

# Fast track SQL

## 3 day training course



### Course contents

This course will cover the following topics. Those marked with (\*) will be covered if time allows.

#### From our Introduction to SQL course

##### Using SQL Server

- SQL Server Management Studio
- Controlling windows
- Using Object Explorer

##### Creating databases - overview

- Designing databases
- Primary keys

##### Working with tables

- Creating tables
- Allowing nulls or not
- Identity fields
- Creating relationships

##### Simple Queries

- Creating queries
- Comments
- Indentation and case

##### Setting criteria using WHERE

- Wildcards (% and \_)
- Setting criteria for dates
- Coping with nulls

##### Calculations

- Calculated columns
- Using aliases
- String functions and concatenation

##### Calculations using dates

- GetDate
- Converting dates
- Useful date functions

##### Basic joins

- Inner joins
- Table aliases
- Left and right outer joins

##### Aggregation and grouping

- SUM, AVG, MIN, MAX
- Various ways to count
- Grouping by fields
- Using HAVING to filter results

##### Views

- The view designer
- Limitations of the designer
- Scripting views

##### Subqueries

- The concept of a subquery
- Syntax of subqueries
- Using subqueries in a query

##### Derived tables and CTEs

- Using derived tables
- Common Table Expressions (CTEs)
- Multiple CTEs in a single query



## From our Advanced SQL course

### Stored procedures

- Creating stored procedures
- Executing stored procedures
- System stored procedures

### Variables

- Declaring variables
- SET versus SELECT
- Tricks with variables
- So-called global variables

### Parameters and return values

- Passing parameters
- Default values / WHERE clauses
- Output parameters
- Using RETURN

### Scalar functions (\*)

- What they are
- Writing user-defined functions
- Worked examples
- Pros and cons of scalar functions

### Testing conditions

- IF / ELSE statement
- Using CASE where possible

### Looping

- Syntax of WHILE
- Breaking out of a loop

### Error-handling (\*)

- Using TRY / CATCH
- System error functions
- Custom error messages

### Deleting using SQL

- Ways to drop tables
- DELETE versus TRUNCATE

### Updating data in SQL

- The UPDATE statement
- Updating using joins

### Inserting data

- Making tables (SELECT INTO)
- Appending data (INSERT INTO)
- Inserting individual rows

### Creating tables

- Creating tables in SQL
- Primary keys and indexes
- Adding relationships

### Transactions (\*)

- Beginning a transaction
- Committing / rolling back

### Temporary tables and table variables

- Scope (local versus global)
- Using temporary tables
- Creating table variables
- Pros and cons of each approach

### Table-valued functions (\*)

- In-line table-valued functions
- Mult-statement table-valued functions

### Dynamic SQL (\*)

- Building up dynamic SQL
- Executing dynamic SQL
- Disadvantages of dynamic SQL

### Pivots (\*)

- Assembling data for pivoting
- Using PIVOT
- Dynamic column headers

### Triggers (\*)

- Insert, update and delete triggers
- Using generated tables (eg INSERTED)
- Using INSTEAD OF

## Pre-requisites for Fast track SQL course

There are no special pre-requisites for you to satisfy to attend this course, other than to have a good level of IT literacy. If you don't find it easy to create Excel formulae you should avoid this course!

## Prices

Venue	Address	Price per place
<a href="#">London</a>	Landmark, 99 Bishopsgate, London EC2M 3XD	£1,995 per person + VAT
<a href="#">Manchester</a>	Holiday Inn, 25 Aytoun Street, Manchester M1 3AE	£1,695 per person + VAT
<a href="#">Online</a>	Your home or office!	£1,350 per person + VAT

## Scheduled Dates

Dates	Venue	Times	Price per place	Booking
Mon/Wed 28-30 April 2025	Online	09:30-16:30	£1,350 + VAT	<a href="#">Book this</a>
Wed/Fri 11-13 June 2025	Online	09:30-16:30	£1,350 + VAT	<a href="#">Book this</a>
Mon/Wed 21-23 July 2025	Online	09:30-16:30	£1,350 + VAT	<a href="#">Book this</a>
Wed/Fri 10-12 September 2025	Online	09:30-16:30	£1,350 + VAT	<a href="#">Book this</a>
Wed/Fri 29-31 October 2025	Online	09:30-16:30	£1,350 + VAT	<a href="#">Book this</a>

If you can't see the dates that you want, ask us about organizing a customized course at your office (we'll provide and set up the computers), or else an online course tailored to your needs.