PHSC 11700 1 - Physics for Future Presidents: Energy and Sustainability - Instructor(s): Savan Kharel

Project Title: **College Course Feedback - Winter 2024**

Number Enrolled: **91**
Number of Responses: **52**

Report Comments

Opinions expressed in these evaluations are those of students enrolled in the specific course and do not represent the University.

Creation Date: **Thursday, March 28, 2024**

What are the most important things that you learned in this course? Please reflect on the knowledge and skills you gained.

Comments
Estimating energy calculations and thinking about energy being all around us in the real world.
The most important thing we learned was quantum mechanics and black bodies.
Physics of Wind Energy
lectures were really engaging and helpful
Energy: how to calculate it, its importance, where its found, and how it interacts with the world.
How energy works and the feasibility of renewable energy as a primary source for power.
energy, sustainable energy production, different energy formulae, radiation, black bodies
Renewable energy, fossil fuels, quantum mechanics
I learned how to do physics conceptually, how to approximate, how physics applies to our everyday world, how energy sources work, light–wave particle duality, energy, work, etc.
Some basic quantum mechanics, and clean energy options.
We learned about sustainable energy sources and climate change as well as various physics concepts that underlay them, and some fundamental physics truths about the universe.
We learned about the physics of energy, how that connects with policy issues concerning energy consumption and production, and the final weeks briefly introduced quantum mechanics.
Radiation, CO2, etc
We received a really great overview of the basic physics of energy, the values of the different sources from which we draw our industry, and the way in which our energy use can affect the planet. We also had a few lessons on the basics of quantum physics (for the purpose of understanding the way light acts as energy), which I really enjoyed because Kharel did a good job of explaining it and it wasn't particularly challenging. As for skills, the class gave us some practice with Fermi approximations and dimensional analysis.
Physics of energy (solar and wind), quantum mechanics, global warming
Energy, sustainable sources of energy, climate change, guesstimation, quantum mechanics, waves.
The most important thing I learned was how the concept of energy translates not only into most areas of life, but also how we understand the environment. I learned how to connect mathematical concepts and formulas with real world phenomena.
I learned more about energy and how it relates to issues in the real world, as well as the basics of quantum mechanics.
basics concepts of energy and power, science behind climate change, estimation skills
estimations
energy and quantum mechanics
Professor Kharel did everything to make the class interesting for everyone. The in–class lectures were always very interactive and accessible to someone without a background in STEM.
We learned about climate and quantum mechanics.
Light is a wave and a particle. That's it
A great deal about physics and energy + how it relates to climate change
Equations of motion and renewable energy physics
Physics of sustainable energy, energy sources and uses
I learned how to make proper estimates and have reference points for things relating to energy and power.
Approximation, uses of energy, important laws of physics.
I learned the power of physics. I also learned a lot of concepts and the role both energy and sustainability play in our everyday life.
Basic physics concepts
The basics of physics and their applications to real–world phenomena and issues like sustainability.
Basics of quantum mechanics, energy conservation, implications of climate/sustainability policies, etc
It completed my requirements
energy, different spectrums, manmade effects to our planet, clouds.
Climate change, clouds, quantum mechanics, public policy

Describe how aspects of this course (lectures, discussions, labs, assignments, etc.) contributed to your learning.

