Course Number: IS218
Course Title: Building Web Applications
Section: 101
Semester: Fall 2017
Date & Time: W 6:00PM – 9:05PM
Location: 2400 GITC
Credits: 3
Contact Hours: 3 Hours Face-to-Face

Instructor Information:
Name: Bryan Nissen
Office: 6501 GITC
Email (preferred): bcn3@njit.edu

Office Hours:
Thursday: 4:00PM – 5:30PM

Course Materials

Murach, Joel, and Associates. *Murach's PHP and MySQL 2nd Edition*. Fresno, Calif.: Mike Murach & Associates, 2014. Print. ISBN: 978-1890774790

Hunt, Andrew, and David Thomas. *The Pragmatic Programmer: From Journeyman to Master*. Reading, Mass.: Addison-Wesley, 2000. Print. ISBN: 9780201616224

Catalog Description

This course provides a critical, hands-on introduction to the design of Web-based Information Systems. We will explore and discuss emerging trends, capabilities, and limitations of web technologies used to capture, store, access, and disseminate information for both businesses and online communities. Students, working in groups, will design and develop different types of web applications, which will then be analyzed and critiqued by the students as to their usability in actual public and private settings. Students will use an open-source web content management system throughout the course.

Prerequisites: CS 113 or CS 115 or other computing GUR

Learning Outcomes

1. Students will be able to create an application using PHP and MySQL.
2. Students will be able to design and implement a user registration and management process for a web application.
3. Students will be able to demonstrate fundamental concepts in web application development such as Model View Control (MVC).
4. Students will be able to demonstrate the ability to collaborate using source code management software.
5. Students will be able to describe and implement basic design patterns found in PHP such as a singleton and factory pattern.
6. Students will be able to demonstrate asynchronous client server communication using JavaScript and PHP.
7. Students will be able to use SQL create, retrieve, update, and delete (CRUD) queries.

Grading Category Weights

2 Projects: 30% (Project #1 = 10%, Project #2 = 20%)
5 Quizzes: 10% (each = 2%)
2 Exams: 20% (each = 10%)
Homework: 30% (each = 3.75%)
Participation: 10% (each = 0.66%)

Grading Scale

A: 90 - 100
B+: 88-89
B: 80 - 87
C+: 78-79
C: 70 - 77
D+: 68 - 69
D: 60 - 67
F: 0 - 59

Incompletes are only given for extenuating and documented medical or personal issues.

Late Grading policy

A. No free late days for projects and homework. 20% off from full credits per day late. (e.g. if you were late for one day, the instructor would start grading your work at 80%).
B. Quizzes will be graded to 0 automatically if you do not finish them on time.
C. You will receive 0 for any missed exams. If you know you will not be in the day of exams, please inform the instructor at least a week beforehand to make alternative arrangements. There will be no make-up exams.

Attendance

Attendance will be taken for each class meeting. Attendance is worth 10% of your final grade. Students who miss 5 or more than 5 will receive a 'F'.

Academic Integrity Policy

My expectation is that each person will complete original work for this course and will not copy from fellow students or tutorials online. It is OK to refer to tutorials online; however, you will be considered in violation of the NJIT honor code by submitting work found online. Any violations of the honor code will be referred to the Dean of Students for investigation and possible disciplinary action. For more information about the NJIT honor code, you should refer to this document:

http://www.njit.edu/academics/pdf/academic-integrity-code.pdf

TENTATIVE CLASS SCHEDULE

Below are the TOPICs covered in the course.

Week Meetings	Topics	Assignments
1	**Introduction of tools we use in this course:** • **Install Sublime and SFTP;** • **A brief intro to AFS and command line;** • **A brief intro to Git and GitHub.**	*Git commands, basic AFS commands and Sublime practice*
2	**Introduction to PHP basic 1:** • **Basic syntax;**	*Quizzes*

	• **Variable types;** • **Constant types.**	
3	**Introduction to PHP basic 2:** • **String;** • **Number;** • **Array.**	*Quizzes*
4	**Introduction to PHP basic 3:** • **Comparison & Logical operators;** • **Conditional expressions;** • **Control statements.**	*PHP basic practice and Quizzes*
5	**Form Handling**	*Exam #1*
6	**Basic intro to MySQL:** • **Workbench;** • **SQL statements.**	*SQL query practice*
7	**MySQL and PHP:** • **PDO connection;** • **Exceptions handling.**	*PDO practice*
8	• **HTML and CSS review,** • **Bootstrap.**	*Create a sign up page*
9	**Functions and Class:** • **How to define a functions;** • **Functions arguments and returning values;** • **How to define a class;** • **Member visibility;** • **Inheritance.**	*Functions and Class Practice*
10	**Introduction to PHP basic 4:** • **Cookies;** • **Sessions;** • **Date;** • **Time.** **Project (Discussion)**	*Project #1*

11	**MVC**	*Simple MVC practice*
12	**Demo MVC example**	*Draw MVC work flow*
13	**Regular expression**	*Quizzes*
14	**Open questions**	*Exam #2*
15	**Project (Discussion)**	*Project #2*