

Spring 2020

IS 218-004: Building Web Applications

Keith Williams

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Course Number: IS218
Course Title: Building Web Applications
Section: 004
Semester: Spring 2020
Date & Time: Tuesday 1-3:50
Location: Online
Credits: 3
Contact Hours: 3

Instructor Information:

Name: Keith Williams
Office: 5114 GITC
Phone Number: 551-580-3989
Email: kwilliam@njit.edu
IM: Slack Preferred

Course Materials

Office Hours:

Monday: 4PM-5:00PM (By Appoint Only)
Tuesday: 4PM-5:50PM (By Appoint Only)
Wednesday: 2:30PM-3:30PM (By Appoint

Only)

Slack Chat Preferred

<https://app.slack.com/client/T28EF5C02/CN16J8HFH>

I may be in one of the classrooms I teach in, so text me on Slack to confirm my location. I don't have any courses in my building, so I don't go back to the building often.

All course materials are provided online through recorded video lessons and hand-on projects. In addition, 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 Python 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: 25%

4 Individual Projects: 25% **B+**: 88-89 Mid-Term Project: 25% **B**:

80 - 87 Final Project: 25% **C+**: 78-79

Grading Scale A:

90 - 100

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>

Calendar

Week Start	Content	Assignment	Assignment Assigned	Due Date
Monday, January 20, 2020	Introduction to Course Tools (Docker, Git, and IDE)	Install the IDE, Create a project, and post it to GitHub	Monday, January 20, 2020	Sunday, February 2, 2020
Monday, January 27, 2020	Module 1	Homework 1	Monday, January 27, 2020	Monday, February 3, 2020
Monday, February 3, 2020	Module 2	Homework 2	Monday, February 3, 2020	Monday, February 10, 2020
Monday, February 10, 2020	Work Week	Individual project 1	Monday, February 10, 2020	Sunday, February 23, 2020
Monday, February 17, 2020	Module 3	Homework 3	Monday, February 17, 2020	Monday, February 24, 2020
Monday, February 24, 2020	Work Week	Group Mid-Term	Monday, February 24, 2020	Monday, March 9, 2020

Monday, March 2, 2020	Module 4	Individual Project 2	Monday, February 24, 2020	Sunday, March 8, 2020
Monday, March 9, 2020	Mid-Term Project	Work Week	Work Week	Work Week
Monday, March 16, 2020	Spring Break	Spring Break	Spring Break	Spring Break
Monday, March 23, 2020	Module 5	Homework 5	Monday, March 9, 2020	Monday, March 16, 2020
Monday, March 30, 2020	Module 6	Homework 6	Monday, March 16, 2020	Monday, March 23, 2020
Monday, April 6, 2020	Module 7	Group Final Project	Monday, March 23, 2020	Last Day of Class
Monday, April 13, 2020	Module 8	Individual Final Project	Last Day of Class	Thursday, May 14, 2020
Monday, April 20, 2020	Work Week	Work Week	Work Week	Work Week
Monday, April 27, 2020	Work Week	Individual Project 4	Monday, April 27, 2020	Sunday, May 10, 2020
Tuesday, May 5, 2020	Last Day of Classes			
Wednesday, May 6, 2020	Reading Day 1			
Thursday, May 7, 2020	Reading Day 2			
Friday, May 8, 2020	Final Exams Begin			
Thursday, May 14, 2020	Final Exams End			
Saturday, May 16, 2020	Final Grades Due			

Tentative Schedule Dates May Change Please Refer to Canvas