Comments
Lectures were great and engaging, professor Kharel was fantastic; Labs were cool but sometimes boring; Reading were very interesting and p–sets were okay but would need to be marked with an actual rubric (you never know how you lost your marks in the homework) and the questions need to be worded better to avoid confusion on the student's end.
This course really confused me. I felt like the the lectures didn't follow any understandable pattern. The class isn't hard, per se, but it's structured in a really confusing way.
engaging, psets and tests actually corresponded to what he said in class, so going to class actually felt productive. Assignments not as much.
labs were really fun and helped put the material into context
Lectures are engaging and taught by an engaging professor but honestly aren't necessary at all for learning the content of the course.
Labs were much more interesting and connected to the lectures than they were last quarter. Discussions optional. Assignments were pretty difficult. In–class attendance is strongly encouraged to perform well on the exams.
lectures
Lectures and assignments were pretty useful. I found the discussions and labs to be a waste of time.
Labs were generally tied to one another to offer a practical understanding of light & of work/energy loss.
The lectures are very well done and very engaging. The labs are not run by Prof. Kharel, but by the physics department. At times they are boring, but are never too difficult. We have discussions once per week, but they are only helpful so long as the TA is good.
The lectures and labs were very important to me and helpful in my learning progress because the instructors were kind about helping me fully understand the material. Reading assignments were helpful to me and so were P–sets, but I found that P–sets were difficult to complete without help.
Lectures were helpful, and relevant. Labs were generally related to the topics, and interesting. The reading reflections and PSETs were less helpful.
Lectures and worksheets were extremely helpful for gaining and synthesizing information, but I did not feel that the labs were essential.
The lectures were the best part of this course. The material was presented in a very accessible way, and Kharel always showed up in an engaging and positive attitude. Hard to leave the class not feeling good because of how he led it. Aside from lecture, the weekly reading responses and labs felt like a chore. The P–Sets were also unnecessarily abstract and the office hours did not help in explaining questions.
Labs provided hands–on learning, lectures helped learning. PSets helped practice skills.
The lectures were very engaging, and Kharel does a great job of making the class a really enjoyable experience. The reading assignments were very interesting. I came out of them with a much better understanding of the international energy situation, climate change, and the development of quantum physics. Finally, the labs weren't too difficult and gave real–world experience with the concepts of the class.
Lectures and interactive activities, demonstrations, and labs were helpful.
Lectures were very engaging and helpful. Labs were slightly less engaging, but still interesting. Discussion sections were helpful for if we had questions on the homework.
The lectures were helpful, and the labs were relevant and translated difficult ideas into something I could understand.
Lectures were pretty helpful. P–sets were often ridiculously long to do and required lots of estimation we hadn't really learned in class, but the tests weren't too bad, nor were reading reflections which were actually quite helpful. Labs were sometimes related but mostly just took a really long time and did nothing
lectures were most informative, labs were pretty useless
refreshed my physics knowledge
PSETs
The lectures were okay for explaining concepts and the labs were interesting, but didn't really teach much about the concepts.
Lectures were kinda all over the place – labs were interesting but very basic, and p–sets were probably the only place it was clear what we were supposed to be learn.
Professor always provided an intimate, engaging learning environment.
The lectures were great, I got a lot out of them and they were both engaging and instructional.
The lectures were always extremely engaging and Professor Kharel always had demonstrations to make the course fun

Comments
Lectures were super helpful and the problem sets helped reinforce that knowledge.
I loved lectures— they were really interactive and Professor Kharel usually had a demo or two for each class.
Labs helped us have a visual understanding of learnings
The lectures were always interesting and the labs were usually substantive in supporting what was learned in lectures.
Despite the large size of the class, lectures were engaging and often fun. We were given space to talk with a partner nearby and come back to group discussion. Lectures often involved in–class experiments, short application videos, working on problems together, etc
Lectures are crucial to attend. Labs felt unnecessary.
Labs, discussions, and lectures were engaging and riveting

Please respond to the following:

	Mean	Median	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
This course challenged me intellectually.	3.81	4.00	4.26%	8.51%	17.02%	42.55%	27.66%
I understood the purpose of this course and what I was expected to gain from it.	4.11	4.00	2.13%	6.38%	8.51%	44.68%	38.30%
I understood the standards for success on assignments.	3.96	4.00	4.26%	6.38%	12.77%	42.55%	34.04%
Class time enhanced my ability to succeed in graded assignments.	4.30	4.00	0.00%	4.35%	6.52%	43.48%	45.65%
I received feedback on my performance that helped me improve my subsequent work.	3.84	4.00	11.11%	2.22%	20.00%	24.44%	42.22%
My work was evaluated fairly.	4.09	4.00	4.26%	8.51%	10.64%	27.66%	48.94%
I felt respected in this class.	4.63	5.00	0.00%	0.00%	6.52%	23.91%	69.57%
Overall, this was an excellent course.	4.26	5.00	2.13%	2.13%	14.89%	29.79%	51.06%

Additional comments about the course:

