

Pellissippi State Community College
Master Syllabus

WEB DESIGN FOR MOBILE DEVICES
WEB 2710

Class Hours: 3.0
Laboratory Hours: 0.0

Credit Hours: 3.0
Revised: Fall 2016

Catalog Course Description:

This hands-on course provides students with the skills to develop content for mobile devices (cell phones, PDAs, etc.) using wireless markup language (WML), XHTML, and CSS. Particular emphasis is given to designing for small screens, including interface design, usability, and aesthetic style. Students will also be provided an overview of the wireless industry, including infrastructure, device platforms and operating systems, and emerging trends in mobile technologies.

Corequisite(s):

WEB 2300

Textbooks(s) and Other Course Materials:

1. McGrane, Karen. Content Strategy for Mobile (2012), ABookApart, ISBN-13: 978-1-937557-089.
2. Marcotte, Ethan, Responsive Web Design (2011), ABookApart. ISBN-13: 978-0-9844425-7-7.

Supplemental Materials: Related blogs (discussed in class) and lyndaCampus.com videos as assigned (lyndaCampus.com license provided by college)

I. Week/Unit/Topic Basis:

Week Topic

- | | |
|----|--|
| 1 | Mobile Web fundamentals and terminology |
| 2 | Overview of different methods for designing for mobile devices |
| 3 | Basic concepts including XHTML markup, basic page structure, and validation |
| 4 | Images for the mobile web |
| 5 | Working with CSS part 1 |
| 6 | Working with CSS part 2 |
| 7 | Testing designs using software, emulators, and devices. Creating forms for mobile devices. |
| 8 | Accessing device features -- phone, SMS, maps, etc. |
| 9 | Beyond simple XHTML pages - widgets, RSS, Ajax, and more |
| 10 | HTML5 functionality - geolocation API |
| 11 | HTML5 functionality - Audio and Video |
| 12 | HTML5 functionality - Offline Storage |

- 13 Finishing touches - page animations, app icons, etc.
- 14 Final project Q&A, next steps, and developing native iOS applications (overview)
- 15 Presentation of final project

II. Course Goals*:

The course will:

- A. Use a variety of Web-based search engines to conduct advanced searches and learn the basics of mobile web design. (III,VI)
- B. Learn mobile Web page creation and other aspects of mobile Web authoring. (I,II,III)
- C. Develop Web pages in a text editor and a graphic user interface (GUI) editor for use on mobile devices. (I,II,III)
- D. Learn to use Cascading Style Sheets (CSS) and study the basics of Extensible Hypertext Markup Language (XHTML) as it relates to mobile web design and operation. (I,II,III,IV,V)
- E. Create simple Web pages for mobile devices containing text, graphics, hyperlinks, and forms. (I,II,III)
- F. Explain and apply layout elements for a mobile web site. (II,III)
- G. Explain why navigation is especially critical for mobile web sites and describe how browsers control navigation for mobile sites. (I,III)
- H. Explain the function of graphics in a mobile web site. (I,II,IV)
- I. Apply Web design principles to mobile screen dimensions. (II,III)
- J. Edit graphics for mobile display. (IV)
- K. Learn terminology specific to mobile web design. (I, II, III)

*Roman numerals after course objectives reference goals of the Web Technology program.

III. Expected Student Learning Outcomes*:

Students will:

- 1. Trace the evolution of the mobile Web.(A)
- 2. Define the mobile "context" and how it differs from the PC Web. (A,D,J)
- 3. List several criteria for selecting a mobile platform. (B, C, F, J)
- 4. Identify and describe several limitations confronting mobile web designers. (B, D,F, I)
- 5. Access and download files using File Transfer Protocol (FTP). (A,B)
- 6. Identify various file formats, such as MPEG, MP3, MOV, AIFF, AU, WAV, AVI, EPS, TIFF, and RTF. (A,E,H)
- 7. Define the nature, purpose, and operation essentials of Wireless Application Protocol (WAP) 2.0. (I,J)
- 8. Describe the relationship between Wireless Markup Language (WML) and XHTML. (B, F, J, K)
- 9. Identify major differences between XHTML and XHTML-WP. (B, C)
- 10. Use the W3C's Mobile Web Best Practices 1.0 document in designing code for mobile web pages. (A, B, C, K)
- 11. Define layout elements and their usage for mobile web pages. (A,J)
- 12. Define multimedia mobile web-enabling technologies. (A,B)
- 13. Apply design principles for mobile media. (B)
- 14. Identify mobile web accessibility issues and solutions. (E,G)

