CS 50.12 :: HTML5: Interactive Web Sites

Course 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.

Student Learning Outcomes
Upon completion of the course, students will be able to:

- Use HTML5 Markup to create interactive web content.
- Explain the major benefits of HTML5.
- Compare and contrast HTML5 and HTML4.
- Utilize HTML5 to incorporate audio and video elements into Websites.
- Develop web pages using HTML5's new Canvas element to create code-based drawings and animations.
- Analyze and implement code to create Web Storage for offline applications.
- Use new HTML5 form elements.
- Evaluate the current state of browser support for HTML5 and create code solutions to enable web sites to degrade gracefully.

Class Meetings
Each lecture week starts on Monday. There will not be live lectures, as this is a totally online class. All the lecture material will be offered asynchronously, meaning you can access at anytime of the week you want.

Instructor: Corrine Haverinen
Email: chaverinen@santarosa.edu (best way to reach me)
Phone: (707) 527-4778 - CS Dept for emergencies only
Class Web Site: http://online.santarosa.edu/homepage/chaverinen/cs50_12/html5/

The best way to contact me is by email. I will respond within 48 hours.

Office Hours:
Tuesdays 5:30-7:30 PM Online

Email me to schedule a meeting online, or we can chat by email or phone. We can both log on to a website and call a toll-free phone number to chat with each other if you need visual instruction. Contact me in advance if you would like to make arrangements to meet in the lab.

Web Site
Students will use the class web site for assignment instructions, submitting assignments, viewing classmate's work, sharing resources, and viewing grades.
Required Text

**Introducing HTML5 (Second Edition)**
AUTHOR Bruce Lawson. ISBN 978-0321784421
You can find the text at the SRJC or Petaluma campus bookstore and online at the [SRJC Bookstore](#) or [Amazon](#).

Required Software
Students will need to use an HTML editor and FTP software of choice, and at least 3 browsers. You can use the open labs at either the Petaluma or Santa Rosa campus, although you will not have control over which browsers are available.

**HTML editors:**
[pc] Notepad, Homesite, Dreamweaver
[mac] Textedit, BBEdit, Dreamweaver

**FTP software:**
SSH client [win] / Fugu [mac] / Dreamweaver [win or mac]

**Web Browsers:**
I recommend you have the latest version of at least 3 browsers: Firefox, Chrome, IE [PC] or Safari. Opera will be helpful when working with HTML5 forms.

Dropping the Class
If you decide to discontinue this course, it is your responsibility to officially drop it to avoid getting no refund (after 10% of course length), a W symbol (after 20%), or a grade (after 60%). Also, for several consecutive, unexplained absences, the instructor may drop a student.

**Pass-No Pass (P/NP)**
You may take this class P/NP. You must decide before the deadline, and add the option online with TLC or file the P/NP form with Admissions and Records. With a grade of C or better, you will get P.

You must file for the P/NP option by 2/23. Once you decide to go for P/NP, you cannot change back to a letter grade.

If you are taking this course as part of a certificate program, you can probably still take the class P/NP. Check with a counselor to be sure.

Important Dates
Day Class Begins: January 13, 2014
Day Class Ends: May 16, 2014
Last Day to Add without instructor's approval: January 19, 2014
Last Day to Drop with refund: January 26, 2014
Last Day to Add with instructor's approval: February 2, 2014
Last Day to Drop without a 'W' symbol: February 2, 2014
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Last Day to Opt for Pass/No Pass: February 23, 2014
Last Day to Drop with a 'W' symbol: April 20, 2014

Class Message List
I check email daily Monday through Friday and frequently on the weekends. I will attempt to answer email questions within 48 hrs. Students can use the class message list linked to from the class web site for sharing resources and student interaction outside of class.

Attendance
Students who miss the first two week’s assignments may be dropped from the class. It is strongly advised that if you need to miss more than one class/homework deadline in a row that you contact me to avoid being dropped from the class.

Assignments/Late Policy

Submitting Assignments
Students will be required to submit assignments by web page on the student server only. If you do not already have one, obtain an account on the student server at: http://student.santarosa.edu/apply

Late Policy
All assignments are due at midnight PST on the due date. A late submission will receive a 20% penalty. Submissions more than one week late are not accepted without prior arrangement. Late work will not be graded unless student sends instructor an email with URL for late work.

Exams
There will be online midterm and final exams. The material comes from the textbook, class lectures and supplemental materials. If any exam is missed, a zero will be recorded as the score. It is your responsibility to take the online exams by the due date.