Comments
The PSETs were really frustrating and barely related to anything we learned in class. The TA's also left no comments on what we got wrong. We just got a score.
This course is just a bunch of busy work. If you can sit down and basically be a human version of chat gpt estimating different things then you'll do great. If you want a class that teaches you something new then take the 130's for your physics requirement. Don't expect this to be an "easy A" unless you like the idea of being a corporate slave in a cubicle for 80 hrs a week assigned to mind numbing busy work. Take global warming instead.
the psets were significantly longer and harder this quarter. some of the readings were as long as 30 pages, so expect to do lots of reading for this class.
The course was smooth sailing until week 6, and then all of a sudden the material got a lot more difficult, and the readings became significantly longer.
The work could be spread out more. There was very little homework towards the beginning, yet lots towards the end, such as Week 8. It would be nice if it could be spread out a bit more.
There is far too many time commitments, specifically thinking of the labs, expected of this course.
The professor is amazing and you can really tell that he cares about his students.
Lots of estimation and frustrating how much time it takes—feels like you're in middle school or something, but that said pretty easy
overall good — doable with no physics background, one of the better non stem physci courses
Kharel is a rockstar, take this course! He grades fairly and genuinely cares about the well–being of his students. Learned a lot, wasn't stressed out, and sincerely enjoyed the course.
I love kharel, but this course was really confusing in how it progressed and what we were supposed to know.
It is an excellent course
Kharel is wonderful! Extremely kind, knowledgable, and available for students
Professor was super great, motivated and helpful! Went above and beyond to make class interesting.
Professor is great and super kind, didn’t learn much though, but easy for satisfying requirements
professor kharel is amazing!

I would recommend this course to:

	No	Yes
Highly-motivated and well-prepared students	13.33%	86.67%
Anyone interested in the topic	8.89%	91.11%

Thinking about your time in the class, what aspect of the instructor's teaching contributed most to your learning?

Comments
Called on the class for answers; remembered peoples names; did experiments in the lecture
Lectures and posting lecture slides helped the most.
discussion questions during class then working through them together
STEM is not a strength of mine, but Physics for Future Presidents with Dr. Kharel made me feel like I was capable. I love the way he facilitated class and how he treats all of his students as adults worthy of respect but also pushes us to use our minds and think outside of the box. He never made me feel stupid which is a fear of mine in STEM courses but rather he was encouraging and direct, always guiding us in the right direction.
Lectures
In class demonstrations, teaching methods that focused on conceptual understandings of things rather than memorization, and an overall relaxing learning environment.
Lectures were engaging and had heavy in–class participation.
discussions during class really helped me to further understand concepts. getting practice questions was also helpful!
Writing notes on the board was the most helpful.
Kharel is absolutely one of the most caring professors at this school; he is always looking out for his students' well–being & he

Comments
tries to provide opportunities to keep students from letting stress overwhelm them. This could be a much more fast–paced course than it was, but I feel I would have learned far less had it been.
Dr. Kharel is the most fantastic professor I have ever had at the University of Chicago. He truly cares about his students and their well–being, but also what he is teaching. He is engaging, even in lectures of 70+ people, and still manages to learn students' names. That says a lot. He also makes very complex physics concepts digestible for those with little to no background in physics. He keeps class fun, but you still learn a lot, and actually want to learn too. And he loves to talk to his students about physics or anything they care about. He also makes sure that his class is not overly stressful; he starts the class with a minute of quiet, and often emphasizes that students don't need to pull their hair out over exams or work because he will never put a surprise on them. It's quite refreshing to see a professor so invested in the education and well–being of his students. I cannot recommend taking his classes enough.
Professor Kharel was extremely kind and eager to help me and other students deeply understand the class material. He wanted students to ask questions if we did not understand something, and he walked around the class to have one–on–one time with students. I found it particularly helpful to have personalized conversations with him so that he could explain in a way that made sense to me specifically.
The lectures, especially video demonstrations that went along with the lectures I found to be the most helpful. Also, class discussions were very helpful.
All the presentations and lectures were really helpful, and the tests were rigorous but fair and I appreciated the opportunity for exam corrections a lot
Kharel is an excellent professor. He is engaging with the class, presents material very accessibly, and just seems to genuinely care for all of the students in his course, which is impressive for someone that leads a large core class.
Instructor was amazing, great energy, good lecturer.
Professor Kharel was a phenomenal teacher. Since you'll see a lot of other people saying the same thing, I'm going to tell a story from the eighth week of the class. For our extra credit assignment, Kharel made us aware of the city of Chicago's plans to replace Promontory Point's limestone architecture with a concrete embankment. He explained that multiple outside surveyors had said that the Point's structure was perfectly safe and needed no renovation, yet the city was proceeding with their plans anyway. I don't tend to be someone who goes to protests or does political activism of any sort, but Kharel kinda had me fired up about saving the point. Out of all the professors I've ever had, he is the professor most insistent on our using our talents and knowledge to change the world in whatever way we can. I think that's really valuable. Also, he's just a delightful person to be around.
Interactive lectures and group discussion work
His interesting lectures and demonstrations. I found it easier to understand the concepts at hand when I could see it through a demonstration.
Prof. Kharel did a very good job introducing confusing concepts and then boiling them down so that a non–STEM major audience could really get them.
He was very engaging with the students and clearly cared a lot about teaching.
prof kharel is very nice, at times it can feel a little condescending, but he doesn't want people to do badly in the class which is great
his passion
His explanation
The instructor's use of demonstrations often helped clear up a topic.
Lectures ish
Just the way he would engage with all of our questions and tie the content into relevant parts of our world today.
Kharel is the actual GOAT
The professor was really good at making the subject entertaining, as well as explaining physics concepts intuitively, rather than in a strictly mathematical way, which was great since I'm not much of a mathematician
His demonstrations and engagement with us, even though it was a lecture made the course interesting and understandable.
The lectures and the experiments he did in class.
I think the lectures and discussion helped a lot with learning new material and getting help on p–sets.
Being super well spoken
He used relatable real world examples which made the topics more accessible.
Professor Kharel is amazing! It was my second quarter with him, and I appreciate his acknowledgment that we all have different backgrounds in STEM. Because of his positive energy and humor, it wasn't your typical lecture where your fatigue overpowers. He made himself readily available if we were confused about a concept.
Lectures

