

**FUNDAMENTALS OF WEB PAGE DESIGN AND DEVELOPMENT**  
**COURSE CODE: 5031**

**COURSE DESCRIPTION:** This course is designed to provide students with the knowledge and skills needed to design and develop websites. Students will attain skills in designing, implementing, and maintaining websites using authoring tools. Successful completion of this course will prepare students to take industry certification test(s).

**NOTE:** Websites created by students in this course are not to be published without following district guidelines.

**OBJECTIVE:** Given the necessary equipment, supplies, and facilities, the student will be able to successfully complete all of the following core standards for a course that grants one unit of credit.

**RECOMMENDED GRADE LEVELS:** 10–12

**COURSE CREDIT:** 1 Carnegie unit

**PREREQUISITE:** Keyboarding 5100 (or SCDE state Keyboarding Proficiency Test)

**COMPUTER REQUIREMENTS:** One computer per student

**AVAILABLE CERTIFICATIONS:**

Adobe Certified Associate-Web Authoring Using Adobe Dreamweaver  
CIW Web Foundations Associate

**APPLICABLE SOFTWARE:**

Adobe Creative Suite (Dreamweaver, Photoshop, and Fireworks)  
Advanced Text Editors (e.g., Notepad++, TextWrangler, Komodo Edit, Brackets)  
Operating System Text Editor such as Notepad and TextEdit

**RESOURCES:**

[www.mysctextbooks.com](http://www.mysctextbooks.com)

**A. SAFETY**

1. Review school safety policies and procedures.
2. Review classroom safety rules and procedures.
3. Review safety procedures for using equipment in the classroom.
4. Identify major causes of work-related accidents in office environments.
5. Demonstrate safety skills in an office/work environment.

## **B. STUDENT ORGANIZATIONS**

1. Identify the purpose and goals of a Career and Technology Student Organization (CTSO).
2. Explain how CTSOs are integral parts of specific clusters, majors, and/or courses.
3. Explain the benefits and responsibilities of being a member of a CTSO.
4. List leadership opportunities that are available to students through participation in CTSO conferences, competitions, community service, philanthropy, and other activities.
5. Explain how participation in CTSOs can promote lifelong benefits in other professional and civic organizations.

## **C. TECHNOLOGY KNOWLEDGE**

1. Demonstrate proficiency and skills associated with the use of technologies that are common to a specific occupation.
2. Identify proper netiquette when using e-mail, social media, and other technologies for communication purposes.
3. Identify potential abuse and unethical uses of laptops, tablets, computers, and/or networks.
4. Explain the consequences of social, illegal, and unethical uses of technology (e.g., piracy; illegal downloading; licensing infringement; inappropriate uses of software, hardware, and mobile devices in the work environment).
5. Discuss legal issues and the terms of use related to copyright laws, fair use laws, and ethics pertaining to downloading of images, photographs, documents, video, sounds, music, trademarks, and other elements for personal use.
6. Describe ethical and legal practices of safeguarding the confidentiality of business-related information.
7. Describe possible threats to a laptop, tablet, computer, and/or network and methods of avoiding attacks.

## **D. PERSONAL QUALITIES AND EMPLOYABILITY SKILLS**

1. Demonstrate punctuality.
2. Demonstrate self-representation.
3. Demonstrate work ethic.
4. Demonstrate respect.
5. Demonstrate time management.
6. Demonstrate integrity.
7. Demonstrate leadership.
8. Demonstrate teamwork and collaboration.
9. Demonstrate conflict resolution.
10. Demonstrate perseverance.
11. Demonstrate commitment.
12. Demonstrate a healthy view of competition.
13. Demonstrate a global perspective.
14. Demonstrate health and fitness.

15. Demonstrate self-direction.
16. Demonstrate lifelong learning.

#### **E. PROFESSIONAL KNOWLEDGE**

1. Demonstrate effective speaking and listening skills.
2. Demonstrate effective reading and writing skills.
3. Demonstrate mathematical reasoning.
4. Demonstrate job-specific mathematics skills.
5. Demonstrate critical-thinking and problem-solving skills.
6. Demonstrate creativity and resourcefulness.
7. Demonstrate an understanding of business ethics.
8. Demonstrate confidentiality.
9. Demonstrate an understanding of workplace structures, organizations, systems, and climates.
10. Demonstrate diversity awareness.
11. Demonstrate job acquisition and advancement skills.
12. Demonstrate task management skills.
13. Demonstrate customer-service skills.

#### **F. FOUNDATIONS OF WEB DESIGN**

1. Define web terminology.
2. Understand the history and evolution of the web.
3. Research current best practices and emerging technologies.
4. Utilize technical documentation as part of the design and development process.
5. Identify basic uses of websites in business, industry, government, and education.
6. Identify the purpose and target audience of a website.
7. Explain the role of Hypertext Markup Language (HTML), Cascading Style Sheets (CSS), and JavaScript in Web development.
8. Evaluate existing websites and their source code.
9. View multiple websites using various browsers.

#### **G. PLANNING AND DESIGN**

1. Determine the purpose and target audience of a website.
2. Create relevant and appropriate content including text, graphics, and hyperlinks.
3. Develop a site map and navigation plan.
4. Identify concepts in usability for components of a website.
5. Develop wireframes for initial design concept.
6. Explore and apply color principles to websites.
7. Explore and apply current best practices for web typography.
8. Critique web sites for professional quality in look and layout based on design principles.

#### **H. CONSTRUCTING WEBSITES**

1. Develop a file management system for website content, utilizing proper naming conventions for files and folders.
2. Define structure of a document using appropriate HTML elements.
3. Code a website utilizing proper HTML document structure and elements.
4. Determine appropriate HTML elements to present website content.
5. Create and modify internal and external CSS to format the styling of HTML elements and positioning of objects.
6. Locate and integrate JavaScript code into websites.
7. Test and debug websites in multiple browsers.
8. Identify and use validation tools.

## **I. IMPLEMENTING AND MAINTAINING WEBSITES**

1. Explain the domain naming system.
2. Identify the process for obtaining a domain name, acquiring hosting, and uploading and maintaining a website.
3. Research features and costs of domain name and hosting providers.

## **J. ACCESSIBILITY AND USABILITY**

1. Describe legal requirements and standards for accessibility on the web.
2. Optimize websites to accommodate users with special needs.
3. Discuss issues relating to usability on a variety of platforms and devices.