

## Course Information

**Course Number:** IS601

**Course Title:** Web Systems Development

**Section:** 852

**Semester:** Spring 2025

**Date & Time:** Virtual

**Credit Hours:** 3

## Instructor Information

**Name:** Keith Williams

**Office:** GITC 3420

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

### Office Hours (GITC 3420)

Day	Time	Format	Designated Course
Tuesday	1:00 PM - 2:20 PM	In-Person/Discord	IS601
Thursday	4:00 PM - 5:30 PM	In-Person/Discord	IS421
Friday	4:00 PM - 5:30 PM	In-Person/Discord	IS322

### Additional Support:

- Available on Discord throughout the week
- Quick questions can be answered anytime on Discord
- Virtual meetings can be scheduled outside office hours by appointment
- Message on Discord before visiting office hours
- **All students are welcome during any office hour time slot**

## Course Description

This comprehensive course immerses students in the world of data programming with Python and web development, focusing on hands-on projects to develop critical problem-solving skills for addressing complex information system requirements. Students will gain proficiency in Python programming, working with various data sources like CSV files, SQL databases, and REST-based web services. The course also emphasizes professional competencies, including industry standards, Git for version control, code standards, object-oriented programming, and Agile development principles. By the course's end, students will possess both the technical expertise and professional acumen necessary to excel in the competitive fields of data programming and web development.

**Prerequisites:** None

## Course Materials

- Online and Instructor Created

## Course Technologies and Concepts

Python

Python FastAPI Framework

GIT

Pycharm IDE

SQL,CSV,

REST Web Services

Server-Side Programming

Introduction to Structured Query

Language (SQL)

Object Relational Mapping Pattern

Unit Testing

## Course Format

- Content consists of a unit introduction, videos, hands-on exercises, and readings

## Class Communication

We will be using Canvas, for the posting of projects, class resources and other class announcements. Students having questions on projects, etc., **may contact Professor Williams directly using Discord**, if the answer would benefit the class, post the question in the class channel in Discord. Students are obligated to log and participate regularly in Discord. Contact me using Discord only, since I want to respond to you as soon as possible and not have your messages accidentally lost in email.

## Office Hours – Instructor Communication

Virtual – General Availability – Must make an appointment – Available on Discord Most Times – Use Discord to receive quick answers to your questions. I am often up late at night and will answer questions whenever possible.

**If we can't solve the issue on Discord, we can use WebEx for screen sharing (requires appointment).**

Webex Virtual Office: <https://njit.webex.com/meet/kwilliam>

## Instructional Philosophy

The #1 thing that I am trying to teach you is technical problem solving and helping you to develop some confidence in your abilities.

- Isolate the problem
- Read the error message
- Google the part of the error message that is not specific to your machine. For example, remove any directory path on your computer from your search

- Do not give up
- If you ask a question, post a screen shot – do not say “I have a problem” and not include information about the problem and do not post code in Discord, link to it on GitHub
- It is not the computer, it is not me, it’s you (most of the time). Sometimes people’s computers are broken.

## You are Learning Hard Things

- You must respect that you are learning difficult material and that many people have succeeded, you will too.
- If I give you a certain amount of time for something such as 2 weeks for a project, this means it really will take you two weeks.
- Projects can take 40 hours of work to complete depending on your previous technical experience
- You are learning the top industry skills in software development and devops. These skills are in high demand and result in excellent salaries if you can manage to learn them.
- I am preparing you to obtain jobs that pay more than \$100,000 dollars and this means that the job is hard and so is learning how to do it.

## Sometimes I make Mistakes

I am human and I make mistakes sometime. My goal is to provide you with the best learning experience possible, but I do not make it an easy process because you need to bring your skills up to a standard that will result in at least an entry level position in this field. Technologies change all the time and things are constantly being updated, what worked yesterday may not work today and you must become accustomed to this.

## Course Grades

- Mid-Term Project – 25%
- Final Project - 25%
- Homework – 50%
- Extra Credit for Team Collaboration Report – 0-3% of the final Grade

## Grading Scale

Grades	Significance	Approximate Point Total
<b>A</b>	Superior	90-100
<b>B+</b>	Excellent	87-89
<b>B</b>	Very Good	80-86
<b>C+</b>	Good	77-79
<b>C</b>	Acceptable	70-76
<b>F</b>	Inadequate	Below 69

## Grading Policy

Do not ask me about an increase in your grade. I am not difficult with grades, and I already give you some consideration in how I grade because my main goal is for you to learn these technologies and I understand that not everyone has the same previous experience with technology. If you are receiving bad grades, you have not done your work and are not serious or possibly qualified to do this type of work.

## Homework vs. Project Grading

- Homework is graded on a complete / incomplete basis.
- Projects are graded in detail and feedback will be provided. Generally, projects consist of previous content from homework and additional content. Each project is worth 100 points. You will receive at least 50 percent for making a substantive effort and the additional 50 percent is determined by how well the project works, looks, and is coded.

## Late Policy

- Homework assignments that are late by more than 2 days are not accepted under any circumstances except with a medical excuse from a doctor or other verifiable proof such as military services
- Projects that are late by more than 4 days are penalized 10% per day and are not accepted after 4 days under any circumstances except with a medical excuse from a doctor or other verifiable proof.
- Do not ask me to turn something in late. You have adequate time to complete your work and the consequences for not doing so are manageable if you do not make a habit of it.

## Incomplete Policy

Incompletes are not given under any circumstance other than a doctor's note for serious medical issues or military service

## Academic Integrity

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.

### **NJIT Academic Integrity Policy:**

[https://www.njit.edu/dos/sites/njit.edu.dos/files/NJIT%20University%20Policy%20on%20Academic%20Integrity\\_0.pdf](https://www.njit.edu/dos/sites/njit.edu.dos/files/NJIT%20University%20Policy%20on%20Academic%20Integrity_0.pdf)