Narrative Summary of Teaching

In my last 4 years at SUNY Potsdam, I've had the opportunity to teach eight different courses. Of these, two courses, CIS 431 Machine Learning and CIS 475 Introduction to Cryptography were entirely conceptualized, developed, and taught by me. This year, my new teaching initiative was to design and develop a new course CIS 325 Data Analysis & Visualization, which is now approved and added to the catelog. I'm leading the data analytics track for computer science majors and with the Data analysis & visualization course being approved, I developed three courses towards this track. My next goal is to get data analytics track approved for computer science majors

In the last 2 semesters, I taught 5 different courses: CIS 431 Machine Learning (a new course I introduced in Spring 2020), CIS 410 Computer Networks, CIS 420 Database Systems, CIS 201 Computer Science 1 (including lab; Spring and Fall), and CIS 301 Theory of computation. These courses have been regularly revised considering changes in the field and student/peer feedback. Some of these revisions include: introduction of a lab for the Computer Networks course, incorporation of Big Data concepts and projects in the Database course, and inclusion of research paper reviews in all 400-level courses.

With the pandemic, the last two semesters have not been ordinary. In Spring 2020 when we had to transition our courses to online with short notice, I chose to offer my classes asynchronously, with the assumption that my students can pace and access the course according to their situation at home while maximizing learning. This transition was aided by my prior attendance of CCI workshop in early Spring 2020, where new technologies for online education were introduced to us. I incorporated learnings from that workshop in my online offering and posted weekly pre-recorded lectures, related short quizzes, and associated homeworks. Additionally, I was available for 3 hours of office hours on all weekdays on *Discord* (Computer Science department server) for students to "stop by" and discuss any questions they had. My goal was to recreate or even exceed the in-person experience that the students were used to.

At the end of the Spring 2020 semester, however, I realized that the lack of regular structured interaction with students affected student-learning and my teaching experience. During summer 2020 I attended an online pedagogy course (session 5) offered on campus to facilitate development of knowledge, skills and attributes for effective online teaching and learning. For Fall 2020, I made a "course-correction" by switching to synchronous offering. This change resulted in a course that was much closer to my regular in-person offering. The student feedback was very positive for this change.

Some problems from the Fall offering that I am addressing in Spring 2021 are: 1) Uneven student participation: Students presence in online classes is not always evident as they sometimes do not turn on their video. To ensure that they are present and attentive, I'm taking two actions. First, I'm calling out students randomly and having them answer questions related to the lecture. Second, I have short in-class quizzes that test students' attention to the lecture material. 2) Zoom waiting room challenges: Students joining the lectures late or losing connections, are sometimes stuck in my waiting room. To overcome the challenge of managing the waiting room during the lecture, I assigned a student leader to watch the waiting room. Also,

the last student to come is often assigned as the one responsible for managing the waiting for the next time. This approach has largely eliminated late arrivals.

The change in the mode of teaching to online from in-person has benefited students in many ways, including with access to recorded lectures after class and being able to electronically "walk-in" to my office hours via discord. Some students, however, have found this transition a bit challenging, and in their evaluations noted that the semester was stressful and overwhelming. Recognizing that students face a diverse set of challenges that are not easily evident to me, I've been encouraging regular contact through office hours and am open to some flexibility in deadlines.

Some of the pandemic-driven changes in my teaching will become part of my offering when we get back to in-person teaching. As an example, I will be teaching using tablets, so I can face my students while teaching and post recordings after class, and continue to use discord for office hours, in addition to face-to-face meetings, to provide flexibility in how students reach me.

Reflecting the effort that I put into the courses, my student evaluations, as in years past, were highly positive. I was also fortunate to have my peers sit in several of my classes and evaluate me and they were highly positive about my offering. I always carefully look through the feedback from my students and peers to see how I can improve and modify my teaching style/content.