

Introduction to SQL

The Structured Query Language (SQL) defines a standard for communicating with a relational database. In this one-day introductory course, participants will learn the basic SQL syntax for data extraction, filtering and insertion. We will start by querying a local database before connecting to a remote database held on an AWS server. Here, we will stress important considerations when working with shared databases in the cloud.



Course Outline

- **Introduction to SQL:** An introduction to relational databases that implement the SQL standard and establishing database connections.
- **Data Extraction:** Using SELECT statements to extract filtered data and organising the output.
- **Database Modification:** Creating tables and inserting data.
- **Cloud Deployment:** An introduction to database services on AWS and setting up remote, shared access.
- **Multiple Tables:** Dealing with and joining data that resides in multiple tables that share common variables.

Learning Outcomes

Session 1:

By the end of session 1 participants will...

- understand the concepts of relational database management.
- be introduced to the PostgreSQL dialect.
- be comfortable working in the VS Code integrated environment.
- understand how to form a connection and view the database schema.
- have learned basic SQL syntax:
 - extracting data with SELECT statements
 - filtering and organising data
 - creating tables and inserting data

Session 2:

By the end of session 2 participants will...

- be familiar with database services on AWS.
- understand the basic considerations for cloud storage and sharing.
- have worked with both local and remote connections.
- have learned how to join tables by matching variables.

This course does not include:

- S3 and data warehouse services on AWS.

- Connecting to databases through programming languages like R and Python, see our [Intro to SQL with R](#) and [Intro to SQL with Python](#) courses for this.

Attendee Feedback

- “Environment was easy to access and set up, course materials were easy to follow and the instructor was knowledgeable & responsive to questions.”