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### Q: How many CPD hours does this course provide?

The 2-day Advanced SQL Programming (TTSQL005) course provides up to 13.0 CPD hours of structured learning. CPD certificates can be provided upon request.

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### Q: What is the duration of the Advanced SQL Programming (TTSQL005) training?

The training takes place over 2 day(s), with each day lasting approximately 16.00 hours including breaks for lunch and refreshments.

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### Q: Do you provide corporate training for Advanced SQL Programming (TTSQL005)?

Yes, we provide corporate training, dedicated training, and closed classes for Advanced SQL Programming (TTSQL005). Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

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### Q: What related terms do people search for?

Popular related searches include: Advanced SQL

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## Q: Why choose Nexus Human for Advanced SQL Programming (TTSQL005)?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

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## Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Advanced SQL Programming (TTSQL005) training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.


**Nexus Human**

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