

TEACHING EXPERIENCE AND REFLECTIONS

SYRACUSE UNIVERSITY

Teaching Assistant

CIS 351: Data Structures

Fall 2024 - Spring 2025

Instructors: Dr. Rahman Farzana and Dr. Gabriel Silva de Oliveira

In Fall 2024, I had the opportunity to serve as a teaching assistant for a demanding course with over 120 students. The course, which included more than seven labs, seven homework assignments, and weekly readings, required mastery of data structures and Java programming. As a TA, my primary focus was ensuring students grasp these fundamental concepts. Additionally, effective communication between TAs and instructors was crucial for the success of the course, contributing to many students earning spots on the Dean's List in 2025.

Given the advanced nature of the course, students were already familiar with the material. However, with the rise of generative AI, it became essential for both TAs and instructors to set clear guidelines for its use. In this course, students utilized Zybook to read and practice course material. While generative AI can be a helpful tool for understanding concepts, I emphasized that it should not be used to complete lab or homework assignments. I encouraged students to work independently, attend office hours for personalized assistance, and referred to approved educational tools like Zybook or Stack Overflow, fostering critical thinking rather than relying on AI-generated solutions.

Throughout the course, I made it a point to improve my teaching practices by actively seeking feedback from students, both verbally and through course evaluations. For example, during lab sessions, I asked students to explain concepts or describe their approach to solving lab exercises, ensuring they had completed the work on their own. This practice not only helped reinforce their understanding but also prepared them for real-world coding challenges, such as job exams or technical interviews. I believe that following up with students about their submissions encourages independent problem-solving, which is crucial for their growth as programmers.

SYRACUSE UNIVERSITY

Teaching Assistant

CIS 151: Fundamentals of Computing and Programming

Fall 2023 - Spring 2024

Dr. Nadeem Ghani and Dr. Reza Zafarani

I have been teaching the Fundamentals of Computing and Programming course since the Fall semester of 2023, with some adjustments in responsibilities for the Spring semester 2024. This course aims to teach students programming, specifically using the Python language, fostering critical thinking and innovative problem-solving skills. As a Teaching Assistant collaborating with two other Teaching Assistants (TA), effective communication between us and with the instructor is crucial for supporting this semester's course and supporting students to learn very well. Our students, hailing from diverse academic backgrounds such as engineering, science, and other non-scientific fields, necessitate understanding on an individual level when providing academic support while maintaining academic integrity, especially pertinent as artificial intelligence tools can now assist in solving most coding problems.

To ensure the course's success, I have established regular communication with two TAs, fostering reflection on lab sessions after each occurrence. When grading, I highlight students' names, enabling me to email them privately, inquire about any performance issues, and encourage attendance at office hours with either the TAs or the instructor.

An insightful reflection from initial teaching experiences revealed that some students prefer interacting with the instructor, while others lean towards communication with the TA. Encouraging students through the blackboard, reminding them to practice, and emphasizing the availability of assistance when they are stuck has proven effective.

In the current spring semester, collaboration with other TAs involves developing solutions and marking rubrics for labs and challenges. Prior to each lab, I reviewed solutions from fellow TAs, ensuring alignment and compiling them for consistent support during coding lab sessions. Providing feedback to TAs post-grading includes encouraging them to approach shy students and assess if they are facing challenges but hesitant to seek help. Recognizing diverse cultural backgrounds and learning styles among students, it's crucial to approach and motivate them to ask for help, assuring improvement over time—a lesson learned from the Fall 2023 semester.

Teaching this course has been gratifying, aligning with my experience and research where Python programming is utilized to solve power system problems. Applying interpersonal skills, including motivation, resource sharing, and academic guidance, adds fulfillment to my teaching experience. While willing to share sample materials from both previous and current courses, the constraint

lies in the similarity of lab questions, mid-term, and final exam questions for the current spring semester, despite different instructors overseeing the courses.

CARNEGIE MELLON UNIVERSITY – AFRICA CAMPUS

Graduate Teaching Assistant

Orientation

Aug 2021

Instructor: [Cathy Bishop](#)

In Summer 2021, I was a part-time teaching assistant for a large Programming and Operating Systems class, to a substantial intake of master's students at Carnegie Mellon University – Africa Campus. My responsibilities included developing homework assignments, organizing in-class activities, and aiding students during office hours. This experience enlightened me on crafting questions with students' perspectives in mind. I learned to formulate clear, concise questions that are simple yet require thoughtful analysis to solve. Collaborating with the professor and other teaching assistants during the orientation, I developed the skill of accepting feedback to enhance my question creation. Additionally, I acquired the ability to attentively listen to students' reasoning, offering support without directly providing solutions.

CARNEGIE MELLON UNIVERSITY – AFRICA CAMPUS

Graduate Teaching Assistant

04-801: Mathematical Foundations for Machine Learning

Aug 2020 – Oct 2020

Instructor: [Busogi Moise](#)

I assisted the instructor by clarifying challenging materials and ensuring students understand key concepts. I facilitated assignment-solving through recitation sessions, conducted reviews, and provided explanations to clarify assignments. Additionally, I graded students' work and provided feedback to the instructor. Teaching students of a similar age group required me to carefully balance social interactions with maintaining professionalism, while effectively guiding them throughout the course.