

**Course Number:** IS601  
**Course Title:** Web Systems Development  
**Section:** 102  
**Semester:** SPRING 2017  
**Date & Time:** M 1:00PM – 2:55PM  
**Location:** CKB 220  
**Credits:** 3  
**Contact Hours:** 3 Hours Face-to-Face

**Instructor Information:**

Name: Keith Williams  
Office: 5114 GITC  
Phone Number: 551-580-3989  
Email (preferred): kwilliam@njit.edu

**Office Hours:**

Tuesday / Thursday: 1:25PM – 2:25PM  
Monday: 4PM – 5PM  
Wednesday: 3:30 – 4:30  
Also by appointment and Slack

**Course Materials**

Murach, Joel, and Ray Harris. *Murach's PHP and MySQL: training & reference*. Fresno, CA: Mike Murach and Associates, 2014. Print.

Rosenberg, Scott. *Dreaming in Code: Two Dozen Programmers, Three Years, 4,732 Bugs, and One Quest for Transcendent Software*. New York: Three Rivers, 2008. Print.

**Course 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. In addition, students will learn skills required to work in a software development team such as version control, online collaboration tools, the agile development workflow, testing, and the development of a minimally viable product (MVP).

**Learning Outcomes**

1. Students will be able to create an MVC web based application using an object oriented programming language and an SQL database
2. Students will be able to demonstrate the use of web based application programming techniques such as processing variables passed through a URL
3. Students will be design and create a normalized SQL database
4. Students will be able to write SQL queries to retrieve information from at least 3 tables
5. Students will be able to apply object oriented design patterns solve programming challenges
6. Students will be able to apply the principles of version control to work within a development team

**Grading Category Weights**

1 Project: 30%  
3 Exams: 45%  
Homework & Quizzes: 15%  
Participation: 10%

**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.

## **Homework Rubric**

**1 - Completed on time**

**0 - Not Completed on Time**

## **Late Project and Homework Policy**

All projects and homework must be turned in on time, or you will lose one point for each week that project or homework is late. **Note: A homework that is 1 week late loses all points.**

## **Attendance**

Attendance will be taken for each class meeting. You are permitted one unexcused absence for the class; however, each subsequent absence will result in a 3 percent reduction in your final grade. Attendance is worth 10% of your final grade.

## **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>

## **Calendar**

All dates on the calendar are tentative, please refer to Moodle for any changes in due dates