Projects
Exercises and Assignments will be clearly posted throughout the semester.

You must submit a final project by the posted due date for a passing grade. The project will be a comprehensive website demonstrating the techniques taught in the class and developed in the class exercises in each weekly lesson.

Grading Policy
Your final grade will be based on the following:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quizzes and Exercises</td>
<td>180</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>30</td>
</tr>
<tr>
<td>Final Exam</td>
<td>30</td>
</tr>
<tr>
<td>Final Project</td>
<td>30</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>270</strong></td>
</tr>
</tbody>
</table>
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Grades will be assigned as follows:

90% for an A = 243 points or more
80% for a B = 216 to 242 points
70% for a C = 189 to 215 points
60% for a D = 162 to 188 points

In addition to receiving at least 70% of the total class points, you must complete the midterm exam and the final exam to pass the class.

Grade Book
I grade once a week and post grades and comments on the online grade book.

Standards of Conduct

Students who register in SRJC classes are required to abide by the SRJC Student Conduct Standards. Violation of the Standards is basis for referral to the Vice President of Student Services or dismissal from class or from the College.

Collaborating on or copying of tests or homework in whole or in part will be considered an act of academic dishonesty and result in a grade of 0 for that test or assignment. I encourage students to share information and ideas, but not their work.

Special Needs
Students with disabilities who believe they need accommodations in this class are encouraged to contact Disability Resources (527-4278), as soon as possible to better ensure such accommodations are implemented in a timely fashion.

Class Lecture Schedule

Week 1 – January 13 ~ Introduction to HTML5
Topics: Intro to Course, History leading to HTML5, Major benefits of HTML5, Compare and contrast HTML5 and HTML4, Browser Support, Intro to Google Chrome DevTools & Firebug

Holiday - January 20

Week 2 – January 27 ~ HTML5 Semantics & Structure
Topics: Review of HTML5 tags, HTML5 shiv, Outlining, HTML5 Validation, ARIA, Microdata, CSS review

Week 3 – February 3 ~ CSS3 and Javascript Integration
Topics: Detection and Progressive Enhancement including Modernizr, polyfills, feature detectors. Basics of integrating JS. CSS3 review including the nth selector, Google fonts and @font-face, text-shadow, box-shadow, border-radius, gradients, multiple bgnd, transforms & transitions.

Week 4 – February 10 ~ Responsive Web Design Part 1
Topics: Responsive vs Adaptive Web Design, Media Queries, Introduction to Grid-based
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Frameworks, downloading and setting up a simple site with Bootstrap, the Bootstrap grid classes

**Holiday - February 17**

**Week 5 – February 24 ~ Responsive Web Design Part 2**
Topics: More on building a site with Bootstrap, Slideshow and Portfolios in Bootstrap, using a Bootstrap Theme

**Week 6 – March 3 ~ Deeper with Bootstrap**
Topics: Combining Bootstrap grid classes to control layout, nesting with offsets, reorder using push and pull, modal windows, popovers

**Week 7 – March 10 ~ Tables, Interactive Page Layouts**
Topics: Tables, Tabs, Accordions, Navigation, and Panels - with and without Bootstrap

**Spring Break - March 17-23**

**Week 8 – March 24 ~ SVG**
Midterm Exam open, due March 31

**Week 9 – March 31 ~ Canvas**
Topics: Interactive Imagery, Scripting the Canvas Tag, Charts with Canvas

**Week 10 – April 7 ~ Multimedia Elements**
Topics: Audio & Video elements, codecs, mimetypes, encoding, using a jQuery media player

**Week 11 – April 14 ~ Forms Part 1**
Topics: HTML5 Input Elements, Pseudo-Classes, Form attributes, Forms in Bootstrap, Styling Forms

**Week 12 – April 21 ~ Forms Part 2**
Topics: Validation and Processing Forms with HTML5

**Week 13 – May 12 ~ Accessibility**
Topics: Review of Accessibility features and other considerations for making Accessible Web sites

**Week 14 – April 28 ~ Time and Place**
Topics: Geolocation API & History API, Location-aware HTML5 Apps, jQuery Mobile

**Week 15 – May 5 ~ Persistent and Interactive Data**
Topics: Browser Data Storage, Offline, File System API, Local Data Storage

**Week 16 – May 19 ~ Finish Final Projects**
Final Exam open, due May 23