



Learn SQL Basics for Data Science Specialization



Instructors: [Don Noxon](#) +2 more

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3 course series

Get in-depth knowledge of a subject

4.6 ★

(10,418 reviews)

Beginner level

No prior experience required

2 months to complete

at 10 hours a week

Flexible schedule

Learn at your own pace

What you'll learn

- ✓ Use SQL commands to filter, sort, & summarize data; manipulate strings, dates, & numerical data from different sources for analysis
- ✓ Assess and create datasets to solve your business questions and problems using SQL
- ✓ Develop a project proposal & select your data, perform statistical analysis & develop metrics, and present your findings & make recommendations

Skills you'll gain

Apache Spark Data Visualization Presentations Databricks SQL Data Pipelines Data Governance Statistical Analysis Descriptive Statistics

Data Storytelling Data Quality Data Modeling Database Design JSON Data Analysis Complex Problem Solving Data Lakes Peer Review

Distributed Computing Exploratory Data Analysis [View less skills](#)

Details to know



Shareable certificate

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Taught in English

[28 languages available](#)



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August 2025

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- Learn in-demand skills from university and industry experts
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Specialization - 3 course series

This Specialization is intended for a learner with no previous coding experience seeking to develop SQL query fluency. Through three progressively more difficult SQL projects with data science applications, you will cover topics such as SQL basics, SQL analysis, problem- solving strategies, debugging, improving data quality, and more. These topics will prepare you to apply SQL creatively to analyze and explore data; demonstrate efficiency in writing queries; create data analysis datasets; conduct feature engineering, use SQL with other data analysis and machine learning toolsets; and use SQL with unstructured data sets.

[Read less](#)



SQL for Data Science

Course 1 • 15 hours

[Course details](#) ^

What you'll learn

- ✓ Identify a subset of data needed from a column or set of columns and write a SQL query to limit to those results.
- ✓ Use SQL commands to filter, sort, and summarize data.
- ✓ Create an analysis table from multiple queries using the UNION operator.
- ✓ Manipulate strings, dates, & numeric data using functions to integrate data from different sources into fields with the correct format for analysis.

Skills you'll gain

SQL Data Governance Query Languages Relational Databases Data Quality Data Manipulation Data Transformation Database Design Data Analysis Data Modeling Data Science



SQL Problem Solving

Course 2 • 10 hours

[Course details](#) ^

What you'll learn

- ✓ Validate and clean a dataset
- ✓ Assess and create datasets to answer your questions
- ✓ Solve problems using SQL
- ✓ Build a simple testing framework to touch on AB Testing

Skills you'll gain

SQL JSON Data Transformation Business Reporting Debugging Business Metrics Data Quality Data Visualization Data Analysis Data Presentation Exploratory Data Analysis Predictive Analytics Forecasting Complex Problem Solving



SQL for Data Science Capstone Project

Course 3 • 35 hours

[Course details](#) ^

What you'll learn

- ✓ Develop a project proposal and select your data
- ✓ Perform descriptive statistics as part of your exploratory analysis
- ✓ Develop metrics and perform advanced techniques in SQL
- ✓ Present your findings and make recommendations

Skills you'll gain

Data Analysis Performance Metric Data Manipulation Peer Review Data Storytelling Text Mining Statistical Analysis Exploratory Data Analysis Descriptive Statistics Business Analytics Data Science Proposal Development SQL Data Modeling Presentations Target Audience



Earn a career certificate

Add this credential to your LinkedIn profile, resume, or CV. Share it on social media and in your performance review.

Instructors



Don Noxon

University of California, Davis

1 Course • 41,380 learners

[View all 3 instructors](#)

Offered by



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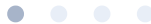
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Frequently asked questions

^ How long does it take to complete the Specialization?

This Specialization consists of 4 courses that could take anyone from 4-6 months to complete.

^ What background knowledge is necessary?

This Specialization is intended for the learner with no prior knowledge and will progress through the courses advancing their SQL skills.

^ Do I need to take the courses in a specific order?

We absolutely recommend you take the first course listed first and the Capstone project last, but courses two and three can be completed in either order.

✓ Is this course really 100% online? Do I need to attend any classes in person?

✓ Can I just enroll in a single course?

✓ Is financial aid available?

✓ Can I take the course for free?

✓ Will I earn university credit for completing the Specialization?

Show less ^



More questions

[Visit the learner help center](#)

Financial aid available, [learn more](#)

Skills

Artificial Intelligence (AI)
Cybersecurity
Data Analytics
Digital Marketing
English Speaking
Generative AI (GenAI)
Microsoft Excel
Microsoft Power BI
Project Management
Python

Certificates & Programs

Google Cybersecurity Certificate
Google Data Analytics Certificate
Google IT Support Certificate
Google Project Management Certificate
Google UX Design Certificate
IBM Data Analyst Certificate
IBM Data Science Certificate
Machine Learning Certificate
Microsoft Power BI Data Analyst Certificate
UI / UX Design Certificate

Industries & Careers

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Computer Science
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Career Aptitude Test
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