

**Fond du Lac Tribal and Community College
COURSE OUTLINE FORM**

12/11/12

Please return this form to the college vice president of academic affairs and the chairperson of the Academic Affairs and Standards Council (AASC).

1. Prepared by: _____

2. Date submitted: _____

3. Date approved: 5/14/13 Date revised _____

4. Department/discipline: Computer Science

5. Department(s) endorsement(s): _____

(Signatures of the person(s) providing the endorsement are required.)

6. Course Title: Write Your Own Mobile Web Apps

Abbreviated course title (25 characters or less): Mobile Web Apps

7. Course Designator: CSCI 8. Course Level: 1010 9.

10. Number of Credits: Lecture 3 Lab _____

11. Control Number (on site) 35 Control Number (online) _____

12. Catalog/Course description:

This is a hands-on introduction to building web sites, games, and "web apps" aimed at mobile devices. HTML5, CSS3, and Javascript are sufficient technologies and promise to deliver broad access and new capabilities on any web-capable device. This course also serves as a survey of web technology and programming.

13. Course prerequisite(s) or co-requisite(s): Accuplacer scores/ Other courses

Prerequisite(s):

Co-requisite:

14. **Course Materials** (Recommended course materials and resources. List all that apply, e.g. textbooks, workbooks, study guides, lab manuals, videos, guest lecturers).

Text/Handout/Online: HTML5 + CSS + Javascript

Text/Handout/Online: HTML5 Canvas

Suitable mobile device: Iphone/pod or Android device

Web server access (development servers on a FDLTCC machine)

There are several suitable books to use as a textbook. Trade books are the best in this technical area and especially those published by O'Reilly. However, all information is available online from multiple sources in these technical areas, and some online information is decidedly more authoritative. For example, W3C.org sets Internet/WWW standards and generally publishes only online. A practical way to present technical information for a class is in the form of abbreviated "cheat sheets" with references to the online sources.

15. **Course Content** (Provide an outline of major topics covered in course)

This is an introduction/survey course without prerequisites, so the topics below each mean a survey of practical methods for mobile web applications rather than in-depth studies. For example, a short code "snippet" of Javascript can be used to create an interactive menu button, and it is appropriate for students to simply use such code snippets.

0. Internet protocols and WWW
1. Web page design - classic HTML
2. HTML5
3. CSS3
4. Javascript
5. Mobile devices - native vs. web apps
6. Web sites for Mobile devices
7. Web apps for mobile devices
8. HTML5 Canvas graphics
9. Games and Simulations on Canvas
10. Packaging Mobile web apps - Phonegap

16. **Learning Goals, Outcomes, and Assessment** Minimum of one goal and two measurable learning outcomes in each competency. *If your course does not meet one of the Competencies Across the Curriculum, please justify your rationale.* Minimum of two assessment measures for each learning outcome. **Add other goals and outcomes as needed.** If this course is part of the Minnesota Transfer Curriculum (MTC), attach the MTC goals, outcomes, and your assessment measures to this form.

A. Information/Technology Literacy (the ability to use print and/or non-print tools effectively for the discovery, acquisition, and evaluation of information as well as core computer tools for the manipulation and presentation of information.)

I. Goal: Create functional mobile web applications.

A. Outcome: Write applications suitable for desktop and mobile devices.

1. Assessment: Write a navigation menu with buttons suitable for small screen devices.

2. Assessment: Write HTML5 content which is suitable for all devices.

B. Outcome: Write applications which use HTML5 Canvas for visual interaction.

1. Assessment: Write an interactive game with a mobile touch feature.

2. Assessment: Write a "player" simulating a process or illustrating an idea.

B. Ability to Communicate (the ability to listen, read, comprehend, and/or deliver information in a variety of formats.)

I. Goal: Write web applications which are easy to use and maintain.

A. Outcome: Write applications suitable for the target audience.

1. Assessment: Write an application with easily used controls.

2. Assessment: Write an application with content that is indexed and easily navigated.

B. Outcome: Write applications which can be easily understood.

1. Assessment: Write clearly documented code with comments.

2. Assessment: Write self-documenting code with obvious variable names and standard formats.

C. Problem Solving (the ability to conceptualize, apply, analyze, synthesize, and/or evaluate information to formulate and solve problems.)

- I. Goal: Setup applications on a server for delivery to end users.
 - A. Outcome: Deliver applications to users as "web apps"
 - 1. Assessment: Write HTML5, CSS, and Javascript so that apps use device switching to adjust layout to user machines.
 - 2. Assessment: Design templates so that content layout can be adjusted depending on the user device.
 - B. Outcome: Package and offer applications for end users.
 - 1. Assessment: Use PhoneGap to package applications as native apps for at least two different devices, say Android and Apple IOS devices.
 - 2. Assessment: Write a server page for users to select a native app from a download page.

- D. Culture (knowledge of Anishinaabe traditions and culture, knowledge of one's own traditions and culture, knowledge of others' traditions and cultures, culture of work, culture of academic disciplines and/or respect for global diversity.)

This area is not directly addressed by the course.

E. Other

17. Minnesota Transfer Curriculum (MnTC): If this course fulfills an MnTC goal area, state the goal area and list the goals and outcomes below:

See www.mntransfer.org

Goal Area(s): none

Goal and Outcomes: