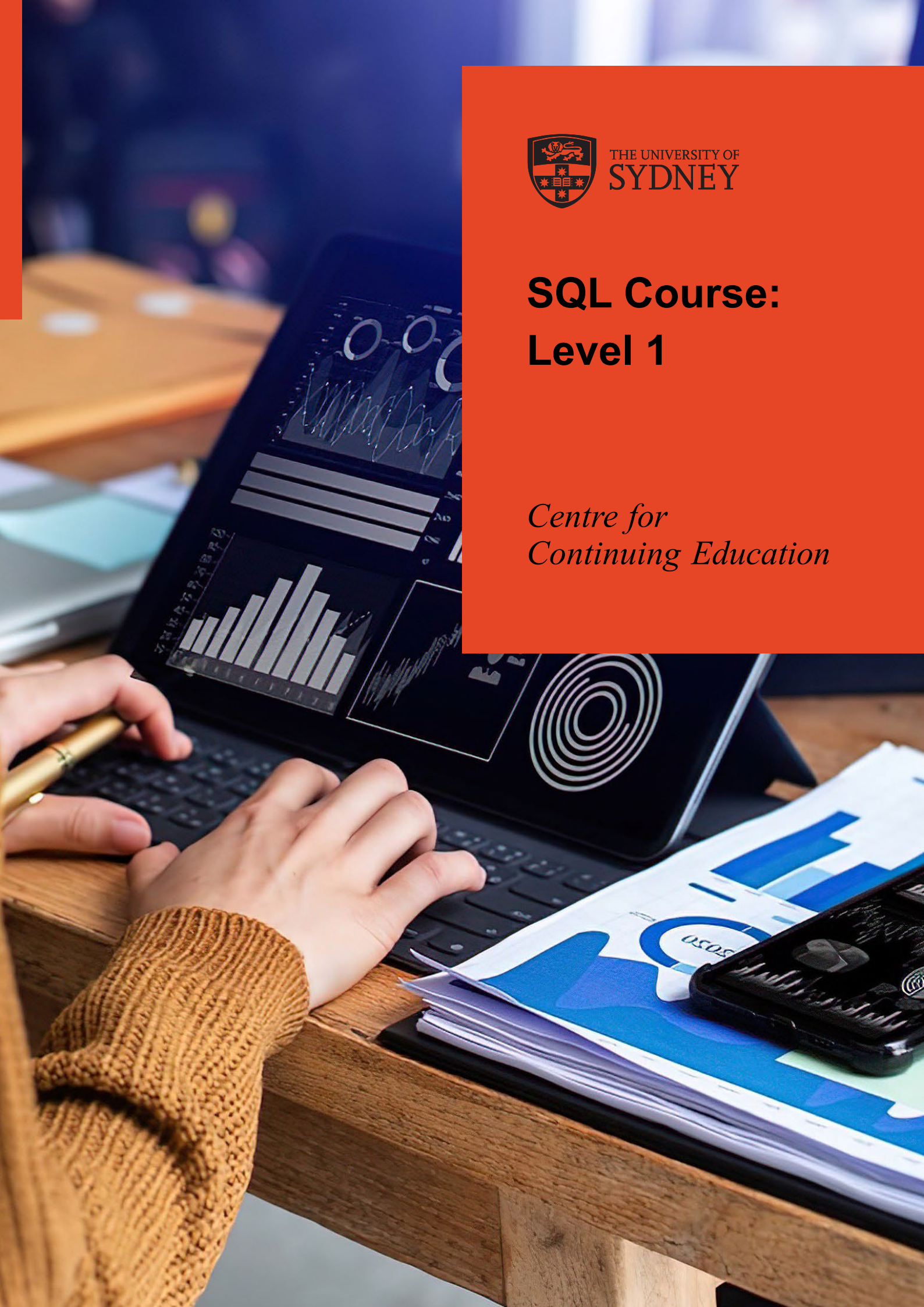




THE UNIVERSITY OF
SYDNEY

SQL Course: Level 1

*Centre for
Continuing Education*



SQL Course: Level 1

This introductory course is suitable for those with little or no prior understanding of relational databases ([Microsoft Access](#), [Oracle Database](#), [Microsoft SQL Server](#), [MySQL](#) etc), those who would like to get more value from attending [SQL Course Level 2a](#) training, or who want to demystify relational database management systems.

