

SQL Bootcamp

Learn to answer questions with a database, the ultimate system of record for most organizations. As every industry becomes more data-driven, the value of learning SQL will only grow into the future.

Group classes in Chicago and onsite training is available for this course. For more information, email class@programwithus.com or visit: <https://programwithus.com/classes/sql-bootcamp-chicago>



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Course Outline

Foundations

Basic Concepts

- What is a relational database?
- What is SQL?
- What is Postgres?
- Database tables
- Rows and columns
- Data types

Graphical User Interface

Object Explorer

- Query Window
- Results Grid
- Setting Options

Querying

Select Statements

- Syntax of a SELECT statement
- Selecting specific columns
- Using a LIMIT clause
- Distinct records
- Using a WHERE clause
- Field and Table Aliases

Filtering and Aggregating

- Filtering with Text Criteria
- Wildcard Filters
- Filtering with Numeric Criteria
- Using SUM, COUNT and AVG
- Using MAX and MIN
- Group-by Statements

Adding Data

Creating tables

- Primary keys
- Foreign keys
- Data normalization
- Create statement
- Constraints

Inserting data

- Insert statement
- Nulls, empty strings and zeros
- Transactions
- Update Statement
- Setting Conflict Actions

Combining tables

Joins

- Inner Joins
- Full Outer Joins
- Left/Right Joins

Views

- Creating a view
- Performance issues

Advanced Topics

Advanced querying

- Subqueries
- Querying JSON data

Functions

- String Functions
- Cast Function
- Convert Function
- Rounding Functions

Dealing with CSVs

- Loading data from a CSV
- Exporting a table to CSV