

GIMM 300: Mobile Web Development

Section 001: Monday 11:55am - 2:40pm

Section 002: Wednesday 11:55am - 2:40pm

Instructor: Dr. Daniel Hampikian

Office Hours: By appointment only

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Website: <http://www.danielhampikian.com/>

Books

Required:

Programming: Computer Programming For Beginners: Learn The Basics Of HTML5, JavaScript, & CSS - 2nd Edition
by Joseph Connor

The Internet of Us: Knowing More and Understanding Less in the Age of Big Data
by Michael P. Lynch

Apache Cordova 4 Programming (Mobile Programming) 1st Edition
by John M. Wargo

Optional:

Clean Code A Handbook of Agile Software Craftsmanship
by Robert C. Martin

Web Programming Step by Step Second Edition
by Stepp, Miller, and Kirst

Course Objectives:

Students who successfully complete this course will:

- Be able to create and modify via plugins a wordpress website
- Have a basic foundational knowledge of javascript, html, and css
- Setup and host websites on amazon web services (AWS)
- Have a basic knowledge of servers and databases
- Create and maintain an AWS server/database
- Have a basic understanding of Bootstrap
- Be able to utilize Bootstrap templates in their websites
- Be able to deploy Unity games to web and mobile platforms

- Have a basic foundational understanding of Node.js
- Understand how to create mobile apps using Cordova and Ionic frameworks
- (Extra credit) Have the ability to use Arduino sensors, Node.js, and AWS server to update a database/website
- Reflectively engage with the deep philosophical implications of the fact that information structures through the medium of the web and mobile devices have and continue to change the nature of what it is to be human.

Course Description:

The dense saturation of the web and mobile devices throughout our culture has changed the way that our minds work and the nature of human existence in intricate and interesting ways. In this class you will learn the ability to use existing structures in the web and mobile devices to create interactive and dynamic apps and websites while simultaneously reflecting on and exploring the philosophical implications of this ability.

Through internet and mobile technology we can extend our senses, enhance our memory, create new realities in virtual space, invent and direct web based social practices, collect and visualize data patterns, use those data patterns to modify or control behaviors, and have immediate access to almost any factual information that is known.

Some of the questions that these developments in human society raise are: How are we being shaped by technology and the things that it allows individuals and corporations to do? What are we now? How does it compare to what we were? What are we becoming? Can we ourselves shape our own human existence through technology for the better? Can we shape others? Should we? How does the human will (if it exists) factor into this extended interconnectivity and mental dependence that mobile devices and the internet create? And how should we conceive of living a good life amongst the information structures within which we are embedded?

On a more practical note, for better or worse a large part of who you are to other people - of what truthfully or falsely represents you as a person - is your online identity. Strangers, future employers, and future friends will all know you by this identity in part or in whole. Another piece of who you are is made up by your artistic expression of yourself, and that is determined in part by your audience, your effort, and the mediums in which you can express your creativity. This class will provide you with the ability to create in several artistic and informational mediums that are both themselves expressions of creativity and also capable of hosting and displaying other artistic and academic achievements. I hope you get a lot out of this course, and look forward to seeing your abilities and reflections continuously develop.

Assessment:

All projects will be announced in class and specific assessment for individual projects will be posted to blackboard and my website. All homeworks will be announced a week before they are due in class and posted to blackboard. There will periodically be a quiz on the day hmw is due on the same topic the hmw was on. 10% of your grade is attendance and participation, that will involve you writing down three thoughts or questions you have about the reading and/or assignments before class in order to have a productive and reflective discussion at the beginning of class. These questions will be turned in each class and that is how I will track attendance.

- Hmw assignments/Quizzes: 20%
- AWS server/database/wordpress website project 10%
- Bootstrap/javascript personal website project 10%
- Basic unity game deployed to personal website 5%
- Video and audio deployed to either personal or wordpress website 5%
- Cordova web and mobile app creation and deployment 20%
- Participation (especially in book discussions) and attendance: 10%
- Website and app final presentations: 20%
- (Extra credit) Arduino communication with wordpress site 5%

Tentative schedule:

Week beginning on:

1/9 Introductions, hmw 1 assigned
1/16 Topic: The web, servers, AWS, hmw 1 due, hmw 2 assigned
1/23 Topic: Wordpress, Intro to html/css/javascript. hmw 2 due
1/30 Topic: Basic html/css, wordpress site hosted on AWS due, hmw 3 assigned
2/6 Topic: Databases, basic php hmw 3 due, quiz 1
2/13 Topic: Javascript, Node.js personal website project assigned, hmw 4 assigned
2/20 (no class - holiday)
2/27 Topic: Node.js, Arduino extra credit assigned, hmw 4 due, quiz 2
3/6 Personal website 1 on 1 meetings
3/13 personal website project due
3/20 (no class - spring break)
3/27 Topic: Cordova and Ionic hmw 5 assigned, video and audio capability in wordpress site or personal website
4/3 Topic: Cordova continued, unity deployment, hmw 5 due, quiz 3
4/10 Topic: Permanent data via cordova plugins and databases, basic game deployed to personal website due
4/17 Cordova app 1 on 1 meetings
4/24 (presentations) cordova app due, extra credit arduino project due
5/1 (finals - makeup/overflow presentations and pizza)

Disclaimers:

This is the first iteration of this class. Accordingly, it very likely won't be perfectly planned, so I reserve the right to modify this syllabus and the course to fit the needs and abilities of the class. You can work in groups and seek guidance from other students, other websites, etc., but the projects, quizzes, and hmw should be your own work.