

# WEB DESIGN AND DEVELOPMENT



## PURPOSE

To evaluate each contestant's preparation for employment and to recognize outstanding students for excellence and professionalism in the field of web design and development.

First, download and review the General Regulations at: <http://updates.skillsusa.org>.

## ELIGIBILITY

Open to a team of two active SkillsUSA members enrolled in programs using Web design or web development as an occupational objective.

## CLOTHING REQUIREMENTS

### Class E: Contest specific — Business Casual

- Official SkillsUSA white polo shirt
- Black dress slacks (accompanied by black dress socks or black or skin-tone seamless hose) or black dress skirt (knee-length, accompanied by black or skin-tone seamless hose)
- Black leather closed-toe dress shoes

These regulations refer to clothing items that are pictured and described at: [www.skillsusastore.org](http://www.skillsusastore.org). If you have questions about clothing or other logo items, call 1-888-501-2183.

**Note:** Contestants must wear their official contest clothing to the contest orientation meeting.

## EQUIPMENT AND MATERIALS

1. Supplied by technical committee:
  - a. Workstation with table space for two computers, with two chairs, 110-volt electrical outlet
2. Supplied by the contestant team:
  - a. All competitors must create a one-page résumé and submit a hard copy to the technical committee chair at

orientation. Failure to do so will result in a 10-point penalty.

**Note:** Your contest may also require a hard copy of your résumé as part of the actual contest. Check the Contest Guidelines and/or the updates page on the SkillsUSA website at <http://updates.skillsusa.org>.

- b. Two multiple outlet surge protectors
- c. Sketch pad for storyboarding
- d. Computers with CD-RW drive or USB port, and an Ethernet connection
- e. Hub and patch cables for interconnecting team computers
- f. Related web authoring and graphics software accompanied by proof of license
- g. Design and development tools necessary to build a complete website

## SCOPE OF THE CONTEST

The contest is defined by industry standards and set by the current industry technical committee.

## Knowledge Performance

The contest consists of a written knowledge exam assessing the team's general knowledge of definitions, software, processes and procedures relevant to web design in such areas as: graphics, design, layout, programming, code and process.

This team event includes topics such as: programming (HTML, XHTML, JavaScript, client-side scripting), web graphics, website design (usability), website management, project management and Web multimedia. Legal issues surrounding the field of web design will also be considered a part of this contest.

## Skill Performance

The contest includes a web design project and a written document providing an overview explaining how the web content supports a designated theme to assess web design and development skills.

## Contest Guidelines

### Web Design Project

1. The project requires a team of two: a web designer and web developer/webmaster. The team of two is to demonstrate how a developed project with an educational theme has been completed through the application of graphics, multimedia, design and layout.
2. Attention will be paid to the quality of code and the quality of the website development process.
3. The national technical committee will provide a template, which describes the site development process.
4. All entries to the contest must be created by the teams during the contest.
5. Teams will be issued a work order on Tuesday during the orientation meeting. Each team's website will be constructed at the contest site for evaluation and continual work on the day of the contest.
6. Specific schedules outlining equipment setup, storyboarding and specific judging criteria will be distributed during the orientation meeting on Tuesday.
7. All copyright laws are to be followed.
8. Violations will result in disqualification.
9. No hard or soft copy reference material such as HTML, CSS or JavaScript documentation will be permitted for use during the contest. Some written reference materials will be available on site.

### Explanation Document

1. Teams shall provide an overview document that shows how developed Web content supports the educational theme. Criteria include:
  - a. Theme and content must be educational in nature
  - b. Content must support the theme
  - c. Quality of the site organization and navigation
  - d. Acceptable use of language and conventions: paragraph structure, grammar, spelling, punctuation, etc.
  - e. Any multimedia elements used should contribute to the site content
  - f. The site can be viewed in more than one browser on both Mac and Windows platforms

- g. Links are valid and all multimedia components load properly and within a reasonable period of time

For further information and FAQ, visit:  
[www.webdesigncontest.org](http://www.webdesigncontest.org).

