

FUNDAMENTALS OF WEB DESIGN AND DEVELOPMENT SYLLABUS*

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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).

The Fundamentals of Web Design and Development course incorporates Project Based Learning(PBL) by extending classroom learning to real world applications. Through investigation, analysis and presentation students will master South Carolina Content Standards and Success Skills that include creativity, critical thinking, communication, and collaboration.

A minimum of 1 PBL will be completed per semester.

Ridge View High School believes in creating a community in which reading, writing, speaking, listening, and thinking are integrated into every class daily in order to strengthen literacy skills for each student.

NOTE: Websites created by students in this course are not to be published without following district guidelines.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

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 life-long 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.

Note* The instructor reserves the right to change or alter this document as needed.

INSTRUCTIONAL MATERIALS, SUPPLIES, AND EQUIPMENT:

All books and equipment are provided by the instructor. Students are required to provide paper, pencil, pen, and 8 GB (4 GB minimum) Flash Drive.

TUTORING SCHEDULE:

- Monday 7:25am – 7:55am
- Tuesday 7:25am – 7:55am
- Thursday 7:25am – 7:55am
- Friday 7:25am – 7:55am

REQUIRED TEXTBOOKS / INSTRUCTIONAL MATERIAL:

HTML5 and CSS: Introductory, 7th Ed.

Adobe Dreamweaver Comprehensive Concepts and Techniques, 1st Ed.

EVALUATION SYSTEM:

Students will be given five (5) minutes to calculate and record his/her class average and attendance each Friday and will be graded using the following criteria each grading period.

Grades will be updated regularly, no later than Monday of the following week.

“Students will be held to the Academic Integrity policy of Richland District 2.”

Daily Grade = 20% to include:

1. Attendance
2. Participation
 - a. Includes bringing required supplies and Flash-drive to class each day.
3. Safety
4. Leadership

Quizzes = 20%

Projects = 60%. (Rubric is located @ <http://www.rvhs-aplus.com>)

1. Preparation
2. Logical Sequence
3. Accuracy
4. Completed on-time

Final Project = 20% of Final Grade

GRADING CRITERIA:

- **A = 100 – 90**
- **B = 89 – 80**
- **C = 79 – 70**
- **D = 69 – 60**
- **F = 59 or below**

CLASSROOM EXPECTATIONS:

1. Enter the classroom quietly before the tardy bell rings.
2. Begin working on class assignments when you enter classroom.
3. Do not sit on top of tables, desks, or ACUnit.
4. Only one student may leave the classroom at any time during class.
5. No Food or Drinks are allowed.
6. No horse-playing is allowed.

7. Do not energize any equipment without permission.
8. You are responsible for cleaning up after yourself.
9. Listen to the teacher and follow his/her instructions.
- 10. No electronic device (cellphones, iPods, headphones, Chromebooks, etc...) usage in classroom in accordance with Ridge View High School Electronic Communication Device Protocol.**

PENALTIES FOR VIOLATING CLASSROOM EXPECTATIONS:

Rule 1

- Ridge View High School Tardy Policy

Rules 2, 3, 4, 9

- First Offense: Oral Warning
- Second Offense: Conference with Parents
- Third Offense: Discipline Referral

Rule 5

Students may only leave the classroom in case of an emergency. If the student leaves the classroom without permission or goes anywhere except to the destination where permission was granted, the student will be referred to an Administrator.

Rules 6, 7, & 8

- First Offense: Conference with Parents and Administration Notified
- Second Offense: Discipline Referral
- Third Offense: Discipline Referral

Rule 10 - Ridge View High School Electronic Communication Device Protocol

Please refer to the school and district policy concerning Electronic Communication Devices (ECDs) at <https://www.richland2.org/rvh>. In addition, the Ridge View High School ECD Protocols will be followed as outlined below:

- Students will NOT be allowed to take out their cell phones during class.
- No use of cell phones in bathrooms or locker rooms for the purpose of capturing images, audio, or video.
- No cell phone usage in classrooms (except for educational purposes).
- No recreational cell phone breaks.
- No stepping out of class to take/make important calls.

