Because of Covid-19, professors all over are moving their classes online, and the University of Northern Iowa is no exception. This is quite the transition for both students and faculty, especially when it comes to classes with laboratories and other hands-on parts that are easier to complete in person. Even so, people are finding ways to make it work.

Dr. Brittany Flokstra is a professor of Chemistry at UNI. She is currently teaching both General Chemistry II and an upper level Environmental Chemistry course. She explained that the transition for some classes has been easier than others.

“The Environmental Chemistry class is going great,” Dr. Flokstra said. It’s an upper level course and based heavily on discussion and independent work projects. Dr. Flokstra said that she discussed the schedule and workload with students when classes first moved online. A few dates and assignments had to be adjusted, but overall it is still going well.

“They were working on the project on their own. So they can still do that,” Dr. Flokstra explained. The students all picked an environmental contaminant. They are writing a paper, but in smaller chunks throughout the semester. They also have 3 mini-projects that they will combine into one final term paper. The mini-projects are an introduction to the contaminant, its properties, characteristics, and common sources of pollution and then the students must pick two of the three spheres (Atmosphere, Hydrosphere, Lithosphere) and explain how their contaminant moves through this sphere, including any reactions, sources, and sinks. That is what they are working on outside of class. Dr. Flokstra gives them the information they need to think about during class and they apply it to their contaminants.

“We also meet every Monday on Zoom. We do a current event and have conversations about our case studies. All of class conversations we need to have. And then they're just free to do what they need to do for the rest of the week. And that's going really well. They're showing up. They're doing what they're supposed to do. They're turning their stuff in.”

A few of the students in that class work in hospitals, so their schedules combined with schoolwork have been difficult. Luckily, professors like Dr. Flokstra are more than happy to work with students to make things work, including being flexible with online office hours and communicating through email.

Transitioning General Chemistry II to online has been much more difficult than the Environmental Chemistry course. This is, in large part, due to the required lab work. There are ways to do lab work online. There are resources for online labs and professors can record simulations. However, Dr. Flokstra did not want to have to have both her and her students working with something new and unfamiliar on such short notice. In addition, they had already completed five in-person labs of the eight that were planned.

“Of the remaining three, there was going to be one worksheet lab anyway. So I transitioned another into a worksheet lab and dropped the final one,” Dr. Flokstra explained. “A worksheet lab is where I take what we would have done in lab and turn it into a worksheet where they answer questions, do calculations, and explain ideas. They are usually about 3-5 pages in length, de-
pending on the information. They may include tables, graphs, or data collected in previous semesters.”

Students are still attending the normal lab hours. However, Dr. Flokstra has changed the labs from the two separate 3 hour sessions to six separate 1 hour labs. Each lab has about 9 students. This causes the online meetings to run more smoothly, but it also means she is repeating the same information every hour for an entire afternoon.

There are a lot of changes to make when moving classes online. Dr. Flokstra has been recording her lectures for students to watch. Not only is this extra work, but it is an unusual experience to lecture without the feedback of the faces of students. She also makes herself available online during her usual office and class hours in case students have questions.

“Anybody who thinks online learning is less work is wrong. If you’re a student, you know it’s more work. If you’re a professor, you know it’s more work,” Dr. Flokstra said. “In fact, I think I am working twice, if not ten times as much as before.”

According to Dr. Flokstra, the hardest things to transition online were exams.

“I have a great class and I’m not worried about the majority of them,” Dr. Flokstra explained. “But you always have students that are not passing and if they pass based on less than ideal circumstances, I don’t know. They probably won’t pass the next class. My struggle is maintaining some sort of rigor with testing and also trusting the process.”

Dr. Flokstra’s advice to students is to communicate with their professors. In these times, flexibility is important.

“I have students who come off 12-hour shifts at Hy-Vee or Target or Walmart and they email me. They might have an assignment due that night, but have no energy to work on it. I am happy to let them turn it in the next day. It is so much easier for me to say yes and extend the due date when I know the circumstances.”

Her advice to professors is to also be flexible. Different things work for different classes and a lot of changes need to be made.

“I want people to know that professors are doing the best they can and so are the students. We need as much grace and kindness as we can give each other at this time.”