



**0208 942 5724**

Email: [Info@aspecttraining.co.uk](mailto:Info@aspecttraining.co.uk)

Web: [www.aspecttraining.co.uk](http://www.aspecttraining.co.uk)

# **SQL Introduction / Intermediate**

**Duration: 3 Days**

## **Overview:**

Databases drive nearly every Internet and Intranet Web site. Aspect's Introduction to SQL and Database Design class teaches you how to master their power through a thorough grounding in SQL and sound database design fundamentals. This course is designed for people with no relational database experience. The database that we use for the class is MySQL, an open source product that is gaining in popularity in the industry. However, the concepts are basic enough that they transfer easily to any standard database product that abides by the ANSI standards.

## **Prerequisites:**

Windows or equivalent knowledge

**Continued over....**



0208 942 5724

Email: [Info@aspecttraining.co.uk](mailto:Info@aspecttraining.co.uk)

Web: [www.aspecttraining.co.uk](http://www.aspecttraining.co.uk)

## Course Topics:

### Introduction: Databases and the Web

Overview  
The File System  
Databases and the ACID Test

### An Overview of SQL

The Role of SQL  
SQL History and Major DBMS Vendors

### Relational Databases

Queries and Recordsets  
Building a Simple SQL Query

### More Parts of Relational Databases

Tables  
Primary Keys, Foreign Keys, and Relationships

### Retrieving Data with SELECT

Comparison Operators for the WHERE Clause  
Apostrophes in Database Text  
Calculated Columns: Doing Math in Select Statements  
Select Distinct  
Selecting All Columns  
Selecting Data from the Database

### Data Manipulation: INSERT, UPDATE, DELETE

INSERT Statements  
UPDATE Statements  
DELETE Statements

### Data Retrieval: More about SELECT

ORDER BY  
Practicing with ORDER BY  
Practicing with Aggregate Functions  
Extended WHERE Conditions  
Practicing with Extended WHERE Clauses

### Fine-Tuning Aggregate Functions

GROUP BY  
The HAVING Clause  
Using GROUP BY and HAVING to Analyze Data

### Querying Data Across Tables

Basic Joins  
Selecting From Multiple Tables

### Reusing Queries as Views

Creating Views

### Query Within a Query

Subqueries  
Subqueries vs. Joins

### Database Definition SQL

CREATE TABLE  
Creating a Table for a Guest Book

### Database Design

Data Modeling  
Handling More than One Phone Number  
Adding Columns with ALTER TABLE

### Establishing a Primary Key

Auto-numbered Columns

### Relationships Between Tables

Normalization  
Normalizing the Guestbook Table  
Online Transaction Processing vs. Decision Support

### Restructuring Tables

Renaming Tables or Columns  
Adding or Deleting Columns  
Normalizing the Camp Sales Database

### Data Integrity: Controlling What Goes Into a Database

Default Values  
Setting Default Values  
Check Constraints  
Checking Input  
Creating Foreign Keys  
Defining Primary and Foreign Keys

### Many-to-Many Relationships Introduction to Transactions Major SQL Statements