

Hi everyone,

Thanks for your valuable feedback. I'm seeing a variety of responses as to what people like, dislike, are concerned about. I think we have struck a good balance between technical/environmental/societal content. Many people expressed concern about the lack of definition and structure. With regard to the projects I repeat that this is your project and I ask you to take control of it. If you don't know where to start, I am glad to meet with you during office hours... or even outside office hours if you can't make any of them. However, I ask that you first follow the initial direction on the project page and contact the people I put there.

I understand that the grading in this class is different from others. I find it sad that classes hold your grade over your head, often making grading the predominant focus... but I do recognize that grade is an important currency. And just like we should know the cost of the electricity we're using in order to make an informed decision, you should know how you will be evaluated. I looked over the syllabus and I added the following:

Grading: You will be graded based on watching the videos, weekly assessments, three self-interventions, and a group project to be presented during finals exam time. Your final grade will be roughly half your assessment scores, and half your project score. You are expected to responsibly watch videos and do the self-interventions (count as video watching) in order to stay up with the class and participate fully... and is required for a good grade in the class (explained below [in the syllabus]). The class is not competitive and I would like to see everyone earn an "A". However, I expect that it will be "A-" or "B+" centered.

Many people noted that this free-wheeling education is new to them... where does this come from, and do I know what I'm doing?

Friday, Bernard Amadei (founder of Engineers Without Borders) began his talk with the question, "is our present engineering education preparing people for the world they will find when they graduate?" His definitive answer was "NO". Our antiquated, hierarchical, structured education system has worked well in creating siloed knowledge, which served society reasonably well up until recently. However, the transition to a "closed earth" model whereby we ourselves are affecting the planet as a whole requires something different... something we don't know. So how do we go about inventing a new education? ...something we don't know? I think it starts with creating community and having open, transparent communication. No, I don't know (exactly) what we're doing. However, so far, I can see it's a great improvement to what was happening when I did (erroneously) know. And we will invent and innovate as we go along. How will we make sure it doesn't go off a cliff? By leveraging this same open, transparent communication. Can we be sure it won't go off a cliff? Maybe not... however, I myself am sure that with the present system intact, we as a society are headed for the cliff imminently, and thus there is no option to not innovate. You likely recognize that I am not alone in this innovation in society or at Cal Poly. For instance, I worked closely with the SUSTAIN initiative for about 6 years with several faculty, many community members and about 200 freshmen dedicated to creating a new education model. Read more: <http://sustainslo.blogspot.com/>

Below, please see your feedback in black text and my occasional comments in purple italics. Thanks for being part of this.

Pete

The past three weeks of this class were definitely not what I was expecting when I registered for it. The whole “backwards classroom” concept seems like it can easily fail into being a waste of time, but I think that’s to your charisma, everyone has been able to learn an extraordinary amount so far.

I also appreciate the time you put into setting up all of the projects for us. That in itself sounds like a project and you did all the work in 2 weeks, so thank you very much for doing that.

The first three weeks have been very interesting and more than I expected of this class. I feel like I’m starting to be able to think globally in a quantitative way vs purely qualitative in the past. I really enjoy that the videos check in with you during the lecture.

So far, I like how the class is going. I guess I would like a better idea of when the project stuff is due since this first presentation kinda sneaked up really quick.

Yes, I get it. If you are the bike group, you might feel a little blind-sided. But someone has to start, so you can be “taking one for the team.” Additionally, there is no grade riding on performance Monday, we’re just practicing and learning together. Full disclosure: if it seems like this came out of nowhere... it did. I decided to add the Monday presentation on Thursday. In the past, students expressed problems with the projects: lack of connection with the class, lack of structure, hard to get started. I think that these brief group check-ins during each class will nicely answer this need. It may seem that we’re just making this up as we go along. To a degree, are we are... but within the context of the syllabus. In ascertaining your expectations, the syllabus serves as a contract.

