

Hi everybody.

Thanks for the feedback Thursday, the end of our eight week. My statements in purple.

From Thursday, Week 8:

This is one of my favorite classes and I think it's great that this class encourages working together + thinking outside the box.

I still really like how the class is run, but w/ rotational mechanics I wish we had gotten more consensus 'cause sometimes when I left class I wasn't sure what I was supposed to take away. Also would love more time to take the midterm.

By "more consensus" I think you mean that you left class without a feeling of resolution. Maybe I need to end material sooner and make more space for students to talk about what it is that is unclear for them.

I address the midterm time below.

I truly appreciate the experiments + demonstrations. It really helps understanding the material. (PS every time it looks like you'll hurt yourself)

Still not 100% confident in a couple topics but overall, it's alright. Some stuff I know more conceptually and don't know execution.

I like when you lecture more in class than we talk in groups.

How the class is going... I really could not grasp angular/rotational lenses. I have been meaning to come to office hours but I will this upcoming week.

Excellent. More about office hours below.

Pete,

Let's go to Jamba Juice,

Anyway, I am struggling a bit in this class and it's because I'm not putting in the effort. My goal is to start paying more attention to videos, take more notes, and consider in-class problems.

This student included their name, so I responded:

"Thanks for the note and identifying yourself so I could respond. I think we are rarely everything we want to be and certainly in college there are so many competing interests. I remember when I was at MIT, I spoke with my dad and told him I was doing well in classes but I was bummed out. He said, "you know what college is about, Pete. It's about getting together with friends and going out for a few beers and having a good time." There was another time he called and I told him that I was doing well, but struggling in my classes. He responded something like, "you know what college is about... it's about buckling down and working hard... keeping your nose to the grindstone."

I appreciate your honesty, owning the difficulty. I encourage you in the last two weeks to get the people you like together and do physics by my office. The group that does that really seems to have a good time... and I think they do pretty well on the exams.

Let me know if I can better support you.

Pete"

So far I feel somewhat comfortable. I received a C on both exams so I imagine I'm around a C average with participation pts. in mind.

The problem sets are long. Like these things could be my bus ride home. They're so long. It'd be nice if they were posted on Monday so we could start them early. Yesterday I had a ton of time to do PS#8 but it wasn't posted and I am sad b/c I'm going to be gone all weekend and will have to stay up all Monday night doing physics and thinking about roundhouse kicking my laptop (now that I know how to do a sick kick).

Sorry... this was my fault. I should have had it posted sooner.

I set up an old laundry bag full of clothes we don't wear any more for a punching bag. There must have been some buckle or large button in it. I hit it once and it really hurt. Don't roundhouse kick your computer.

Initially, I did not enjoy this class at all. However, it has surprised me how much my attitude toward this class has changed as the quarter progressed. I am learning how to properly explain the concepts, which is far more important than memorizing formulas which I would forget.

If you identify things we've done that helped this transition, I'd be grateful to hear what they are.

Pete,

I really enjoy this class. I feel like I learn better by looking through lenses and thinking with my hands.

I wish the second midterm (on rotation) reflected more on what we did in class and on the problem sets... but that might have just been my personal misunderstanding.

Overall, I think I've learned a lot in this class.

My understanding was the MT#2 was about things we did in class and the problem sets. Can you point out things that seemed to come out of nowhere that I might be more aware of what wasn't covered so well.

I think this class is going very splendid. This time last quarter I had a solid F with no chance of passing so my high B is much an improvement from that. The class is much more engaging than my last class where we just lectured and took quizzes. Sometimes the videos are hard to watch because I lose motivation half way through but I always finish them. I do lose focus sometimes and have to rewatch it. Overall, I really enjoy this class and the way it's taught. This made me like physics again.

Dear Pete,

I'm really enjoying your class. I have never taken physics before, but I'm doing well in your class. I'm so thankful that I am taking Physics 141 with you and not anyone else. I can't help but see physics in everything now. I'm actually strongly considering going to grad school for geophysics because of this class.

Thanks for being my teacher

P.S. You should come to Winds concert June 3 in Harman Hall 8 PM

I really enjoyed today's videos but be careful with demos.