15. Apply style variations with Cascading Style Sheets (CSS). (E,G)
16. Use CSS for mobile web page structure. (E, G)
17. Create style sheets in HTML documents to simplify mobile web site design. (E,G)
18. Describe device detection as it relates to mobile web design. (B, F)
19. Identify browser plug-ins for testing and validating mobile sites. (B, F, J)
20. Render images in a mobile browser using SVG. (B, F, J, K)
21. Explore the use of location awareness, mobile widgets, and Flash Lite in mobile web pages. (B, F, J, K)
22. Describe mobile content development workflow. (D, F, H, K)
23. Identify resources for promoting mobile web content (e.g., .mobi, WAP push, matrix codes). (B, E, F, G, K)
24. Design and develop visually attractive, usable, and accessible mobile content that accommodates the screen sizes and hardware interfaces of mobile devices. (C, E, I, K)
25. Publish a mobile web site. (A,B,C,G,K)

*Capital letters after Expected Student Learning Outcomes reference the course goals listed above.

IV. Evaluation:

A. Testing Procedures: 30% of grade

Students will be given a series of non-cumulative theory exams over textbook content.

B. Laboratory Expectations:

N/A

C. Field Work:

N/A

D. Other Evaluation Methods:

Projects: 60% of grade. Students will be given mobile web site design and development projects. The projects will be completed in the course of reading and working through the textbooks. The files will be uploaded to web server space.

Online Communication Tools and Participation: 10% of grade. Students will use email and discussion board to communicate with the instructor and with each other. Class participation is also required.

E. Grading Scale:

A	90-100
B+	85-89
B	80-84
C+	75-79
C	70-74
D	60-69
F	0-59

V. Policies:

A. Attendance Policy:

Pellissippi State expects students to attend all scheduled instructional activities. As a minimum, students in all courses (excluding distance learning courses) must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course. Individual departments/programs/disciplines, with the approval of the vice president of Academic Affairs, may have requirements that are more stringent. In very specific circumstances, an appeal of the policy may be addressed to the head of the department in which the course was taken. If further action is warranted, the appeal may be addressed to the vice president of Academic Affairs.

B. Academic Dishonesty:

Academic misconduct committed either directly or indirectly by an individual or group is subject to disciplinary action. Prohibited activities include but are not limited to the following practices:

- Cheating, including but not limited to unauthorized assistance from material, people, or devices when taking a test, quiz, or examination; writing papers or reports; solving problems; or completing academic assignments.
- Plagiarism, including but not limited to paraphrasing, summarizing, or directly quoting published or unpublished work of another person, including online or computerized services, without proper documentation of the original source.
- Purchasing or otherwise obtaining prewritten essays, research papers, or materials prepared by another person or agency that sells term papers or other academic materials to be presented as one's own work.
- Taking an exam for another student.
- Providing others with information and/or answers regarding exams, quizzes, homework or other classroom assignments unless explicitly authorized by the instructor.
- Any of the above occurring within the Web or distance learning environment.

Please see the Pellissippi State Policies and Procedures Manual, Policy 04:02:00 Academic/Classroom Conduct and Disciplinary Sanctions for the complete policy.

C. Accommodations for Disabilities:

Students that need accommodations because of a disability, have emergency medical information to share, or need special arrangements in case the building must be evacuated should inform the instructor immediately, privately after class or in her or his office. Students must present a current accommodation plan from a staff member in Disability Services (DS) in order to receive accommodations in this course. [Disability Services](#) (<http://www.pstcc.edu/sswd/>) may be contacted via [email](#) or by visiting Alexander 130.