

## Objectives:

Students will:

- learn about database management systems, both in terms of use and implementation and design
- understand the stages of database design and implementation
- understand basic database programming theory
- collaborate with team members on a year long project to create a database and mobile app around a business idea of their choice
- develop a professional relationship with an Intel mentor through the PC Pals program
- demonstrate the ability to enter and advance within professional organizations by creating a resume and learning interviewing skills
- have an opportunity to earn Oracle SQL Certified Expert Certification

## Prerequisites:

Database Design & SQL Programming is intended for students who have successfully completed either AP Computer Science Principles or AP Computer Science A.

## FAQ's

### Q: What is SQL?

A: Structured Query Language (SQL) is a specialized language for updating, deleting, and requesting information held in a relational database management system (RDBMS).

### Q: What type of credit do I receive from taking this course?

A: This course has been approved for UC elective "g" credit. This course also articulates with Folsom Lake College *CISP: 351 Introduction to Relational Database Design and SQL*. See reverse for more information.

### Q: Am I required to take the Oracle Certification exam?

A: No. If you decide to take the exam, you will want to take a few practice exams on your own beforehand. There are several preparation books for Exam 1Z0-047.

### Q: Where do I take the exam and is there a fee?

A: Exams are administered at a testing center in the Sacramento area. Students receive a 25% discount voucher off the published price.

## Database Design & SQL Programming

Few subjects will open as many doors for students in the twenty-first century as computer science (CS) and engineering.

Visit [code.org](http://code.org) for more information on computing.

Contact instructor Stephanie Allen at [sallen@eduhd.net](mailto:sallen@eduhd.net) for more information.

OAK RIDGE HIGH SCHOOL

## Database Design & SQL Programming

- Oracle Online Curriculum
- Oracle Certification
- Earn College Credit
- Software Development Skills
- Intel Mentors
- Android App Development
- Resume Building & Interviewing Skills

Oak Ridge High School  
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## What is Database Design & SQL Programming?

This course engages students to analyze complex business scenarios and create a data model—a conceptual representation of an organization's information.

Participants implement their database design by creating a physical database using SQL (Structured Query Language). Basic SQL syntax and the rules for constructing valid SQL statements are reviewed.

This course culminates with a project that challenges students to design, implement, and demonstrate, with a mobile app, a database solution for a business or organization.

## Attend Industry Developers Conferences

Students are invited to attend Oracle OpenWorld and JavaOne. These international conferences held in San Francisco, offer informative technical sessions and opportunities to meet Oracle employees, customers, partners, and Java developers and enthusiasts.

## Intel PC Pal Program

Students will participate in the Intel PC Pals program, an e-mail mentoring program between students and Intel employee volunteers. The Intel volunteer encourages the student in school, stressing the importance of education for their future. The students develop professional correspondence skills and a professional contact within the IT industry they can use after graduation.

Through the Intel Foundation, ORHS will receive a \$200 Volunteer Matching Grant for every 20 hours Intel employees volunteer.

## Android App Development

Throughout the year, students will work on a team where they create an idea for a business, learn about the software development process and produce a working database and Android App to access the database.

## Resume and Interview Skills

In this course, students learn IT skills they can use to compete in today's job market. Students create a resume, learn interviewing skills and how to apply for internships.

## Earn Oracle SQL Certified Expert Certification

Oracle Database SQL Certified Experts demonstrate the complete set of skills required for working with the powerful SQL programming language and have mastered the key concepts of a relational database. SQL Experts understand how to query and manipulate data within the database, control privileges at the object and system level, and use advanced querying and reporting techniques. They are also knowledgeable about the concepts of controlling access and privileges for schema objects.

## College Credit

This course articulates with Folsom Lake College CISP: 351 Introduction to Relational Database Design and SQL. College credit will be granted only if the student completes all course work and examination(s) or equivalent with a grade of "A" or "B", completes the Folsom Lake College parent permission form, and obtains a student identification number by submitting an application to Folsom Lake College.