



# Sheldon High School

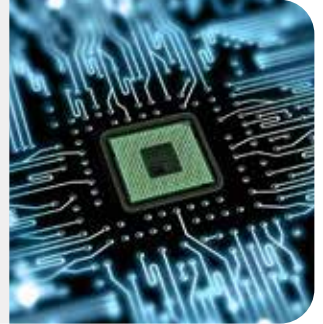
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## Computer Science Object-Oriented Developer Empowerment (CODE) Pathway

### About This Pathway

Do you love all things related to computers? Students learn about careers in computer science that involve the design, development, implementation, maintenance and management of systems that rely on software programs to satisfy the operational needs of modern business organizations. Persons with expertise in systems development and programming are critical to support operations like electronic commerce, medical records management, retail sales and inventory management, digital entertainment and use of energy. C.O.D.E has the tools you need for the 21st century while gaining practical hands on experience.



"I've learned skills I can use in real-life for the rest of my life. I feel like I can attain my goals."  
*Business Pathway Student*

### College & Career Pathway

#### ENTRY LEVEL

Average Salary: \$37,344

- Computer Support Specialist • Information Technology Technician • Web Designer • IT Support Specialist
- Computer technician

#### ASSOCIATE'S DEGREE/CERTIFICATION

Average Salary: \$100,913

- Computer User Support Specialist • Telecommunications Engineering Specialist • Web Administrator • Web Developer

#### BACHELOR'S DEGREE +

Average Salary: \$116,450

- Computer Programmer • Computer/Electrical Engineer • Geospatial Information Technologist • Information Security Analyst
- Information Technology Project Manager • Video Game Designer
- Computer Science Teachers, Postsecondary

### Explore Your Future Career

SOFTWARE & SYSTEMS DEVELOPMENT



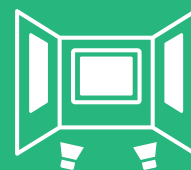
INFORMATION SUPPORT & SERVICES



NETWORKING



GAMES & SIMULATION



# Computer Science Object-Oriented Developer Empowerment (CODE) Pathway

SHELDON HIGH SCHOOL



## Competitive Advantage

### INDUSTRY SKILLS

- Basic SQL syntax and rules for construction valid SQL statements
- Database Attributes: Conceptual/physical, instances, identifiers, ERDs
- Relationships: Transferability, types, CRUD requirements
- UID's, Normalization, Arcs, Hierarchies and recursive modeling
- Functions: Manipulations, conversion, NULL, conditional expressions
- JOIN: Cross-natural, clauses, inner-outer, self-hierarchical queries
- DML, DDL, Constraints, Views, Sequences, Privileges, TCL
- CS: App design, variables, conditionals, functions, & algorithms
- CS: Lists, loops, traversals, and parameters, return, libraries

### STUDENT ACCOMPLISHMENTS

- Design, code, test, and debug programs that may include sound, voice, and graphics
- Create artifacts for both self-expression and problem solving such as images, audio, and Apps
- Generate a physical database based on their design using SQL
- Utilize programming, abstractions, algorithms, data sets, and the Internet
- Work the field of Cybersecurity experiencing encryption and how it can pose a threat to our safety

### COMPETITIONS

- AFA CyberPatriots
- UC Davis C-STEM Girls Camp and competition

## Sequence Of Courses

### EXPLORING COMPUTER SCIENCE #12137

10th GRADE - INTRODUCTORY

### AP COMPUTER SCIENCE PRINCIPLES #12116

11th GRADE - CONCENTRATOR

### DATABASE DESIGN & SQL PROGRAMMING #12119

12th GRADE -CAPSTONE

DISCLAIMER: The courses outlined above meet pathway requirements and are subject to change. This sequence does not list all courses needed for graduation.

## Business & Community Partners

- Apple Volt Program
- Folsom Lake College
- Google
- Merlot Marketing
- MMA Incorporated
- Soroptimist International of Elk Grove

