

Fall 2019

# IS 601-101: Web System Development

Keith Williams

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**Course Number:** IS601

**Course Title:** Web System Development

**Section:** 101

**Semester:** Fall 2019

**Date & Time:** 6:0 0PM-8:50PM

**Location:** FMH110

**Credits:** 3

**Contact Hours:** 3 Hours Face-to-Face

**Instructor Information:**

Name: Keith Williams

Office: 5114 GITC

Phone Number: 551-580-3989

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

IM: Slack Preferred

**Office Hours:**

Monday: 5PM-5:50PM (By Appoint Only)

Thursday: 5PM-5:50PM (By Appoint Only)

Friday: 5PM-5:50PM (By Appoint Only)

Slack Chat Preferred

<https://app.slack.com/client/T28EF5C02/CMZAMV7QQ>

**Course Materials**

All course materials are provided online through recorded video lessons and hand-on projects. In additions, extensive online resources are provided.

**Catalog Description**

Students will gain experience in the development of Web based systems using an object oriented programming language and SQL. Students will learn to develop a web based system through an intensive hands-on project that requires students to apply real-world problem-solving skills to meet the challenge of developing a web based information system. Students will learn the basic principles of web based applications, MVC application design, how to apply object oriented design patterns, design a relational database, and write SQL queries to create, retrieve, update, and delete information in a database.

Prerequisites: NONE

**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) and other OOP design patterns
4. Students will be able to demonstrate the ability to collaborate using source code management software.
5. Students will be able to demonstrate through coding and project design concepts such as DRY, Yagni, and basic OOP Design Patterns
6. Students will be able to use SQL create, retrieve, update, and delete (CRUD) queries

## Developing Technical Confidence

A major objective of this course is to expose students to current software development technologies, so that students develop problem solving skills that will help develop technical confidence. Students gain this through Internet research and developing a process to isolate, identify, and seek solutions to problems by using a Internet search engine.

### Grading Category Weights

4 Mini Projects: 60%  
Homework: 10%  
Final Project: 20%  
Participation / Participation: 10%

### Grading Scale

**A:** 90 - 100  
**B+:** 88-89  
**B:** 80 - 87  
**C+:** 78-79

**C:** 70 - 77

**F:** 0 - 59

Incompletes are only given for documented medical or personal issues.

### Late Grading policy

- A. No free late days for projects. 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 / Participation

Attendance in face to face classes will be taken for each class meeting. Attendance is worth 10% of your final grade. Students who miss 3 or more will receive a 'F'. Attendance in online classes is determined by participation through Slack

### 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.

Every assignment/project is a 'home-mini-exam.' The NJIT Honor Code will be strictly upheld. Students found cheating/collaborating/plagiarizing will be immediately referred to the Dean of Students and the NJIT Committee on Professional Conduct and subject to possible Disciplinary Probation, a permanent marking on the record, possible dismissal and a grade of 'F' in the course. All submitted assignments are carefully checked for similarities, and plagiarism and guilty students will be identified and referred to the Dean of Students for disciplinary action.

Use of file sharing sites such as CourseHero.com is strictly forbidden. Students either posting or using these sites will be referred to the Dean of Students for disciplinary action and/or copyright infringement prosecution.

***This is your only warning.*** Cheating is not worth it - you may not only fail this course, but also be suspended or expelled from NJIT. THE INSTRUCTOR RESERVES THE RIGHT TO REQUIRE REMOTE EXAM PROCTORING SOFTWARE SUCH AS RESPONDUS.

For more information about the NJIT honor code, you should refer to this document:

<http://www.njit.edu/doss/code-student-conduct-article-11-university-policy-academic-integrity/>

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

### TENTATIVE CLASS SCHEDULE – Subject to Change

Meeting Week	Topics	Assignment Due During this Week
1 (9/1/19)	<b>Introduction of tools we use in this course:</b> <ul style="list-style-type: none"> <li>• <b>Install Virtualbox and PHPStorm;</b></li> <li>• <b>Introduction to Heroku;</b></li> <li>• <b>A brief to Git and GitHub.</b></li> </ul>	
2	<ul style="list-style-type: none"> <li>• <b>HTML Forms and Bootstrap</b></li> </ul>	<i>Homework 1</i>
3	<b>Introduction to PHP basic:</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>	<i>Homework 2 &amp; 3</i>

	<ul style="list-style-type: none"> <li>• How to define a functions;</li> <li>• Functions arguments and returning values;</li> </ul>	
4	<b>OOP PHP - Functions and Class:</b> <ul style="list-style-type: none"> <li>• How to define a class;</li> <li>• Member visibility;</li> <li>• OOP Concepts (DRY, YAGNI, KISS)</li> </ul>	
5	<b>Introduction to PHP Flow Control:</b> <ul style="list-style-type: none"> <li>• Comparison &amp; Logical operators;</li> <li>• Conditional expressions;</li> <li>• Control statements.</li> </ul>	<i>Mini Project 1</i>
6	<b>Introduction to Laravel</b>	
7	<b>Laravel and Blade</b>	
8	<b>Laravel and Forms</b>	Mini Project 2
9	<b>Laravel Seeding, Testing, and Database</b>	
10	<b>Laravel and Seeding Testing and Database</b>	Mini Project 3
11	<b>Project Workshop Mini Project 4</b>	
12	<b>Project Workshop Mini Project 4</b>	
13	<b>Project Workshop Mini Project 4</b>	<i>Mini Project 4</i>
14	<b>Final Project Workshop</b>	
15	<b>Final Project Workshop</b>	
TBD	<b>Final Project Must be Presented During Final Exam Time</b>	<i>Final Project</i>