I really like the way the class is being taught in class. I think the response questions for the videos need some clarity editing. I would have appreciated the due date for the self-intervention being posted at least a week in advance, so I would have known I needed to start by a specific time to fully complete the project. Separately, I am quite excited to start on the group project, and I am curious to see where it goes.

It’s already AIGHT [*Tekuru told me what this means, “It’s a young person’s term”*]. New material that is interesting – I like the estimation. I hate the flipped aspect, Hate sort of videos LOL.

Project will be interesting. Let’s see how it goes. I like structure too...

Big fan of the class. The way you test is very useful for interviews [????]. I enjoy the physics/society blend.

Sadly not a fan of the projects. I am a senior trying to focus on my senior project and leading lab groups in other classes. I was hoping this class would not require much out of class collaboration since I already have 3 project intensive classes.

I 100% see the value in them, it’s just a lot IMO.

I am really enjoying this class. I am learning a lot and the articles you link are very informative. I do wish there were like more organized notes/ppts because all we really have are the videos and some slides. The problem sets are helpful but maybe a little long. I enjoy the in-class discussions, but I would like more structure. But I genuinely enjoy coming to class and talking with my peers;

the conceptual/thought provoking aspect to the class is a great break from the math-heavy technical side of my other classes.

I am interested in the subject and hope to learn more. I appreciate the free-flowing nature of the class but would benefit from more structure.

I really like the class content. It is interesting and different compared to my usual physics class. It has a survey class feel and increased awareness of current issues. However, it does not practice enough / go over the math behind it. We are tested about the equations but we talk about social issues.

There was also random/assumption questions like the population that I did not study. I focused on equations and applications. But the population question seemed a bit unfair. I don't know how math focused or social learning focused making it hard to study.

I find the information that we learn in this class is very interesting. This type of information wouldn't be discussed in other classes. However, I do find the class structure hard to get used to but I don't hate it. I do feel like the class has lost some of the "physics" aspect to it. But I'm not sure yet if I love it or hate it.

I like the way the class is run and the collaboration with other students. I'd like the problem sets to be posted a little earlier because I end up needing a lot of time to consider the questions. I'd like to know what needs to be on my equations sheet/anything to know for calculations.

I think this class is really great. I really enjoy the articles and videos, and I like learning about current, environmental related events. I also like getting time to talk frequently during lectures because I often space out and then catch up during those pauses.

I am very interested by this class and it is so refreshing compared to "bleh" classes like vector analysis.

I'm also very excited about the possibilities of my project but honestly don't really know where to start on what specific direction to go and how to do that. One step at a time I guess. Overall, looking forward to it thought ☺

Also, I'm never really sure what to expect on assessments – hate to worry about grades but unfortunately GPA matters.

It's a good class?

Lipped classroom setups are something new but the lecture dos a good job at complementing it. It's just a busy quarter. I'd appreciate more instruction on the projects because following directions is usually simpler but I also like having so much freedom with it.

The class feels a little all over with topics but I'm not an expert on Physics of Energy.

I like your enthusiasm and depth of knowledge, as well as the use of the class page. I very much do not like the lack of organization for the project. Give us a rubric, a due date, a list of suggestions-something! At any rate, I'm looking forward to having class outside, along with more class discussions. ☺

As for organization for the project, I think I've provided half of what you're asking for. I've provided dates. You have group presentations, and dates for website updates. There should be a list of suggestions on the project page, along with project contacts (for some projects). If you've contacted these people and there is still need for more guidance, then please visit with me and we'll see what to do.

I want to be better informed about what and how we are graded for this class. And I want a better understanding of which materials I should study for exams. (I don't mean like a study guide, I'm confused about the focus of this class.) Also % break downs would be nice.

This class more than others has been very thought provoking. I find myself thinking more about the environment recently.

This feedback resulted in the increased definition of grading structure I present at the beginning of this note.

