

## **Reflections on Teaching**

At SUNY Potsdam, I have taught 8 different courses including two entirely new courses, ranging from freshman to senior level. I have had the opportunity to teach several of these courses multiple times. In each of these courses, the students have provided extensive feedback through the end-of-the-semester evaluation process. Additionally, I have also been fortunate to have my peers sit in several of my classes and provide me valuable comments about my teaching and the course material. All of this has meant that I have had plenty of feedback on my teaching to take a stock of what works and what needs to be changed.

My student evaluations have been largely very positive, with the “overall instructor rating” ranging from 1.0 to 1.8 (note: 1 is Excellent) for all my courses taught. As an example of a critical comment that I have often received in my initial offerings and tried to address is the one about the fast pace of my teaching. To address this problem, I have taken several measures, including consciously slowing down my material delivery pace, repeating important concepts multiple times, engaging students with questions and conversations, and switching from PowerPoint to writing on the blackboard. This has resulted in fewer complaints about the pace of my teaching but has not completely eliminated the problem. So I’ll be continuing to put my effort in improving on this front.

In addition to feedback-based improvement, I have addressed some fundamental issues in existing courses on my own. For example, in the Database course, I introduced contemporary topics such as big data and NOSQL, keeping with the advances in the field. In the Computer Networks course, I felt that it was important for students to have a hands-on element to fully grasp the complex theoretical concepts. So when I took over the course, I immediately introduced a lab where students used a simulator to build near real-world networking systems and understand how a network of devices works. To increase engagement of students in my class, I have incorporated in-class weekly quizzes in all my courses. In all my senior courses, I require the students to work on projects and/or research paper reviews, as relevant for industry/graduate school.

The one problem I have had with my classes is related to sudden cancellations because of weather. These cancellations, when they unfortunately fall on the days when one particular course is offered, can have affect my ability to cover the entire syllabus on time. In the past, in response to such cancellations I have sometimes sub-consciously sped up my course. In a recent CCI workshop that I attended, I learnt of several different approaches by which I can address this problem and I expect to be trying out some of these in the coming semesters.

As an educator, it is important to not only provide students with the material to learn, but also create the right environment for learning. I recognize that students have a range of identities, and comfort levels in expressing then, and hence have taken care to be respectful of their choices and preferences while making them comfortable in reaching out to me as needed. I have also made sure that students in my class are always respectful to each other and have an environment where discussion is welcome. This is reflected in how several students visit my office hours (a minimum of 6 hours per week) regularly and even stop by after hours.

I am active participant and informal advisor for ACM-W, which is a society for female computer science students. The society includes several women from minority groups. Participation in this group has involved traveling to conferences with the students and also helping them in creating and presenting posters. This society has been a great source for us to promote computer science amount women and minorities consistent with the policies and DEI goals of SUNY Potsdam.

I have about ~ 20 advisees who I'm responsible for. I ensure that my advisees meet me during advising week where we discuss their progress report, future courses, and career plans. I attempt to get some feedback in terms of whether I have answered their questions to their satisfaction and also as to how else I could help them. I spend time with students who are under-performing, to try and find out how I and our department can help, including by providing tutor help, etc.

One of the courses I teach, CIS201, an introductory course on computer programming, is required for some students outside computer science. For these students, this course is not always one they are keen on. I have been working to find a balance between the needs of our students and that of non-CS students by appropriately tailoring HWs that are relatable to both sets of students and by providing significant lab help for these students.

Computer science is a fast-changing field, where new technologies, concepts, and applications are introduced almost every year. If our students are to be in demand in this field, we need to keep them abreast of the latest developments in the field and capable of joining the workforce in these fields. The department is, therefore, keen on new offerings that are most relevant to the current needs of industry. Towards this end, I have been one of the leaders in the department's efforts to develop two new concentrations – one on Computer Security and another on Data Analytics. To offer these concentrations, 6 new courses were required to be developed. I volunteered to develop 3 of these courses of which one (Introduction to Cryptography) was developed and offered twice already and another (Machine Learning) was developed last semester and am offering currently. I will be developing one additional new course in the next couple semesters. While these new courses are challenging to develop, they have been very rewarding for me. Two students reported back to me that in their job interview (with Lockheed Martin), knowledge from the new courses directly helped them secure a position.

Teaching at SUNY Potsdam has been a real pleasure for me. This job has been fun because of the wonderful interaction I have daily with my colleagues and students. When I see that our students really appreciate our effort (as noted by our ACM student president, Eric Zair, in a SUNY Potsdam news article - <https://www.potsdam.edu/academics/AAS/depts/CS/Zair>), I'm further motivated to keep improving and innovating in my teaching.