There is a developing trend in business for non-IT people to understand and use SQL (Structured Query Language) to query relational database management systems. For many years CCE has offered several courses that teach SQL. The content and pace of these SQL courses were tuned to the historical participants, principally IT professionals, who came into the course with a particular skill level that was understandably not present in most business people. Business people new to databases (how they actually work and why they are designed in particular ways) need to grasp some basic database concepts before tackling the intricacies of SQL.

The principles taught are common to all relational database management systems. For the purposes of this training course, Microsoft SQL Server and Microsoft SQL Server Management Studio will be used to illustrate the content of the course.

We encourage you to use the [CCE SQL level self-assessment tool](#) if you are unsure which course level to enrol in.

Prerequisites

None.



Course duration

1 session, 8 hours total
or
2 sessions, 10 hours total



Time

9am - 5pm



Format

Face-to-face
or
Online in real-time



Dates

Browse available
[course dates](#)

Intended audience

Suitable for those with little to no prior understanding of relational database management.

If you are a business person or an IT professional who is not completely comfortable with relational database concepts, you should complete this course prior to attending [SQL Course: Level 2a](#) training.



Upon completion

Every participant receives a University of Sydney certificate of completion.



Outcomes

By the end of this course, you should be able to:

- recognise elements of good and bad database design relevant to SQL and apply those elements when designing a database
- interpret database structures to determine the SQL required to resolve queries
- choose appropriate clauses to write an SQL query
- write SQL queries to answer specific questions
- read SQL queries to determine the result sets produced.



Content

- Overview of search engines and Google results
- Rationalise the purpose of Relational Database Management Systems and their role in information systems
- Interpret the narratives that define business rules that form the basis of a databases design
- Simplify business rules to enable database design and the interpretation of database design when answering questions with SQL
- Resolve the metaphor used in relational database management systems and thus SQL
- Discuss the principles of a normalised database that store facts in a single place and the method used to relate facts
- Name and discover the natural cardinalities in a given business narrative
- The create an ERD (Entity Relationship Diagram) for the design of a database using its symbols and their meaning that express those cardinalities to capture business rules using primary keys and foreign keys, constraints and datatypes to enforce cardinalities
- Implement a database design in SQL from an ERD creating tables, columns and relationships
- Use Structured Query Language (SQL) to:
 - build a result set from one table
 - alias columns in the result set
 - derive columns in the result set with arithmetic, intrinsic functions and concatenation
 - cull records from a result set with WHERE clause boolean predicates
 - involve multiple boolean predicates in the WHERE clause with the logical operators AND and OR using their operator precedence and brackets
 - sort result sets with the ORDER BY clause and nested sort orders
 - state the purpose of statements and clauses, specifically a SELECT statement, SELECT clause, FROM clause, WHERE clause and ORDER BY clause
 - read a statement using the SQL elements above stating what each clause consumes and produces, and the order in which the clauses execute.



“The facilitator made everything so easy to understand, he is fantastic. The workbook is also built so well, I know it will be a resource I use frequently.”

Emily Wolfe



“The course was well-paced with helpful resource materials. The tutor was clear, checked our understanding of the topics being presented regularly and gave thorough explanations.”

Jodie Tazelaar Molinia



Delivery Style

Face-to-face classes

These classes run in a computer lab and you do not need to bring your own device.

Online classes

You will need your own device. If you are using a Mac, you will need Windows installed alongside MacOS so that you can run the SQL Server on your computer. CCE staff will not be able to assist you with setting up a Windows environment.

An SQL Server Installation Guide (Pdf) will be emailed to you before class.

Materials

Course materials, including a workbook and exercise files, are distributed electronically.



Organisational training and development

This course can be delivered as a private session for groups, and tailored to meet the needs of your business. Contact us to discuss our range of organisational training solutions.

[Learn more](#)



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We recognise and pay respect to the Elders and communities – past, present, and emerging – of the lands that the University of Sydney's campuses stand on. For thousands of years they have shared and exchanged knowledges across innumerable generations for the benefit of all.

Empower ambition,
inspire leadership

For more information

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