

Spring 2020

## IS 218-002: Building Web Applications

David Shaohua Wang

Follow this and additional works at: <https://digitalcommons.njit.edu/info-syllabi>

---

### Recommended Citation

Wang, David Shaohua, "IS 218-002: Building Web Applications" (2020). *Informatics Syllabi*. 188.  
<https://digitalcommons.njit.edu/info-syllabi/188>

This Syllabus is brought to you for free and open access by the NJIT Syllabi at Digital Commons @ NJIT. It has been accepted for inclusion in Informatics Syllabi by an authorized administrator of Digital Commons @ NJIT. For more information, please contact [digitalcommons@njit.edu](mailto:digitalcommons@njit.edu).

**Course Number:** IS218

**Course Title:** Building Web Applications

**Section:** 002

**Semester:** Spring 2020

**Date & Time:** Tuesday 11:30AM – 2:20PM

**Location:** Student Mall PC40

**Instructor Information:**

Name: David Shaohua Wang

Position: Assistant Professor

Office: GITC 5118

Email: [davidsw@njit.edu](mailto:davidsw@njit.edu)

**Office Hours:**

Thursdays: 11:00am – 12:00PM or by appointments through emails (highly preferred).

TA:

Jiahao Fan, PhD student, office: GITC 5601

[jf449@njit.edu](mailto:jf449@njit.edu), office hours: TBA, contact

him through emails and make appointments

**Course Materials**

Murach, Joel, and Associates. *Murach's PHP and MySQL 2<sup>nd</sup> 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 introductory 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: IS 117, CS 113 or CS 115 or other computing GUR

**Learning Outcomes**

1. Students will be able to create a simple application using HTML, CSS, JavaScripts, 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 describe and implement basic design patterns found in PHP

5. Students will be able to use SQL create, retrieve, update, and delete (CRUD) queries.

### Grading Category Weights

1 Project: 30%  
(Project has two phases)  
5 Quizzes: 10% (each = 2%)  
2 Exams: 20% (each = 10%)  
Homework: 30%  
Attendance: 10%

### Grading Scale

<b>A:</b> 90 - 100	<b>C:</b> 70 – 74 (<75)
<b>B+:</b> 85-89 (<90)	<b>D:</b> 60 – 69 (<70)
<b>B:</b> 80 – 84 (<85)	<b>F:</b> 0 – 59 (<60)
<b>C+:</b> 75-79 (<80)	

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

### Re-submissions Policy for home works

Each homework will have two deadlines:

- (1) First deadline: any homework submitted before the first deadline will receive comments and a grade;
- (2) Final deadline: After the comments are released, you will be given one more week to improve your homework. TA will re-grade your homework based on your new-submission and publish the final score.

If you do not want the comments from the first round, you can skip it and make your final submission before the final deadline. But making first-round submissions is highly recommended.

### 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

Every class (except first lecture) will require you to **sign-in and sign-out** a paper-based attendance sheet and you are supposed to show up on time.

You are required to attend every class meeting. Students who do not show up for 4 or more lectures will receive a final score 'F'. Sign-in and Sign-out signatures are needed for every lecture, missing any of them will be viewed as "no show up".

## Academic Integrity Policy

*Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working on. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the academic code of integrity policy that is found at: <http://www5.njit.edu/policies/sites/policies/files/academic-integrity-code.pdf>.*

*Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university. If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at [dos@njit.edu](mailto:dos@njit.edu)*

## TENTATIVE CLASS SCHEDULE (subject to change depending on our progress)

Below are the TOPICS covered in the course.

Week Meetings	Topics	Assignments
Week 1 01/21	<b>Course Introduction</b> <b>Basics of HTML and CSS</b> <b>Text Editor</b>	<i>Homework 1</i> <i>Create a sign up page</i> <i>(homework)</i>
Week 2 1/28	<b>More HTML, CSS, and JavaScript</b>	<i>Homework 2</i>
Week 3 2/4	<b>Introduction to PHP basic 1:</b> <ul style="list-style-type: none"><li>• <b>Basic syntax;</b></li><li>• <b>Variable types;</b></li><li>• <b>Constant types.</b></li></ul> <b>Env for running php and sql</b>	<i>Quizzes</i>
Week 4 2/11	<b>Introduction to PHP basic 2:</b> <ul style="list-style-type: none"><li>• <b>String;</b></li><li>• <b>Number;</b></li><li>• <b>Array.</b></li></ul>	<i>Quizzes</i>
Week 5 2/18	<b>Introduction to PHP basic 3:</b> <ul style="list-style-type: none"><li>• <b>Comparison &amp; Logical operators;</b></li><li>• <b>Conditional expressions;</b></li></ul>	<i>Quizzes</i>

	<ul style="list-style-type: none"> <li>• <b>Control statements.</b></li> </ul> <p><b>Linux commands (publishing your code on-line) on our free NJIT web server</b></p>	
Week 6 2/25	<p><b>Form Handling/practices demo (done by TA)</b></p> <p><b>Regular expression</b></p>	<i>PHP basic practice (Homework)</i>
Week 7 3/3	<i>Exam #1 (paper-based) and project published</i>	
Week 8 3/10	<p><b>Basic intro to MySQL:</b></p> <ul style="list-style-type: none"> <li>• <b>Workbench;</b></li> <li>• <b>SQL statements.</b></li> </ul> <p><b>Connecting to our NJIT MySQL server</b></p>	<i>SQL query practice (homework)</i>
Week 9 3/17	<b>No Class</b>	
Week 10 3/24	<p><b>MySQL and PHP:</b></p> <ul style="list-style-type: none"> <li>• <b>PDO connection;</b></li> <li>• <b>Exceptions handling.</b></li> </ul>	<i>PDO practice (homework)</i>
Week 11 3/31	<p><b>Functions and Classes:</b></p> <ul style="list-style-type: none"> <li>• <b>How to define a function;</b></li> <li>• <b>Functions arguments and returning values;</b></li> <li>• <b>How to define a class;</b></li> <li>• <b>Member visibility;</b></li> <li>• <b>Inheritance.</b></li> </ul>	<i>Functions and Class Practice (homework)</i>
Week 12 4/7	<p><b>Introduction to PHP basic 4:</b></p> <ul style="list-style-type: none"> <li>• <b>Cookies;</b></li> <li>• <b>Sessions;</b></li> <li>• <b>Date;</b></li> <li>• <b>Time.</b></li> </ul>	

Week 13 4/14	<b>MVC</b>	<i>Simple MVC practice,</i>
Week 14 4/21	<b>Open Questions</b>	
Week 15 4/28	<b>Project#2 updates Exam 2#</b>	<i>Exam #2</i>