

<b>98-135</b>	<b>How The Web Works</b>
Spring 2010	GHC 4307 Wednesday, 7:00 - 7:50 pm
Abhinav Sharma	abhinav@cmuwebworks.com
Prerequisite	Basic Programming Experience (15-101)

# Syllabus

## About the Course

The goal of the course is to give you a broad understanding of how Technology, People and Economics come together to create the Internet we know and love. We'll accomplish this by breaking up the course into five parts:

1. Web (2.0) Development (6 classes)
2. Social Web (2 classes)
3. The Intelligent Web (2 classes)
4. Monetization (2 classes)
5. Security (2 classes)

## Content Breakdown

In this course, you will:

### **Web (2.0) Development**

- Build Web Applications with PHP and MySQL
- Use the CodeIgniter Framework
- Make Dynamic Pages (and AJAX calls) with jQuery
- Style websites with CSS

### **Social Web**

- Build applications that use Facebook, Twitter, and YouTube APIs
- Learn about viral advertising on the social web.

### **The Intelligent Web**

- Talk about the Semantic Web, Cloud Computing, Social Search, etc...
- Special emphasis on the Semantic Web

### **Monetization**

- Understand the flow of money on the Internet
- Make some yourself!

### **Security**

- Understand common security issues with web apps and the Internet
- Learn to protect your web apps from these attacks

This is a StuCo, not 15-251 (if you don't know what that is, let's just say its not easy)! At first glance, it seems to cover a lot of material. But the idea is to teach you enough to make learning more easy. Lectures will introduce concepts with no hands-on work. The assignments will cover implementing these ideas. But don't worry about getting lost in a sea of code. The assignments are fully guided tutorials that everyone should be able to finish on time.

*This course is unlike any other in the curriculum because:*

- It covers a broader range of topics than most courses at CMU.
- It extracts the most important information from each of these.
- Because of this, you can apply what you learn for fun and profit.

*This course does not:*

- Try to replace the web apps course (15-437). It will teach you how to use certain tools to make web apps, but won't teach you the internals of how they work. Also, it's taught with a set of tools that's easier to understand.
- Try to mathematically model aspects of the Internet (15-396), even though that's awesome, and we will see snippets of it!
- Investigate the hardware and software that enables the internet (15-441), although we will briefly discuss how the internet was built.

Lastly, please don't be scared by all the comparisons to 3xx and 4xx courses above. I'll explain why next.

## **Grading**

Being a StuCo, this is a Pass/Fail course and does not affect your GPA, the grading policy is as follows:

- Attendance Optional (come only if you don't know the stuff)
- No tests. Grade determined by 5 homework assignments.
- Homeworks should take no more than 3 hours each.
- Homeworks are guided tutorials. Everyone should pass, and within time!
- Homeworks have optional challenges for extra credit.
- Minimum Work Required = 15 hours!

## **Primary Audience**

**Computer Science:** You're already familiar with intermediate-advanced programming and are looking to put those skills to use in creating engaging web applications and profiting from them.

**Information Systems:** If this course was associated with a major, it would probably be Information Systems. You will learn to make web applications with the latest standards, and understand online information flow and Economics.

**Business Administration:** You want to put your entrepreneurship skills to test with online business. This course will help you understand how money is made on the Internet.