

Suggested Pathway

9th Grade

- Intro to Computer Science

10th Grade

- ALC Computer Programming 1A & 1B

11th Grade

- ALC Computer Programming II
- ALC Robotics & Automation

12th Grade

- ALC Mobile App Development
- ALC Gaming App Development
- ALC Robotics & Automation



Computer Programming

Career and College Readiness



Advanced Learning Center
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CAREER OUTLOOK

ENGINEERS:

2010 Median Pay \$56,000 - \$98,000 annually, \$26.92 - \$47.16/hour

ELECTRICIANS:

2010 Median Pay \$48,000 annually, \$23.08/hour
The job outlook for Electricians is 28% growth from 2010-2020 which is higher than the norm.

APPLICATIONS & SYSTEMS SOFTWARE DEVELOPERS:

2010 Median Pay \$87,790-\$94,180 annually, \$42.21-\$45.28/hour
Employment of software developers is projected to grow 30 percent from 2010 to 2020, much faster than the average for all occupations. The main reason for the rapid growth is a large increase in demand for computer software.

COMPUTER PROGRAMMING

MISSION

We provide computer science students with a strong foundational knowledge of computer programming concepts and software development principles. We will provide experiences beyond the classroom for students to interact with and observe professionals in the software development industry.

Computer Programming I
Computer Programming II
Mobile App Development
Gaming App Development
Robotics and Automation

COURSES

Computer Programming 1A & 1B (UVU CE CSI 1400 - 3 credits): This year-long course is a fun and exciting way to learn the basic concepts of programming and software development. This course applies mathematical concepts in real world applications to enhance the student's core skills and problem solving skills while earning college credit.

Computer Programming II: This course builds on concepts learned in Computer Programming 1 by exploring how foundational programming concepts are applied and used together in larger and more in-depth programming projects. Students develop a project portfolio to use in job interviews. The course will explore class development, data structures, and search methods, applying them each to a wide range of applications. Term projects provide the flexibility to create and develop applications using student ideas. The concepts learned in this class will enhance student abilities as a software developer.

TECHNOLOGY

Vex Robotics Lab
Vex Robot kits with:
Motors
Servos
Sensors
Controllers
Computer Hardware
Computer Software

Mobile App Development:

This course will focus on the development of applications for mobile devices. Students will create and deploy a mobile app that can be used on multiple platforms.

Gaming App Development:

This course will focus on the development of games for computer and mobile applications. The course will integrate topics learned in animation, computer programming, and HTML 5.

Robotics & Automation:

In this full-year course students learn the basic systems of robotics and automation. Students learn concepts required to change electrical energy into mechanical energy within a variety of systems, and how to safely work with and measure electricity. Students learn and work with industry-standard 3D-design software. Throughout the course, students design and build robots able to perform a variety of tasks. This class prepares students for college automation and programming courses.

