

# STRANDS AND STANDARDS

## Web Development Projects



### Course Description

Web Development Projects is a course designed to teach the process of User Interface (UI), User Experience (UX), and Information Architecture (IA) for the design section. Advanced coursework in HTML, CSS, and JS. The focus of the course is the design and development of web-based products. Web Development Projects is an advanced course within the Web Development pathway. These skills can prepare students for entry-level positions and other occupational/educational goals.

<b>Intended Grade Level</b>	10 - 12
Units of Credit	1.0
Core Code	35.02.00.00.055
Concurrent Enrollment Core Code	35.02.00.13.055
Suggested Prerequisite	Web Development 2 or Web Development Advanced
Skill Certification Test Number	Industry Certifications: 992, 993, 994, 9921, 9454
Test Weight	1.0
<b>License Type</b>	CTE and/or Secondary Education 6-12
<b>Endorsement Qualifiers:</b>	
Endorsement 1 OR	Web Development
Endorsement 2	Programming and Software Development

## STRAND 1

**Students will use and enhance skills learned in Web Development 1, 2 or Advanced.**

### Standard 1

Apply skills learned in Web Development 1 and Web Development 2 or Web Development Advanced.

- Use UX/UI Design Standards for project planning and design
- Code HTML, CSS, and JS using a variety of advanced techniques
- Create Web Based Applications for Mobile Devices
- Maintain and improve websites, games, and apps for school clients

### Standard 2

Review and apply principles and elements of visual design.

- Utilize visual design elements in all interactive projects
- Apply concepts of color theory in designing and coding web-based projects
- Utilize image composition in projects

### Standard 3

Follow their AUP, Fair Use guidelines, and copyright law.

- Follow and adhere to the school's Acceptable Use Policy
- Understand when copyrighted material can be used under Fair Use guidelines
- Understand and adhere to all applicable copyright laws

## STRAND 2

**Students will create a Mobile App using HTML, CSS, and JS and be introduced to beginning App Development using Web Based API's.**

### Standard 1

Design and development methodologies.

- Describe and define features, number of touchpoints, and networking
- Identify ways to save energy
- Use a minimum of one API in application: Geolocation, Forms, History, or Storage
- Create a Style Guide or an Interface Inventory
- Create prototype version of their app
- Work in a team
- Utilize project management skills
- Develop a concept with considerations for plan, cost, and time
- Develop a design document detailing the problem the app solves
- Implement project management: Student will be able to implement project management methodologies to streamline workflow. Agile, Scrum, Kaban, etc.

### Standard 2

Build the App.

- Create a splash Screen and icon
- Develop audio for the application
- Write and comment code appropriately
- Create application animations

### Performance Skills

Students will publish the App to a physical device or to an App Store (optional)

## STRAND 3

**Students will learn and follow the process of planning, designing, evaluating, revising, and publishing Web Development projects**

### Standard 1

Planning.

- Conceptualize ideas and do the initial planning for a project
- Write a project proposal including objectives, goals, overview of the project, costs, timeline, etc. Define the specs for the project (target users, technology needed, signoffs needed, etc.)
- Create a development schedule, team member assignments, and review options for the project Create a wireframe for the project flow, directories, naming conventions, and navigation
- Get approval for any copyright material that will be used
- Plan your user interface using design standards
- Make any revisions needed and get approvals for the project

### Standard 2

Create and development of the content for the project.

- Create a project prototype (working model) and make any needed revisions
- Create and organize the Web Development objects needed for the project with appropriate naming conventions
- Add any scripting or programming needed
- Follow copyright and fair use guidelines
- Monitor time and cost progress of the project
- Test the project, check for quality assurance, and make any revisions need
- Get client approval and check off

### Standard 3

Publish the Project.

- Design images/animations required for publishing and distribution
- Write needed documentation for the user
- Set a launch date
- Provide plan for continued maintenance of the project
- Publish/launch the Web Based Project

## STRAND 4

**Students will know how to develop a Website or Web Based Game or App.**

### Standard 1

Understand different roles for those who work as members of a Web Development project team.

- Explore personal interests and abilities related to working in the web development industry
- Identify Development talents (i.e., programming, problem solving, algorithmic thinking, etc.) Identify Design Talents (i.e. UX, UI, IA, Animation, 3D JS, ect.)
- Identify organizational and leadership skills
- Explore aptitude for innovation and creativity
- Work and collaborate as an interactive project team member or as an individual
- Identify and understand Web Development team roles: User Interface (UI), User Experience (UX), Information Architecture (IA), Front End Web Developer, Back End Web Developer, Full Stack Web Developer, Programmer, Web Development Designer, Web Development Developer, Web Designer Specialist, etc.
- Explore courses needed for completion of the Web Development Pathway
- Explore careers and training opportunities, trends, and requirements for different roles in Web Development

## STRAND 5

**Students will create an interactive Web Development portfolio which showcases a student's projects, work, and skills. Projects included can be created individually or as a team member.**

### Standard 1

Plan a portfolio showcasing projects completed in all Web Development courses.

- Use the process for planning and designing interactive projects
- Include examples of the planning, design, coding, and publishing process
- Use version Control Software to Produce the portfolio (Git, Github, Tortoise svn, etc. )

### Standard 2

Create a web development portfolio including the following elements with strict adherence to copyright and fair use guidelines:

- Add: Project Designs (Mockups, WireFrames, and UX/UI/IA Plans)
- Include: Original HTML, CSS, and JS Code
- Include finished projects (individual and/or group)
- Add other awards, contest projects, etc. (optional)
- Include your resume

## STRAND 6

**Students will participate in a work-based learning experience and/or student competition.**

### Standard 1

Participate in a work-based learning experience.

- Take a field trip to a software or web design business
- Complete a job shadow in a Web Development career
- Intern at a Web Development business
- Listen to an industry or post-secondary guest speaker
- Work for a Web Development company or as a freelance Web Developer

### Standard 2

Participate in a Web Development student competition. (Optional)

- Enter a school, district, or state level Web Development contest
- Prepare and submit an entry for the Digital Media Arts Festival
- Enter and compete in a CTSO competition in a Web Development area
  - FBLA, FFA, FCCLA, SkillsUSA, or TSA all have web development contests

## Overall Performance Skill

Students will use the Strands & Standards in this course to create a web-based product and final online portfolio.

## Workplace Skills

Workplace Skills taught:

- Communication
- Teamwork
- Dependability
- Legal requirements / expectations

## Performance Skill Documentation & Rubric:

A link to the performance skill rubric form is located [HERE](#) for your review.