## Standards and Competencies

### WEB 1.0 — Use appropriate and thematic graphic elements that contribute to the understanding of concepts, ideas and relationships of the web design to related standards of Certified Web Designer Associate-apprentice

- 1.1 Demonstrate a consistent and appropriate variation in the use of type sizes
- 1.2 Demonstrate an appropriate use of colors
- 1.3 Incorporate objects and background images
- 1.4 Use color, graphics, navigation design and consistency from page to page
- 1.5 Identify the critical elements of web design
- 1.6 Explain the use of copyright, intellectual property and trademark laws as related to web design

### WEB 2.0 — Illustrate the use of various multimedia tools in the web design and layout, which are clearly thought out, appropriately used and error-free to contribute to the best explanation of concepts, ideas and relationships to related standards of CWDSA-apprentice

- 2.1 Use animated GIFs as a part of the final product
- 2.2 Choose appropriate tools for supporting the development of the concepts, ideas and relationships
- 2.3 Optimize the usage of graphic files and file management
- 2.4 Incorporate electronic images, photo files and scanned images into the final product
- 2.5 Incorporate a good blend of audio and video files
- 2.6 Use hyperlinks and anchors
- 2.7 Create a corporate identity and design

**WEB 3.0 — Design a website navigation that is well architected, easy to use, and consistent throughout the site with considerations made to programming and compatibility to related standards of CWDSA-apprentice**

- 3.1 Demonstrate the use of contemporary web browsers
- 3.2 Design a standards-based site that supports many common web browsers
- 3.3 Ensure the capability of code structure and design
- 3.4 Apply HTML, CSS and JavaScript to create a well crafted website
- 3.5 Format and document the code

**WEB 4.0 — Create a process with incorporated strategies and organizational tools that help persons access the site at different levels to related standards of CWDSA-apprentice**

- 4.1 Design activities with a scaffolding of information from basic knowledge to higher-level thinking
- 4.2 Contribute to the richness of the process
  - 4.2.1 Help others experience different perspectives
  - 4.2.2 Share responsibilities in accomplishing a task

### **Committee Identified Academic Skills**

The technical committee has identified that the following academic skills are embedded in this contest.

#### **Math Skills**

- Organize and describe data using matrices

#### **Science Skills**

None Identified

#### **Language Arts Skills**

- Provide information in conversations and group discussions
- Provide information in oral presentations
- Demonstrate use of such verbal communication skills as word choice, pitch, feeling, tone and voice
- Demonstrate use of such nonverbal communication skills such as eye contact, posture and gestures using interviewing techniques to gain information
- Analyze mass media messages
- Demonstrate comprehension of a variety of informational texts

- Use text structures to aid comprehension
- Understand source, viewpoint and purpose of texts
- Organize and synthesize information for use in written and oral presentations
- Demonstrate knowledge of appropriate reference materials
- Demonstrate narrative writing
- Demonstrate expository writing
- Demonstrate persuasive writing
- Demonstrate informational writing
- Edit writing for correct grammar, capitalization, punctuation, spelling, sentence structure and paragraphing

### **Connections to National Standards**

State-level academic curriculum specialists identified the following connections to national academic standards.

#### **Math Standards**

- Geometry
- Measurement
- Problem solving
- Reasoning and proof
- Communication
- Connections
- Representation

*Source:* NCTM Principles and Standards for School Mathematics. For more information, visit: <http://www.nctm.org>.

#### **Science Standards**

- Understands the nature of scientific inquiry
- Understands the scientific enterprise

*Source:* McREL compendium of national science standards. To view and search the compendium, visit: <http://www2.mcrel.org/compendium/browse.asp>.

#### **Language Arts Standards**

- Students apply a wide range of strategies to comprehend, interpret, evaluate and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies, and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics)

- Students adjust their use of spoken, written and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes
- Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes
- Students apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language and genre to create, critique and discuss print and nonprint texts
- Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate and synthesize data from a variety of sources (e.g., print and nonprint texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience
- Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge
- Students develop an understanding of and respect for diversity in language use, patterns, and dialects across cultures, ethnic groups, geographic regions and social roles
- Students participate as knowledgeable, reflective, creative and critical members of a variety of literacy communities
- Students use spoken, written and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion and the exchange of information)

**Source:** IRA/NCTE Standards for the English Language Arts. To view the standards, visit: [www.ncte.org/standards](http://www.ncte.org/standards).