I'm enjoying the in-class discussion so far, but the videos seem like too much review. Maybe that's just because I'm a physics major who has seen energy concepts a lot thought. I enjoy the freedom we have with our projects, and I'm excited to see where we take them.

Yes! The diverse group of students have varying degrees of preparation for this class. A lot of what the videos are for is to level the abilities. It will challenge some students. Many of you know this stuff already, but some don't... but imagine how it would be sitting through lectures of this!

The flipped classroom is nice, but with the change in the format of the class, the videos seem less relevant. I came into this class hoping to be learning more about the physics of energy not so much the impact of it.

Other than that, I am a little stressed because I still don't know what I'm going to do over summer.

I thoroughly enjoy this class so far and I find the subject matter very engaging. My only stressor is the open-endedness of the project. I feel as if our group does not know how to begin or where to go.

Office Hours? Posted on main class website.

This is an interesting class. The difficult part is knowing what you need to know rather than what I want to know. I may commit something to memory and it is viewed seemingly inconsequential in the scope of the class. There isn't much direction or guidance in terms of the projects so it is unclear how to proceed with it. I still really like the class and class structure.

I really enjoy this class so far. I love the environment and want to learn as much as I can about what is hurting it and efforts to combat climate change & large corporations. I enjoy the flipped lecture and have learned a lot.

I am also interested in helping w/ solar cooking but I do not have a lot of background knowledge on diodes or solar. I would love to learn and help in any way thought (*emailEcalpoly.edu*)

Thanks for fighting for the earth+people.

I like the format of the class. I do not have to always frantically take notes. We engage in discussion and I feel that I am genuinely learning the material.

This class has made me think of problems from the decisions that I make that I have never thought of before. i.e. how much CO₂ I create.

Although the loose structure is nice, possibly a vocab list would be posted to make sure to commit to memory important terms we will need to know for assessments and for talking about the subject as a whole?

What do you propose? Maybe someone sets up a google doc for the class and you put terms and definitions on it.

What I think: It's been interesting and different than anything I've experienced so far. If anything, it's almost like I'm being exposed to what it's gonna be like after college. I'm being bombarded with problems and I am not being guided or told what's right. The world appears to be very gloom but I still have hope that I can make a change. I'm excited for this class project and can't wait for what I'll work on in the future. I will set my mark on this planet. I don't want it to end like this.

I like learning about the environmental and sustainability aspect of this class, but I don't really like the more math / calculation part to the class. It sometimes doesn't make sense to me and its hard for me to understand on my own. This is a big concern b/c the % of my grade is greatly affected by these weekly assessments.

I'm very excited about this class. I switched to EE after fall (which no one ever does) because I think energy is fascinating. I enjoy this class because it gives me a glimpse into what kinds of real-world projects there are awaiting me in the future (and the present). I want to do something meaningful – energy really ties us all together in more ways than one and this class makes me feel like I'm on the way to that. I've become more relaxed / Type B over time so the grading system doesn't really bother me and I enjoy spending time learning about the topics I find interesting.

Definitely the most oddly and imprecise physics class I've ever taken. I like the freeform style and the flipped classroom. I feeling classroom. I feel like sometimes more direction/structure about tests/assignment projects would help me be more successful.

You as a person are one of the coolest and most enlightening profs. I've had here. I really happy about some of the relationships that have been brought to light because of the impreseness. That said, I'm finding the projects/assignments difficult.

Maybe you come to office hours to discuss the project. I'll help wherever I can.

For homework and assessment, it took a while to get accustomed to analyzing the answers to support our work. I feel like it should have been emphasized. The format of the flip class isn't too overwhelming. The videos are not too time consuming where it'd be an hour's worth or more outside of class. The active research in some homework question makes it difficult, but it helps to learn the material. I don't know if it really helps absorb it.

The topics in class are very interesting and you have made it very engaging. Can we have another explanation for projects. I am somewhat confused on our role in the projects.

I love this class, I am learning so much about the politics around major issues. For the first time since senior year of high school I am starting to keep up with international news.