

Teaching Philosophy

Gary L. Gray

When I teach a class, the students are the most important thing in myriad ways. This is true whether I am teaching a class with a dozen students or one with 135 students. I want the students to be engaged and eager to learn the material. I do this by making the material relevant to their future careers and by making it interesting through homework problems and example problems that are real engineering problems. I am invested in the students and their names, get to know them, and stay until 6:30 p.m. for my office hour that was supposed to go from 3:00–5:00 p.m. In a class of 40 students, I will frequently see 15–20 of them regularly at my office hours. I meet in common areas on campus where I can move from student to student, guiding them through their assignment. If a student is not doing well, physically or mentally, I work with that student to move an assignment or exam to another time so that they can do their best. Students know when you genuinely care about how they are doing, both in the class and in their life, and it makes their experience so much more enjoyable and meaningful. I treat the students as adults and with respect.

I also give extra support to individual students when they need it. Of course, I offer numerous weekly office hours, but when a student is struggling and comes to me for help, I make extra time for that student, often scheduling weekly meetings for the remainder of the semester. In addition, a few years ago, I started reaching out to students who fail the first exam in any of my classes. I send those students a short email telling them that I noticed that they did not do well on the first exam and that we should try to understand why that happened. I then tell them that, if they wish, I am available to work together to improve their performance. This email demonstrates to these students that the figure up in front of the classroom, even if it is a large lecture hall, took the time to notice that the course was not going well for them and reached out. Many students respond telling me that they appreciate my concern and that they will change the way they study. A few students take me up on my offer, and we meet to figure out what is not going right.

In the classroom, again, no matter the size of the class, I get students engaged. I am constantly asking them questions, and I strongly encourage questions from them. In a class with 130 students, I can't engage with every one of them, but I can make the environment friendly, fun, and safe, so that *any* respectful question or comment is welcomed and addressed in a friendly and encouraging way.

My philosophy for how I assess students is simple—demand rigor and excellence from them, but be benevolent when assessing and grading their work. Undergraduate students in engineering are still training for their profession, and I do not believe in beating them up as they do so. With that said, when I demand a high level of work from students, they are amazed at what they are able to accomplish and how powerful they feel when they accomplish it.

My lectures now have a lot of humor in them, and I joke around with the students. Honed through years of teaching and writing a textbook, my lectures are very methodical with example problems that get the students excited about the material. The students in my classes are provided with a detailed grading rubric prior to exams, so that they know exactly what is important and how they will be assessed.

In essence, my philosophy of teaching is to be engaging, be rigorous, be fun, be fair, and treat the students with respect.