



Course Overview

High School | Technology Education | Coding & Web Design - Last Updated on April 3, 2025

DESCRIPTION

K-12 Content Area | Mission & Philosophy Statement

- Young people are born investigators, with natural curiosities about the physical, biological, and social worlds they experience. Anchoring science, technology, engineering learning in real-world phenomena connects curiosities to core conceptual understandings.
- Students actively construct understanding through inquiry, experimentation, and analysis to develop science and engineering practices such as asking questions, planning and carrying out investigations, and constructing explanations and models.
- Integration of crosscutting concepts such as patterns, cause and effect, and systems thinking promote interdisciplinary understanding and sense-making of the natural world.
- The design process is central to the modern world. Architects, Engineers, Drafters, and Designers utilize technical tools to prototype, manufacture, and collaborate in the development of new products.

Course Description

Coding will teach the foundations of computer science and basic programming in JavaScript, with an emphasis on helping students develop logical thinking and problem solving skills. This course will prepare students for AP Computer Science Principles. Students will gain skills in building web pages and writing software. Students will begin with JavaScript and increase in knowledge and experience throughout the course. Students will learn how to create effective, informative personal and business web pages while investigating the use of the Internet in business. Students will learn advanced webpage design using HTML, DHTML, and JavaScript. Students will apply the knowledge and skills acquired in this course to create web pages for the district web site and possibly local business/community members.

STANDARDS

CSTA Computer Science - K-12 (2017)

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|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1A-CS-01, | 1A-CS-02, | 1A-CS-03, | 1A-NI-04, | 1A-DA-05, | 1A-DA-06, | 1A-DA-07, |
| 1A-AP-08, | 1A-AP-09, | 1A-AP-10, | 1A-AP-11, | 1A-AP-12, | 1A-AP-13, | 1A-AP-14, |
| 1A-AP-15, | 1A-IC-16, | 1A-IC-17, | 1A-IC-18, | 1B-CS-01, | 1B-CS-02, | 1B-CS-03, |
| 1B-NI-04, | 1B-NI-05, | 1B-DA-06, | 1B-DA-07, | 1B-AP-08, | 1B-AP-09, | 1B-AP-10, |
| 1B-AP-11, | 1B-AP-12, | 1B-AP-13, | 1B-AP-14, | 1B-AP-15, | 1B-AP-16, | 1B-AP-17, |



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1B-IC-18,	1B-IC-19,	1B-IC-20,	1B-IC-21,	2-CS-01,	2-CS-02,	2-CS-03,	2-NI-04,
2-NI-05,	2-NI-06,	2-DA-07,	2-DA-08,	2-DA-09,	2-AP-10,	2-AP-11,	2-AP-12,
2-AP-13,	2-AP-14,	2-AP-15,	2-AP-16,	2-AP-17,	2-AP-18,	2-AP-19,	2-IC-20,
2-IC-21,	2-IC-22,	2-IC-23,	3A-CS-01,	3A-CS-02,	3A-CS-03,	3A-NI-04,	3A-NI-05,
3A-NI-06,	3A-NI-07,	3A-NI-08,	3A-DA-09,	3A-DA-10,	3A-DA-11,	3A-DA-12,	
3A-AP-13,	3A-AP-14,	3A-AP-15,	3A-AP-16,	3A-AP-17,	3A-AP-18,	3A-AP-19,	
3A-AP-20,	3A-AP-21,	3A-AP-22,	3A-AP-23,	3A-IC-24,	3A-IC-25,	3A-IC-26,	
3A-IC-27,	3A-IC-28,	3A-IC-29,	3A-IC-30,	3B-CS-01,	3B-CS-02,	3B-NI-03,	
3B-NI-04,	3B-DA-05,	3B-DA-06,	3B-DA-07,	3B-AP-08,	3B-AP-09,	3B-AP-10,	
3B-AP-11,	3B-AP-12,	3B-AP-13,	3B-AP-14,	3B-AP-15,	3B-AP-16,	3B-AP-17,	
3B-AP-18,	3B-AP-19,	3B-AP-20,	3B-AP-21,	3B-AP-22,	3B-AP-23,	3B-AP-24,	
3B-IC-25,	3B-IC-26,	3B-IC-27,	3B-IC-28,				

COURSE OBJECTIVES

The objective of the course is to demonstrate the knowledge and skills outlined in the CSTA standards.

ASSESSMENT TYPES

The following assessment types will be used during the course:

- Curriculum-based Measures
- Formative Assessments
- Performance-based Assessments
- Summative Assessments



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SUGGESTED METHODS OF INSTRUCTION

A technology education program demands the use of a variety of instructional strategies to foster design-based thinking. Below is a list of suggested strategies for high-quality instruction:

- Instructional components outlined in *The Framework for Teaching* by Charlotte Danielson
- Posing questions for investigation
- Cooperative learning and collaboration
- Inquiry, engineering, and design processes
- Developing models

RESOURCES

District Approved Program Resources	District Approved Supplemental Resources	District Approved Technology Resources
		CodeHS