Comments
The instructor was very kind and passionate about this subject

What could the instructor modify to help you learn more?

Comments
Please create mark schemes and feedback for why we drop marks; Provide a syllabus sheet telling what topics are studied when and when exams are
More clearly structuring the course.
reading reflection more relevant and digestible (got better throughout the quarter though)
I wish he would post all the notes, I understand not posting lectures and notes should encourage people to come to class but sometimes life happens and we cant always make it to class so it sucked being behind because he would not post lectures/full notes.
nothing
More involvement in the grading process more communication with the TA's, and more feedback on work.
Make the assignment less reliant on google searching information and more focused on the lectures.
more practice questions
Clarify some of the difficult concepts like blackbody radiation.
Literally nothing. Dr. Kharel is a fantastic prof.
I felt that the last three weeks of the quarter went by really quickly, and a lot of difficult information was thrown at us about quantized energy. I think it would have helped me to have more of a build–up so that I did not feel overwhelmed with such complicated information.
Relate the PSETs more to what was taught in class. They frequently were disconnected from the material learned in class, which felt strange to then be learning ourselves.
Some of the reading reflections didn't feel like the best use of our time and the workload between weeks varied a lot
Nothing! Kharel is great.
First test earlier in quarter, so second test doesn't seem so close to first.
Nothing.
N/A Professor Kharel is great!
Maybe introduce the video assignment a bit earlier in the quarter, so we don't have a bunch of assignments due at once.
Perhaps more opportunities to ask questions immediately after lectures, though that is a small suggestion, and in any case I really think the professor did a great job.
Make the p–sets more similar to the tests/ explanation based instead of calculation based on estimation. Provide more time for problems in class with the letter thing.
more clarity on exam content would've been helpful — he would say there would be no surprises and then I was always surprised by 1 or 2 questions (and I went to every lecture and did all the work)
nothing really
Too vague psets / please respond to emails.
The class could be a bit more organized, and the topics could work together more.
Please make expectations and curriculum clearer. In every way. It felt like we jumped around from topic to topic and psets were repetitive or covered things we didn't learn in class. Labs were either too easy or too hard, and reading reflections were either incredibly long and dense or not talked about in class.
Nothing!
Some of the labs seemed only tangentially related to what we had done in class, and the feedback we got on them would sometimes not have explanations. The exams also could've used some more specific feedback
n/a
N/A
Nothing
Sometimes lectures felt a little repetitive and sometimes things were not covered in enough detail, especially towards the end of the course.
not sure
slowing down a little when going over math equations

The Instructor . . .