Free zones include: Hallways and Cafeteria.

Teachers agree to follow this protocol when students take cell phones out in class.

- **1st Offense:** Contact Parents - Teacher will ask student to put phone/ECD away and contact parents explaining the issue in class. Teacher should fill out short form and keep a copy for their personal records. If student does not cooperate when asked to put away phone, then call administrator for assistance.
- **2nd Offense:** Contact Administrator - Teacher will fill out long form, use copies of short form to include date of verbal warning and date of parent contact. Teacher will immediately contact an administrator for assistance.

SCOPE AND SEQUENCE -

FUNDAMENTALS OF WEB DESIGN AND DEVELOPMENT

Grading Period	Timeline	Objectives
1st Quarter & 2nd Quarter	Days 1 - 10	1) Orientation to course 2) Safety 3) Student Organizations
	Days 11 - 90	<p style="text-align: center;">HTML, XHTML, and CSS, 7th Edition</p> <p>Chapter 1 Objectives: Students will have mastered the material in Chapter One when they can:</p> <ol style="list-style-type: none"> 1. Describe the Internet and its associated key terms. 2. Describe the World Wide Web and its associated key terms. 3. Describe the types and purposes of Web sites. 4. Discuss Web browsers and identify their purpose. 5. Define the Hypertext Markup Language (HTML) and HTML5 standards used for Webdevelopment. 6. Discuss the use of Cascading Style Sheets (CSS) in Web development. 7. Define the Document Object Model (DOM) and describe its relationship toHTML. 8. Define Extensible Hypertext Markup Language (XHTML) and describe its relationship to HTML. 9. Identify tools used to create HTML documents. 10. Describe the five phases of the Web development life cycle. 11. Describe the different methods of Web site design and the purpose of each Web site structure. 12. Discuss the importance of testing throughout the Web development life cycle. 13. Explain the importance of being an observant Web user. <p>Chapter 2 Objectives: Students will have mastered the material in Chapter Two when they can:</p> <ol style="list-style-type: none"> 1. Identify elements of a Web page. 2. Start Notepad++ and describe the Notepad++ window. 3. Enable word wrap in Notepad++. 4. Enter HTML tags. 5. Enter a centered heading and a paragraph of text. 6. Create an unordered, ordered, or definition list. 7. Save an HTML file.

8. Use a browser to view a Web page.
9. Activate Notepad++.
10. Identify Web page image types and attributes.
11. Add an image, change the color of headings on a Web page, change a bulleted list style, and add a horizontal rule using inline style.
12. View the HTML source code in a browser.
13. Print a Web page and an HTML file.
14. Quit Notepad++ and a browser.

Chapter 3 Objectives:

Students will have mastered the material in Chapter Three when they can:

1. Describe linking terms and definitions.
2. Create a home page and enhance a Web page using images.
3. Change body and heading format using embedded (internal) style sheets.
4. Align and add color to text using embedded and inline styles.
5. Add a text link to a Web page in the same Web site.
6. Add an e-mail link.
7. Add a text link to a Web page on another Web site.
8. Use absolute and relative paths.
9. Save, validate, and view an HTML file and test the links.
10. Use style classes to add an image with wrapped text.
11. Add links to targets within a Web page.
12. Use an inline style to change the default bullet list type to square bullets.
13. Copy and paste HTML code.
14. Add an image link to a Web page in the same Web site.

Chapter 4 Objectives:

Students will have mastered the material in Chapter Four when they can:

1. Define table elements.
2. Describe the steps used to plan, design, and code a table.
3. Create a borderless table for a horizontal navigation bar with text links.
4. Create an external style sheet to define styles across a Web site.
5. Utilize classes to give you more control over styles.
6. Link an external style sheet to Web pages where you want its styles applied.
7. Create a table with borders and insert text.
8. Use the box-shadow property to alter the appearance of an image.
9. Alter the spacing between and within cells using the border spacing and padding properties.
10. Utilize inline styles to alter the style of individual elements on a Web page.
11. Add background color to rows and cells.
12. Insert a caption below a table.

