TEACHING STATEMENT
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Teaching Philosophy

It is my philosophy that learning can only truly happen once we convince ourselves that we genuinely
want to learn. However, it has been my experience that most students view learning as a chore that must
be completed in order to receive good grades. As a teacher, I desire to show students that learning is some-
thing to be cherished, which I believe can be accomplished through using a creative teaching approach.
In particular, I believe in using a student-centered style approach to teaching, keeping students engaged,
and incorporating active learning into the classroom.

Instructor attitude: Instructor attitude is key to keeping students engaged. As an instructor, I believe it
is important to be enthusiastic and excited about the material being taught, come to each class prepared
and well-organized, explain concepts clearly and often in a variety of different ways, encourage student
participation, provide quick and meaningful explanations to questions, be approachable and easy to talk
with outside of class, and truly care whether or not every student learns the material.

Don’t teach just to get through material: Too many teachers nowadays just try teaching as much as they
can as quickly as possible so that they can get through the book. I think this teaching method does not
promote learning in the best way possible. What is actually important is making sure students have a
strong understanding of the material, even if this means cutting out some sections from the book.

Solve problems using critical thinking rather than step-by-step procedures: I do not believe in giving stu-
dents unnecessary formulas to remember or a lot of step-by-step instructions on how to solve a problem.
Rather, I feel that encouraging critical thinking and emphasizing the main methods and ideas behind
how a problem is solved are much more important.

Active learning and in-class activities: Lecturing every class is probably the easiest way to get through the
most amount of material; however, I do not believe this teaching style allows students to fully learn and
retain the information, especially among diverse student populations. Thus, I believe it is important to
mix lecture with active learning and activities for a more student-centered teaching style.

For example, I am currently teaching an "Introduction to Proofs" class and rather than teach the
class using a standard lecture-style approach, I am using a more student-centered approach to teaching.
Before every class, students complete a "preview activity" which is a short activity that explores some of the
main concepts and definitions presented in the section we will be covering in class that day. The preview
activities give students a chance to think about some important concepts prior to coming to class and they
also allow less class time to be spent lecturing and more time to be spent reinforcing and exploring the
ideas. Less than half of every class is spent lecturing, while the remaining time is spent on class discussions
and activities, which are usually intermixed with the lecture. I also often have students write proofs and
compare their answers with a classmate so that they can get feedback from their peers and also so that
they can give their classmates useful suggestions, something I have found to be extremely beneficial for
the students. I will continue to use peer review in my classes in a variety of different ways.

Homework and creative writing assignments or projects: I believe homework should be assigned which
is thought-provoking and meaningful but not repetitive. Often innovative writing assignments or projects
can also be very helpful in helping students understand and want to learn the material.

For example, when I taught Math 202 (Calculus for Business and Economics) during the summer of
2018, I decided to make their required writing assignment something a little different than the standard
writing assignment typically assigned. The typical paper is to write a marginal analysis report: the students select a product their business will produce and construct cost functions, revenue functions, and profit functions, and then they answer a variety of different follow-up questions and determine their business’s optimal operations. When teaching Math 202 previously, I had found that students did not like writing this paper and ultimately did not learn very much from writing it. When I had the opportunity to teach Math 202 during the summer, I had a bit more freedom to choose the writing assignment and decided on a "Letter to Granny" in which students write a letter to their grandmother, who is paying for their college tuition, about the main ideas and concepts of calculus. They also tell her if they think the material they’ve learned might benefit them in their career goals; if they do not think it will, they are asked to explain what else they might gain out of taking a calculus class. After they write their first letter, the students receive a response from "Granny" (me, the instructor) asking for clarifications, more details, and so on, to which the students then write a final response. I found that students much preferred this paper and by reflecting on what, to them, were the most important concepts and ideas in calculus, they ultimately learned more about calculus and marginal analysis, in part because they were more interested in the paper they were writing.

Make it clear the advantages of learning mathematics: Mathematics is important in developing critical thinking skills, learning to think logically, and allowing people to communicate ideas more effectively. Unfortunately, it seems that most students don’t realize that learning mathematics can benefit them in these ways. As a teacher, I would strive to convey these ideas to students.

Address the broad range of student abilities: In every class, I realize there are students with broad backgrounds and abilities, and hence it can be difficult to teach material in a way that is appropriate for every student. However, certain teaching strategies can be implemented to try and help every student learn, without lowering expectations of the class or boring the high-achieving students. For example, homework assignments can be done through differential assignments, such as those where if students score below, say, 80% on a homework, they then must complete an additional assignment or come to office hours. Also, I support the idea of giving students the opportunity to resubmit their homework so that they may learn from and correct their mistakes. In addition, by communicating with struggling students via email or in person, individual meetings can be set up to help these students overcome the difficulties they are having. I am continuously striving to ensure that every student feels a sense of belonging and realizes that he or she has the potential to succeed.

Continuously assess student understanding in class: This can be done by asking questions to the class, and always waiting for at least one response, to make sure students are understanding a concept. Sometimes calling on students in the class can also be helpful (especially if the class size is small enough) to determine different levels of understanding. I have also found it useful to walk around the classroom while students are discussing a topic or working on an activity, during which I will ask questions and try to determine where students are struggling.

To summarize, my teaching philosophy is based around trying to inspire and encourage my students to learn for the sake of learning and not just for the sake of getting a good grade. I continuously work toward this goal by implementing the strategies described above. In particular, I feel that it is very important to promote active learning in the classroom by engaging students with the material through class discussions and activities.
Below is a list of courses that I have taught as the primary instructor.

- Fall 2019, Math 301 (Intro to Mathematical Reasoning), 3 credits
- Summer 2019, Math 273 (Calculus III), 2 credits
- Spring 2019, Math 273 (Calculus III), 2 credits
- Fall 2018, Math 100 (Basic Mathematics), 2 credits
- Summer 2018, Math 202 (Calculus for Business and Economics), 3 credits
- Spring 2018, Math 202 (Calculus for Business and Economics), 3 credits
- Fall 2017, Math 273 (Calculus III), 2 credits
- Summer 2017, Math 220 (Linear Algebra), 2 credits
- Spring 2017, Math 108 (Trigonometry), 2 credits
- Fall 2016, Math 103 (Algebra Methods and Introduction to Functions), 3 credits
- Summer 2016, Math 105 (Exploring Mathematics), 3 credits

**Teaching Awards**

Sidney G. and Evelyn Hacker Graduate Teaching Fellowship, awarded Spring 2018 for excellence in teaching

**Sample of student reviews (from my Calculus III class taught in Fall 2017)**

"She is a very approachable person. Asking her questions is really easy, and she is phenomenal at explaining any kind of question I have. you can tell she knows what she is talking about."

"She is very organized and could explain concepts in a variety of ways"

"Understands students needs and helps students that fell behind to catch up and make sure they understood the material."

"She is very well organized and prepared. she is very good at connecting her thoughts to her words to help us understand the material."

"She was able to compact what is I would consider a very challenging subject into her few available lecture hours."

"Always checks to see if people have questions or if the class is understanding the material."

"At first I didn’t like this, but it definitely grew on me: when she said something long and complicated, she wrote it out on the board. She also made sure we understood the concepts."

"Passionate, easy to understand."

"She knows her material very good and is very enthusiastic about it."

"She is an excellent teacher. She knows what she’s talking about, is willing to help us when we need it, answers questions effectively in class, and teaches the material in a strategic order."

"She treated her students with great respect and also gave us ample opportunities to schedule one on one meetings with her if we chose too."