

Computer Science: Web Development Track Semester 1

Grade Level: 6–8
Credit: 0.5

Course Overview

Embark on an engaging adventure into web creation with Web Development Track, a fully online, self-paced, competency-based program where students become real web builders! Aligned with state and national standards, this course ensures mastery at each stage—no moving forward without proving skills. From day one, learners explore how the internet works, structure web pages with HTML, style them using CSS, and add basic interactivity with JavaScript. Each module builds toward publishing a live portfolio site showcasing their work and voice in the digital world.

By semester's end, students will not only possess foundational web development knowledge, but also critical thinking, digital design awareness, and confidence in building real websites. This is more than coding—it's learning to create, share, and shine online!

What Students Will Explore

- Web Fundamentals & Structure – Discover how the internet works, and build well-structured webpages using HTML tags, headings, paragraphs, images, and links
 - Visual Design & CSS Styling – Learn color, typography, layout, and responsive design for desktop and mobile—practicing grid systems, margins, and aesthetic appeal
 - Interactive Behavior with JavaScript – Add buttons and event-driven interactions to pages—like hide/reveal content, button clicks, or simple animations
 - Website Deployment & Publishing – Understand hosting essentials, organize files, and publish student sites online—creating a shareable portfolio for family and peers.
 - User-Centered Design Practices – Implement accessibility, navigation clarity, and UI principles—focusing on how design can improve user experience
-

Key Learning Experiences

- Guided Lessons & Templates – Hands-on HTML/CSS/JavaScript tutorials, building knowledge step by step.
- Project-Based Learning – Create real web content: digital birthday cards, pet profile pages, personal portfolios, mini blog pages, and interactive photo galleries
- Responsive Challenges – Modify layouts to work smoothly on any device—from desktop to phone.

- Peer Showcase & Feedback – Present web projects, discuss design choices, and offer positive insights using digital commentary tools

- Live Site Publication – Host and present a functional website—styled, interactive, and student-made.

Learning Objectives

By the end of the course, students will be able to:

- Structure and code web pages using HTML elements such as headings, paragraphs, images, links, lists, tables, and containers ([turn0search14])
- Use CSS to style text, images, backgrounds; layout pages responsively with grids and Flexbox
- Implement basic JavaScript to add interactivity—event listeners, functions, DOM manipulation
- Create accessible and user-friendly websites with thoughtful design and navigation
- Debug code effectively—identify and fix HTML, CSS, and JavaScript errors
- Plan, design, deploy, and share a live website portfolio with confidence

Why Take This Course

Web Development Track transforms digital engagement into real-world creation. Building websites gives students immediate, visual proof of their progress—boosting confidence and sparking curiosity. Research shows that learning HTML, CSS, and JavaScript builds problem-solving, design thinking, and computational skills while integrating cross-curricular content in math, language arts, and art ([turn0search5], [turn0search9]).

With its fully online, self-paced, competency-based format, students learn at their own speed—mastering core skills before advancing. By semester's end, they'll have a polished, live website showcasing their creativity and expertise—ready for school presentations, digital portfolios, or further study.

Whether your child dreams of designing games, starting a blog, or launching a passion project, this course equips them with foundational digital skills and lifelong confidence. In a world where the web is our stage, Web Development Track is the perfect spotlight for young creators to shine.

The course is a fully online, self-paced, competency-based program, and we're very proud of it!

Students only advance once they've demonstrated true mastery of each skill—no rushing, no guessing. This flexible structure not only supports individual learning styles and schedules but also empowers learners to take ownership of their progress, knowing exactly what they can do next.

Moreover, every module, assignment, and assessment is meticulously aligned with state standards and clear learning objectives, guaranteeing comprehensive coverage of essential knowledge and real-world skills students need to succeed. This isn't just online learning—it's purposeful, rigorous, and personalized, ensuring no student advances until they truly understand the material.