

**CS 50.12 Course Outline as of Fall 2011****CATALOG INFORMATION**

Dept and Nbr: CS 50.12 Title: HTML5 INTERACTIVE WEB

Full Title: HTML5: Interactive Websites

Last Reviewed: 10/24/2022

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	3.00	17.5	Lecture Scheduled	52.50
Minimum	3.00	Lab Scheduled	0	4	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	3.00		Contact Total	52.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 105.00

Total Student Learning Hours: 157.50

Title 5 Category: AA Degree Applicable

Grading: Grade or P/NP

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

**Catalog Description:**

The course covers using HTML (HyperText Markup Language), CSS (Cascading Style Sheets), and Javascript to produce powerful interactive Web content. Topics include the HTML5 structural, semantic and form tags, how to use Canvas to create drawings natively in the browser, how to work with HTML5 audio and video, and how to build web pages that work with mobile devices. Also includes the current state of browser support for HTML5 and the theory behind all the changes that have been made.

**Prerequisites/Corequisites:**

Course Completion of CS 50.11B

**Recommended Preparation:**

Eligibility for ENGL 100 or ESL 100

**Limits on Enrollment:****Schedule of Classes Information:**

Description: The course covers using HTML (HyperText Markup Language), CSS (Cascading Style Sheets), and Javascript to produce powerful interactive Web content. Topics include the HTML5 structural, semantic and form tags, how to use Canvas to create drawings natively in the

browser, how to work with HTML5 audio and video, and how to build web pages that work with mobile devices. Also includes the current state of browser support for HTML5 and the theory behind all the changes that have been made. (Grade or P/NP)

Prerequisites/Corequisites: Course Completion of CS 50.11B

Recommended: Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Transfer Credit: CSU;

Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>	Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>	Effective:	Inactive:

<b>IGETC:</b>	<b>Transfer Area</b>	Effective:	Inactive:
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<b>CSU Transfer:</b>	Transferable	Effective:	Fall 2011	Inactive:
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<b>UC Transfer:</b>	Effective:	Inactive:
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**CID:**

**Certificate/Major Applicable:**

Not Certificate/Major Applicable

## **COURSE CONTENT**

### **Outcomes and Objectives:**

Upon completion of course, students will be able to:

1. Build web pages using HTML5 code.
2. Explain the major benefits of HTML5.
3. Compare and contrast HTML5 and HTML4.
4. Incorporate HTML5's new elements and attributes into websites.
5. Utilize HTML5 to incorporate audio and video elements into Websites.
6. Develop web pages using HTML5's new Canvas element to create code-based drawings and animations.
7. Analyze and implement code to create Web Storage for offline applications.
8. Use new HTML5 form elements.
9. Evaluate the current state of browser support for HTML5 and create code solutions to enable web sites to degrade gracefully.

### **Topics and Scope:**

1. Introducing HTML5 (HyperText Markup Language)
  - a. Exploring prior standards
  - b. The need for HTML5
  - c. Current HTML5 support
2. HTML5 New Features
  - a. HTML5 vs. HTML4
  - b. Structural tags
  - c. Content tags

- d. Application-focused tags
- e. Deprecated elements
- f. API (Application Programming Interface) overview
- 3. Creating HTML5 Documents
  - a. Content models
  - b. Understanding the outline algorithm
  - c. The role of <div> tags
  - d. Using ID and class attributes
  - e. DOCTYPE declarations
  - f. Character encoding
- 4. Structuring HTML5 Documents
  - a. Basic page structure
  - b. Structuring top-level elements
  - c. Structuring interior content
  - d. Building headers
  - e. Checking document outlines
  - f. Ensuring cross-browser structure
- 5. Building Forms in HTML5
  - a. New input types
  - b. Setting form autofocus
  - c. Using placeholder data
  - d. Marking required fields
  - e. Working with number inputs
  - f. Using date pickers
- 6. HTML5 API Support
  - a. Canvas overview
  - b. Adding canvas content
  - c. Drawing in the canvas environment
  - d. Drag-and-drop API overview
  - e. Offline applications overview
  - f. Video overview
  - g. Encoding video
  - h. Adding video
- 7. Associated Technologies
  - a. Geolocation API overview
  - b. Web storage API overview
  - c. CSS3 (Cascading Style Sheets) overview
  - d. Enhancing typography with CSS3
  - e. Using @font-face
  - f. Styling HTML5 with CSS3
  - g. Using CSS3 transitions
- 8. Compatibility testing
  - a. Current browser
  - b. Older browsers
  - c. Mobile devices

### **Assignment:**

- 1. 25 to 60 pages of textbook reading per week
- 2. Written analysis and critiques of current browser support for HTML5 elements
- 3. Three to five objective tests
- 4. Web pages which incorporate HTML code that produces the following features:

- a. semantic HTML
- b. the outline model
- c. forms
- d. audio and video elements
- e. canvas elements such as drawings, animations and interactivity
- f. storage of information offline
- g. graceful degradation
- h. functionality on mobile devices

### Methods of Evaluation/Basis of Grade:

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Critiques and reviews

Writing  
5 - 20%

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Incorporate class concepts into website projects

Problem solving  
30 - 65%

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

None

Skill Demonstrations  
0 - 0%

**Exams:** All forms of formal testing, other than skill performance exams.

Exams to include multiple choice, matching items, completion, short answer

Exams  
20 - 40%

**Other:** Includes any assessment tools that do not logically fit into the above categories.

Attendance and participation

Other Category  
0 - 10%

### Representative Textbooks and Materials:

Introducing HTML5 (Voices That Matter), by Bruce Lawson and Remy Sharp, Publisher New Riders Press, 2010.

HTML5: Up and Running, by Mark Pilgrim, O'Reilly Media, 2010.