Modern Web Development – Flex-Paced

Frontend Web Development | 0.5 High School Credit | Faith-Integrated

Course Vision

Modern Web Development equips students to understand how the web works and to build real, interactive websites with skill, integrity, and excellence. Students are encouraged to view technology not just as a career skill, but as a tool that can be used to serve others and glorify God.

As image-bearers of a creative God (Genesis 1:27), students reflect creativity and order through clean code, thoughtful design, and responsible digital communication.

Course Description

In this flex-paced course, students learn how to design and build real websites and web applications from the ground up.

Students begin with HTML and CSS, the foundational languages that control structure, layout, and style. From there, they progress into JavaScript to add interactivity such as buttons, animations, and dynamic content.

The course focuses on frontend development—the part of the web users see and interact with—while using pre-built backend tools so students can focus on creativity, problem-solving, and writing clean, understandable code.

Course Objectives

- Understand how websites function
- Build responsive web pages using HTML and CSS
- Add interactivity using JavaScript
- Write clean, organized, readable code
- Debug and troubleshoot common coding problems
- Develop problem-solving skills like a professional developer
- Complete real-world web development projects

Skills Developed

- Web page structure and layout
- Responsive design principles
- Frontend programming
- Code organization and best practices
- Developer thinking and debugging
- Project planning and execution

- Independent learning with accountability

Course Structure

The core curriculum is completed in approximately 20 weeks, with bonus lessons available for continued growth.

- HTML Foundations – page structure, headings, links, lists, images
- CSS Styling – colors, fonts, spacing, layout, responsive design
- JavaScript Basics – variables, functions, events, DOM manipulation
- Modern Tools – Visual Studio Code, Svelte, SvelteKit

Each lesson includes short instructional videos followed by immediate hands-on coding practice.

How the Class Works

This is a flex-paced course with accountability. Students may begin anytime during the year and move faster than a traditional semester if desired.

Students meet weekly (approximately 30 minutes) for one-on-one support, review, and progress checks. Additional meetings may be scheduled for students who wish to accelerate.

Projects
- Personal portfolio website
- Interactive webpage with JavaScript features
- Multi-page responsive site
- Custom project aligned to student interests

Grading Overview
- Project Completion – 40%
- Code Quality & Organization – 25%
- Problem-Solving & Debugging – 20%
- Weekly Progress & Meetings – 15%

Faith-Based Integration

Students will reflect on biblical principles such as stewardship, integrity, diligence, and excellence. Writing clean code and building well-structured websites mirrors God's character of order and design.

Students are encouraged to pursue excellence in their work (Colossians 3:23), act with integrity in digital spaces (Proverbs 11:3), and use their technical skills to serve others.

Web development becomes not just a technical skill, but an opportunity to reflect creativity, discipline, and responsibility in the digital world.

Technology Requirements

- Reliable internet access
- Computer capable of running Visual Studio Code (a free program)
- Modern web browser
- All software used in this course is free

Why This Course Matters

Understanding how websites and web applications function equips students with valuable career and life skills. Students leave this course not just knowing how to follow tutorials—but knowing how to think like developers.

This course prepares students for future study in web development, software engineering, digital design, entrepreneurship, and other technology fields.