PRECISION EXAMS

Web Development II

EXAM INFORMATION

Items
36
Points
49
Prerequisites
WEB DEVELOPMENT I
Grade Level
9-12
Course Length
ONE SEMESTER

Career Cluster
INFORMATION TECHNOLOGY

Performance Standards
INCLUDED

Certificate Available
YES

DESCRIPTION

Web Development is a course designed to guide students in a project-based environment in the development of up-to-date concepts and skills that are used in the development of today's websites. Students will learn the fundamentals of how the Internet works. They will learn and use the basic building blocks of the World Wide Web: HTML5 coding, Cascading Style Sheets (CSS), and JavaScript. They follow the steps to create a website by planning, designing, developing, deploying, and maintaining of the website projects. Students will learn and use different scripting technologies to create more dynamic and interactive websites. They will learn what it takes for a career in Web Development as they complete projects and create their own web site.

EXAM BLUEPRINT

STANDARD	PERCENTAGE OF EXAM
1- Fundamentals of HTML	25%
2- Cascading Style Sheets (CSS)	45%
3- Site Planning & Design	22%
4- Web Technologies	4%
5- Career Exploration & Preparation	4%

STANDARD 1

STUDENTS WILL DEMONSTRATE CREATION OF "WELL FORMED" WEB PAGES

Objective 1 Use advanced HTML5 elements to create web pages.

1. Insert SVG image maps on web page.
2. Insert forms on web page.
3. Insert iframes on a web page i.e. Google Forms, Google Calendar, YouTube
4. Insert JavaScript by using the Script tag on the page for embedded or external JS file.
5. Use a GUI-based HTML5 editing software to create web pages.
6. Explore new HTML5 elements, such as; canvas, drag and drop, audio, video, geolocation.

STANDARD 2

STUDENTS WILL FORMAT WEB PAGES USING CSS

Objective 1 Use selectors in a CSS.

1. Implement a tags, ID, & classes to modify an HTML element.
2. Implement an id selector to modify a single element on the page.
3. Implement class selectors to modify several class elements using span.
4. Implement contextual selectors to modify nested elements.

Objective 2 Format page layout with advanced CSS

1. Use width, height, or auto to adjust the size.
2. Use float to position elements.
3. Use absolute and relative to position elements.
4. Use text align, margin, and padding

Objective 3 Frameworks to layout web pages.

1. Format web pages using frameworks like: BootStrap, JQuery, etc.
2. Explore new frameworks.
3. Use frameworks to create responsive pages.

Objective 4 Code animation and graphics with advanced CSS

1. Buttons (i.e. rounded, colored etc.)
2. Create navigation bars
3. Image overlay hover (i.e. fade in, slide in top etc.)
4. Image slider

STANDARD 3

STUDENTS WILL PLAN, DESIGN, IMPLEMENT, AND MAINTAIN WEBSITES

- Identify basic principles of website usability, readability, and accessibility.
- Use a wireframe to plan a website by using sketches, website hierarchy, or a site map.
- Communicate with others (such as peers and clients) about design, content plans, and timeline.
- Produce website designs that work on various devices and browser versions/configurations.
- Create a presentation that includes a plan for a client's website before, during or after website development.

Objective 1 Create content for website.

1. Create and prepare 2D images.

2. Prepare rich media; such as, video, audio, and animation (CSS3 or JavaScript).
3. Identify when to use various image and digital media file formats.
4. Optimize images for web content, such as resize, compress, thumbnails.
5. Use favicons.

Objective 2 Uploading and maintaining a site.

1. Understand and be able to describe the capabilities of web servers.
2. Upload pages to a web server. * Optional if school district allows
3. Differentiate between types of IP addresses.
    1. Describe a static IP address.
    2. Describe a Dynamic IP address.
    3. Differentiate between ipv4 and ipv6.
4. Conduct basic technical tests such as validating the website (wc3 compliant), accessibility, SEO, etc.
5. Present web pages to others for quality assurances (QA) such as team members and clients for feedback and evaluation on technical merits and usability.
6. Identify methods for collecting site feedback, such as using counters, feedback forums, Google Analytics, Google Webmaster Tools.
7. Provide site maintenance using analytic reports, backups, and promotion.
8. Document all aspects of website creation and maintenance.

Objective 3 Use version control in projects.

1. Utilize code management tools i.e. Git/GitHub, Tortoise SVN, etc.
2. Understand basic terms and procedures of version control.

Objective 4 Work on a team to create a website.

1. Use good oral and written communication skills as a team member
2. Use a project management tool to help with the teamwork ie. Agile/Scrum

STANDARD 4

WEB TECHNOLOGIES

Objective 1 Understand other web technologies.

1. Describe new and emerging Web technologies such as Web 2.0, wikis, blogs, forums, etc.
2. Understand the purpose of content management systems (CMS) such as WordPress, Drupal, Weebly, etc.

STANDARD 5

STUDENTS WILL EXPLORE CAREERS IN WEB DEVELOPMENT AND PREPARE A PORTFOLIO OF PROJECTS CREATED

Objective 1 Explore IT Web Development careers.

1. Identify job roles in the Information Technology (IT) industry as they apply to web development.
2. Understand the responsibilities, tasks, and skills each job requires.

Objective 2 Create a Student portfolio.

1. Prepare an electronic portfolio of projects developed in the class.

Objective 3 Competition:

1. Compete in a project-based competition using web design and development skills. (CTSO: TSA, FBLA, SKILLSUSA, FCCLA, DECA, FFA; Digital Media Arts Festival etc…)

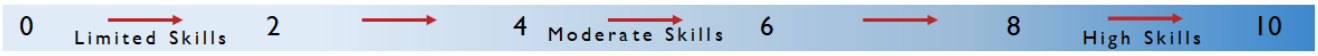
Web Development II Performance Standards (Optional)

Performance assessments may be completed and evaluated at any time during the course. The following performance skills are to be used in connection with the associated standards and exam. To pass the performance standard the student must attain a performance standard average of **8 or higher** on the rating scale. Students may be encouraged to repeat the objectives until they average **8 or higher**.

Students Name_____

Class_____

PERFORMANCE RATING SCALE



STANDARDS 1-4 Score:

- ☐ Create a ten-page website with the following minimum elements:
  - Navigation using CSS or JavaScript
  - Insert Image slider
  - Reusable hand-coded template for sub-pages of website
  - Validate website with W3Schools

PERFORMANCE STANDARD AVERAGE SCORE: