

# ELAINA ACEVES

## Teaching Statement

Department of Mathematics, University of Utah

This statement contains two sections: teaching philosophy and pedagogical development.

### TEACHING PHILOSOPHY

To me, mathematics is all about making connections. As a math instructor, I want to engage my students so that they can view mathematics, not as a set of isolated topics, but as a network of concepts that are interrelated and necessary to appreciate the big picture. The majority of my teaching experience is in general education math courses where I have the opportunity to advocate for mathematics to students who may not be STEM majors. Thus, I like to focus on the relevance of topics as I introduce them and provide any applications to “real life.” I frequently include problems that contain local landmarks or discuss topics like interest on student loans which are relevant in students’ lives. I also provide multiple ways to solve a problem because not all students will immediately think of the most mathematically efficient method. Students need to see the different options so that they can find a logical method that works best for them.

Communication is vital in any format, whether online or in-person. I always make sure to establish how students can contact me, whether that be during class, in office hours, or outside of the classroom. Keeping me updated about possible conflicts with class time also allows us to coordinate any make-up assignments or exams. I like to provide before-lecture notes so that students can anticipate and follow along with the lecture and after-lecture notes with all of the worked-out examples for those who want to look back or who didn’t attend the lecture. Additionally, I prioritize prompt feedback on quizzes and exams so that students can see how they earn points and where any mistakes were made. I also highly encourage questions in class so that I can gauge their progress. To this end, I often call on students so that they can answer a quick question to make sure everyone is following along. Another aspect of communication is receiving feedback from students on what techniques are most effective in encouraging their learning. I accomplish this informally through progress checks in class or more formally with anonymous student evaluations.

Learning mathematics is an endeavor that should never be undertaken alone. Therefore, I dedicate class time for students to work either in pairs or in small groups so that students can gain confidence and practice while working together before they are given any assessments. I design the group problems to highlight patterns or relationships between topics so that they can discover the mathematics themselves. As a math tutor myself, I always encourage visits to the Math Center (or anything equivalent), so that students have

a distraction-free space dedicated to solving problems. My ultimate goal is to guide my students to become more motivated, resourceful, and goal-directed in their learning.

## PEDAGOGICAL DEVELOPMENT

I believe that each lesson and assessment should be evaluated and revised for the next iteration to continuously improve student learning. Would using an online graphing tool better illustrate a concept? Should the students view examples and discover the theorem on their own? How many examples should the students do as a group before they are given an assessment? Can a quiz question be modified so that students can better show their understanding of a concept or skill? All of these are questions that could be asked to increase student engagement and performance.

While at the University of Iowa, I earned two teaching certificates: The Graduate Certificate in College Teaching in Fall 2020 and the Certificate in Online Teaching in Spring 2022. The Certificate in College Teaching is a twelve-unit program that includes two practicum courses where I worked with faculty members to construct syllabi and create new assignments and exam questions. Particular attention was given to designing exams that addressed as many course objectives as possible while varying the difficulty of questions and ensuring that students have enough time to complete the exam. The coursework focused on implementing Universal Design for Learning guidelines into our teaching framework. Based on these guidelines, my goal in teaching is to provide many options in how I deliver material, in how students interact with the material, and how students can express their mastery of the material. This includes having lecture notes accessible to the students before and after lecture (with all worked out examples); having time dedicated to individual, pair, or group work; and allowing for both handwritten and electronic submissions for assessments.

While working towards the Certificate in Online Teaching, the twelve-unit coursework focuses on how to create a virtual classroom environment that is effective in supporting student learning. This has fueled my interest in incorporating new technologies to enhance student interaction with the material and creating a comfortable environment where students can communicate easily with me and with each other. During my time at the University of Utah, I encountered and implemented Gradescope in all my courses so that I am able to grade assignments with individual feedback and stay consistent with grading amongst all my students. I also want to deliver accessible documents and incorporate accessible websites to ensure that more student accommodations are met by default, rather than by request.

During the summer of 2023, I also had the pleasure of being an organizer of the Utah Math Teacher Training Workshop. During this week long workshop, we provided guidance through training activities for our future graduate students and postdocs. As organizers, we

made sure to have activities that had the participants organize a group-based problem solving activity for their students, design interactive and inclusive lessons, and write assessment questions to prepare them to become better TAs and instructors. With the goal of creating a collaborative and supportive environment, we had the participants provide feedback to each other so that they could continually self-reflect on their progress and improve each day as they practiced giving lectures and designing materials.

My goal is to continue to use my knowledge, experience, and skills to become a more adaptable instructor where I will always be discussing, evaluating, and developing new strategies to better accommodate student learning.