Teaching Reflection

Laura M. Grabowski

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Overview: Fall 2022-Fall 2023

Academic year 2022-2023 brought in important changes in our Computer Science curriculum. We began phasing in the previously approved updated introductory course sequence, which adds the new CIS 203 Computer Science III course to the sequence. With the launch of the new curriculum, Fall 2022 was the first offering of the "new" CIS 201 (taught by Dr. Supraja Gurajala) and the last offering of the "'old" CIS 203 Computer Science II course, taught by me. All three Computer Science faculty worked on design and new materials to prepare the newly redesigned courses. At the same time, we continued to work on preparing proposals for the major curriculum revisions, beginning the internal curriculum approval process in Fall 2022. The redesigned CIS 203 course was rolled out in Spring 2023, with nearly all new course materials. The biggest news of 2023 was the ultimate approval of our updated Computer Science curriculum, including the 3-track design in the Bachelor of Science degree (General, Data Analytics, and Cybersecurity tracks). We are officially accepting students under the new curriculum starting Fall 2023.

Low enrollments were an ongoing problem this year, adding administrative stress to already challenging teaching situations. I continued to observe adverse effects from the pandemic years on students' skills, preparation, and approach to class work. Perhaps the most detrimental effect is the habit of isolation and solitary work that persists with many students. While a handful of students seemed to engage fully with the work, taking advantage of provided materials, asking questions in class, and my time in office hours, many students seemed disengaged and at a loss in knowing how to approach the work. I struggled all year trying to find more ways to present information and guide the students into the content. It is very difficult for me to assess the effectiveness of those attempts, given the low response rate on student evaluations, another unfortunate trend of recent years.

I think at least some of my efforts led to improved assignments for the spring semester. The university's concerted examination of academic assessment undoubtedly contributed to an improved focus on learning outcomes at the course and program levels. I believe a clearer vision of assessment helped me to design clearer, more targeted assignments for classes.

As in 2021-2022, WAYS 103 (Fall 2022) was a particularly rewarding teaching experience. Given the low staffing in Computer Science and the curriculum changes that are coming, I will probably not be able to teach this course again for a while. I will miss the opportunity to work with students from across the university and "pull back the curtain" on the workings of the computing devices and systems they use all the time without a thought. I enjoy watching them discover this territory that is so unfamiliar to them. The most important aspect of teaching WAYS 103 is the fresh perspectives that my students show me. I'm quite certain that I learn as much from them as they from the course and me.

Focus on New Course Materials

My teaching in 2022-2023 was dominated by developing, implementing, and deploying new course materials. The redesign of CIS 203 necessitated developing new assignments, labs, and tests to replace nearly all the existing materials. In addition, the Computer Science faculty decided to change the textbook for CIS 201/203/205. As a result of the changes, CIS 203 felt like a new teaching assignment in Spring 2023, despite my having taught the course many times before.

I developed assignments and labs for CIS 203 in collaboration with Dr. Brian Ladd. Our aim was to integrate the content of CIS 203 and the new CIS 205 to make the progression of content through the courses as seamless as possible. We worked to make assignments and labs more focused. We meticulously applied

our refreshed knowledge of assessment to guide our process of redesigning the material. Each assignment and lab has clearly defined learning outcomes that support the defined course learning outcomes, which in turn support the program learning outcomes.

Fall 2023 had more than its share of new materials and revisions. I instructed the lab section of CIS 205 Computer Science III. This course was taught for the first time in Fall 2023, so everything about it was new. Dr. Brian Ladd wrote the lab assignments, since he was the lecture instructor for the course. Supervising a lab that is both new and unfamiliar was quite a challenge, even though I knew the content well. I needed to make several revisions in CIS 203 to improve on organization of content and correct issues that arose in Spring 2023. I made substantial revisions to CIS 380 Professional Practice. The last several offerings of the course focused strongly on issues surrounding artificial intelligence bias. For Fall 2023, I thought that the course should include a broader consideration of professional ethics in computer science and some additional work in professional development. I changed textbooks and reworked many assignments. Several of the new assignments were very successful, and feedback from students was very positive. These included two iterations of an "elevator pitch" and a mock interview. I was ultimately unhappy with the textbook I chose and will not use it again. I also think that I need to include more formal presentations to give students more speaking experience, which is an important learning outcome of the course.