13. Create headings that span rows using the rowspan attribute.

Chapter 5 Objectives:

Students will have mastered the material in Chapter Five when they can:

1. Define terms relating to image mapping.
2. List the differences between server-side and client-side image maps.
3. Name the two components of an image map and describe the steps to implement an image map.
4. Distinguish between appropriate and inappropriate images for mapping.
5. Sketch hotspots on an image.
6. Describe how the x- and y-coordinates relate to vertical and horizontal alignment.
7. Open an image in Paint and use Paint to locate the image map coordinates.
8. Create a home page.
9. Create a navigation bar of text links.
10. Insert an image onto a Web page that is used as an image map and use the usemap attribute to define an image map.
11. Insert special characters into a Web page.
12. Use the <map> </map> tags to start and end a map.
13. Use the <area> tag to indicate the shape, coordinates, and URL for a mapped area.
14. Create an external style sheet for styles used across the Website.

Chapter 6 Objectives:

Students will have mastered the material in Chapter Six when they can:

1. Define terms related to forms.
2. Describe the different form controls and their uses.
3. Use the <form> </form> tags.
4. Use the <input /> tag.
5. Create a text box.
6. Create check boxes.
7. Create a selection menu with multiple options.
8. Use the <select> tag.
9. Use the <option> tag.
10. Create radio buttons.
11. Create a textarea box.
12. Create a Submit button.
13. Create a Reset button.
14. Use the <fieldset> and <legend> tags to group form information.

3rd Quarter
&
4th Quarter

Days 91 - 170

Adobe Dreamweaver CS4 Comprehensive

Chapter 1 Objectives:

Students will have mastered the material in this project when they can:

- a. Describe Dreamweaver and identify its key features
- b. Start and quit Dreamweaver
- c. Describe the Dreamweaver window
- d. Define a local site
- e. Create and save a Web page
- f. Add a background image
- g. Open and close panels
- h. Display the Property inspector
- i. Format and modify text elements
- j. Define and insert a line break
- k. Change a Web page title and check spelling
- l. Preview and print a Web page
- m. Open a new Web page

Chapter 2 Objectives:

Students will have mastered the material in this project when they can:

- a. Add pages to a Web site
- b. Describe Dreamweaver's image accessibility features
- c. Describe image file formats
- d. Insert, resize, and align images within a Web page
- e. Describe the different types of links
- f. Create relative, absolute, and e-mail links
- g. Describe how to change the color of links
- h. Edit and delete links
- i. Check spelling
- j. Describe Code view, Split view, and Design view
- k. Display Code view
- l. Use Live view

Chapter 3 Objectives:

Students will have mastered the material in this project when they can:

- a. Understand page layout

- b. Design a Web page using tables
- c. Create a table structure
- d. Modify a table structure
- e. Describe HTML table tags
- f. Add content to a table
- g. Add a border to a table
- h. Format table content
- i. Format a table
- j. Add borders to images
- k. Create head content

Chapter 4 Objectives:

Students will have mastered the material in this project when they can:

- a. Discuss form processing
- b. Describe the difference between client-side and server-side form processing
- c. Add a horizontal rule to a Web page
- d. Create a form
- e. Insert a table into a form
- f. Describe form objects
- g. Describe and add text fields and text areas to a form
- h. Describe and add check boxes and radio buttons to a form
- i. Describe and add lists and menus to a form
- j. Describe and add form buttons to a form
- k. Describe form accessibility options
- l. Apply behaviors to a form
- m. View and test a form

Days 171 - 175
Days 176 - 180

Students will utilize in-class time to design, construct, and Implement a Web Site as their Final Examination
FINAL EXAMINATION SCHEDULE