Course Number: IS218
Course Title: Building Web Applications
Section: 002
Semester: Spring 2018
Date & Time: Tuesday 10:00AM – 12:55PM
Location: Student Mall PC40

Instructor Information:
    Name: David Shaohua Wang
    Position: Assistant Professor
    Office: GITC 5118
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Office Hours:
Tuesday: 2:00PM – 3:00PM

TA:
Ying Li, PhD student
yl622@njit.edu, office hours: TBA

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 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 a simple 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
6. 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%)
Attendance: 10%

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

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

Grading policy
Normally, comments on your projects, exams, and homework will be given for your references. After the comments are given, you have two days to make a **reasonable rebuttal or question if you feel more clarification is needed**. After two days, if no questions raised, we assume that you agree with the comments.

Late Grading policy
A. There will be a penalty on late projects and homework submission. 20% off per day. (e.g. if you were late for one day or less than a 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 make it 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
You are required to attend every class meeting. Students who miss 5 or more lectures will receive a 'F'.

Every class (except first lecture) will require you to sign a paper-based attendance sheet and you are supposed to show up on time. You will be given 30 mins grace-period. After 10:30am, you will not be allowed to sign the attendance sheet. However, one "free-pass" will be given for any undocumented absence.

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
Week 1 Jan 16th	**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 (homework)*
Week 2 Jan 23rd	**Introduction to PHP basic 1:** • **Basic syntax;** • **Variable types;** • **Constant types.**	*Quizzes*
Week 3 Jan 30th	**Introduction to PHP basic 2:** • **String;** • **Number;** • **Array.**	*Quizzes*
Week 4 Feb 06th	**Introduction to PHP basic 3:** • **Comparison & Logical operators;** • **Conditional expressions;** • **Control statements.**	*PHP basic practice (Homework) and Quizzes*
Week 5 Feb 13th	**Form Handling/practices demo (done by TA)**	
Week 6 Feb 20th	**Basic intro to MySQL:** • **Workbench;** • **SQL statements.**	*Exam #1 (paper-based) SQL query practice (homework)*
Week 7 Feb 27th	**MySQL and PHP:** • **PDO connection;** • **Exceptions handling.**	*PDO practice (homework)*
Week 8 May 06th	• **HTML and CSS review,** • **Bootstrap.**	*Create a sign up page (homework)*
Week 9 May 13th	**Spring Recess – No Class**	
Week 10	**Functions and Class:**	*Functions and Class Practice*

Mar 20th	• **How to define a functions;** • **Functions arguments and returning values;** • **How to define a class;** • **Member visibility;** • **Inheritance.**	*(homework)*

Week 11
Mar 27th
	Project#1 Demo Show and questions
	Introduction to PHP basic 4:
	    • **Cookies;**
	
	    • **Sessions;**
	
	    • **Date;**
	
	    • **Time.**
		Project #1 (Due)

Week 12 April 03rd	**MVC**	*Simple MVC practice*
Week 13 April 10th	**Demo MVC example and practices demo (Done by TA)**	*Draw MVC work flow*
Week 14 April 17th	**Regular expression**	*Quizzes*
Week 15 April 24th	**Project#2 Demo show and questions**	*Exam #2, Project #2 due*
Week 16 May 01st	**No class. Friday Classes Meet**	