I feel somewhat comfortable with the class? I did decent on the first midterm but then I bombed the second one. I'm still a little bitter about that but have been trying my hardest to fully grasp the complete concepts. I would really appreciate a class period dedicated to you walking through an entire problem and how you would like them structured. Still confused as to what you want. I sensed that some students were unsure of what I was looking for after the first midterm, so I made 4 videos for each of the questions. If this didn't work, maybe you could let me know where you are unsure, and how you experience the questions and my solutions.

Class is going better than in the beginning. I am more accepting of the learning model. Considering lenses really does help in understanding a physics problem.

I have really enjoyed this class. Much more than I thought I would.

I'm having trouble still trying to use formulas to solve problems. I can explain a problem decently well but I have trouble solving it.

A suggestion I would make would be to have office hours not be taught by ourselves. I'd rather have your help to be honest because most of us who go to office hours are confused & don't understand.

I really like all the demonstrations. They really help visualize the physics behind the ideas presented in class.

While I do think that leaning together as a group is way more effective than lecture, it was never my intention to leave you alone during office hours (or during class) when you are not able to do something or don't understand. My intention is that when you want guidance, you call me.

Please do this. And if I ask too many questions, you always have the right to say, "no, Pete, just solve it for me and explain this time... I have concept fatigue." Or something like that. We've got two more weeks. I look forward to seeing you.

I love the way you teach. I learn so much in the short 50-minute class. But I struggle to recall information from the videos even if I take notes and pay attention and answer all the questions correctly.

The short time on midterms is very stressful. I don't know if you can get any more time, but I struggle to think through these problems in a short time.

Really, I wish we had more in-class time overall.

Great... you bring up very good challenges. I don't know how to make the videos better or to tell you how to learn more from the videos. For sure, you shouldn't watch them when you're tired or in a time crunch... (my guess is that as college students you're usually tired or in a time crunch. It's spring, we're all getting a little flat-footed... me too.) I think you're doing the right thing by answering the questions and taking notes. However, maybe people just don't learn much from videos... I'm interested to know what the others think. My thought is that if we don't learn from videos, just like we don't learn from lectures, at least we can get them out of the classroom so we can get together and learn in the class with our voices and hands. My thought is that you learn more than you think from the videos. ... videos can *introduce* you to the material so that when you come to class you don't have to be introduced to it again and are ready for a learning experience. Maybe. Again, I'm interested what the others' experiences are.

The midterms... what to do? I used to have 2 hour midterms in the evenings, and then buy pizza and go over the test with everyone... spent about \$1000 on pizza I think. That's one way to do it. I could also simply the questions more. I'm curious what you guys think. At the same time, I

don't think anything is broken... you're stressed, but you're doing OK. So, the problem is the stress – not the time... I think the stress is more about the pressure we put on ourselves, or society puts on us. In any case, thanks and maybe I'll do something different for future classes.

The videos are hard for me to learn from as a primary source of learning. However, I do think the format we've done in the class has been beneficial, but would appreciate more in-class instruction. The class as a whole has been fun and informative, and I really appreciate the depth at which you explain concepts, not just the math.

Class is okay, I'm worried about how we don't really learn formulas & how to apply them to certain problems and how that will affect my progress in the other classes. Getting used to this class, not the flipped classroom but the class itself took a while to adjust to in order to do well in here. I'm very scared for the final but will try my best to succeed on it by reviewing all the past material we have covered. I would appreciate if you come up with something kind of like a study guide for us with EVERYTHING so that we can be prepared as can be.

My guess is that our class will prepare you for subsequent classes *better* than the conventional way I used to teach. Cal Poly students are very good at applying formulas to get answers. That has never been the bottle neck. The problem has been which formula to use, how, and why. That's why we don't spend too much time putting the numbers in and solving for  $v_f$  (for instance). Feedback from students is that this class left them very well prepared for subsequent classes... probability of honesty? I'm not sure. Maybe you can get back to me in a year and let me know.

I've taken a physics class similar to this where class time is used in discussion with peers. I do believe that this learning model helps students retain info better and understand why things happen the way they do. Your class is entertaining and insightful. Keep telling your stories and using real life examples.