	Mean	Median	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
Organized the course clearly.	4.15	4.00	2.17%	6.52%	6.52%	43.48%	41.30%	0.00%
Presented lectures that enhanced your understanding.	4.52	5.00	0.00%	4.35%	0.00%	34.78%	60.87%	0.00%
Facilitated discussions that were engaging and useful.	4.49	5.00	0.00%	2.17%	4.35%	34.78%	56.52%	2.17%
Stimulated your interest in the core ideas of the course.	4.39	5.00	0.00%	4.35%	6.52%	34.78%	54.35%	0.00%
Challenged you to learn.	4.46	5.00	0.00%	2.17%	6.52%	34.78%	56.52%	0.00%
Helped you gain significant learning from the course content.	4.43	5.00	0.00%	2.17%	10.87%	28.26%	58.70%	0.00%
Was available and helpful outside of class.	4.48	5.00	0.00%	0.00%	8.89%	28.89%	51.11%	11.11%
Motivated you to think independently.	4.52	5.00	0.00%	2.17%	4.35%	32.61%	60.87%	0.00%
Worked to create an inclusive and welcoming learning environment.	4.67	5.00	0.00%	0.00%	0.00%	32.61%	67.39%	0.00%
Overall, this instructor made a significant contribution to your learning.	4.54	5.00	0.00%	4.35%	2.17%	28.26%	65.22%	0.00%

Please include the name of the TA/CA/Intern you are evaluating. What aspects of the TA's teaching contributed most to your learning? What could the TA modify to help you learn more? Please include any additional feedback for the TA/CA/Intern.

Comments
Frequently changes
My TA was Spoorthi. She was incredibly mean and unhelpful. She was a super harsh grader and was genuinely scary.
Dont remember her name. The end of the alphabet one.
Rachana Yajur
Xiaofeng Dong
Spoorthi: Very unhelpful, the TA contributed nothing to my learning. The TA could at least give constructive feedback that's not a rehearsed statement told to every other student in the class. A little note on what was incorrect on an assignment or exam would be helpful.
Jonty was my lab TA. He was very helpful during labs by guiding us in the right direction without just giving us the answer. No modifications!
spoorthi
my Lab TA was Rachana. She was very willing to help but often times I did not feel like I benefitted from her guidance on labs.
I had a TA named Spoorthi Nagasamudraum. She would often overcomplicate simple concepts and expect much more of us than other TA's. I had a hard time understanding what I could do to get a good grade on her p–sets as there wasn't feedback provided.
Spoorthi
Xian Dong.
Spoorthi Nagasamudram was my TA for Monday night discussions, and she graded my homework. I think she was unhelpful and rude, making it difficult for me to want to go to her for help, even if I felt I needed it. I felt that she graded too harshly, and when I asked her why I got a certain grade, she was rude and condescending about how I could have done better.
Jonty Paul
Spoorthi Nagasamudram. I did not find Spoorthi to be particularly helpful with the material that we learned in class. Asking her questions during our weekly discussion sections did not usually lead to further clarification or understanding of p–set questions. She also seemed disengaged during lab sections.
Spoorthi N
Jonty did a god job of running our labs. He kept us moving and helped us understand the meaning of the work we were doing.
Xiaofeng Dong

Comments
Spoorthi
Xiaofeng Deng was my TA, and he ran the lab sessions. I found him always available for help when I needed it.
Rashana
Spoorthi Nagasamudram (discussion TA) — I really did not have a good experience with this TA. She was quite rude during discussion section and rarely provided helpful support on the PSETs. Her grading was also extremely inconsistent (me and my friends often received wildly different grades on PSETs we did together) and she overall did not make a safe space to ask questions. I felt very talked down to in discussion sections when I was just trying to clarify what was expected of me on assignments. She also would refuse to explain why points were taken off assignments saying instead we just had to compare our submissions to the answer key. This was hard to do because not every question had an exact answer so I couldn't tell if I was right or wrong and she wouldn't leave any comments about which parts were incorrect (only took points off the total grade). Xiaofeng Dong (lab TA) — He was very helpful in lab! Answered any questions and made sure we were set up for success in lab. Helpful and friendly!
Rachana. She was helpful
Rachana
We love Jonty!
Jonty
Jonti was amazing! Chill but engaged and always ready to answer questions.
Jonty
Spoorthi was my lab TA, it was kind of difficult to get exact answers out of her. She let us have freedom in labs, which was nice, but when grading we wouldn't be told what we had done wrong, and there were sometimes problems with the labs that she couldn't help us with
Jonty. He was helpful in providing instruction in the lab and provided clear feedback on assignments.
Rachana and Jonty were both great! Very helpful, detailed answers to conceptual questions about class content
Rachana– she was amazing and very helpful in answering questions.
Rachana was helpful in lab. She was good at making sure we learned the material ourselves before she helped us.
Jonty Paul — My TA went at a reasonable pace during labs. He would start by seeing our initial understandings of concepts and then went into further explanation. I feel we had a good amount of creative freedom when conducting experiments.
Jonty Paul
Jonty. They were kind and patient

The TA/CA or Intern. . .

	Mean	Median	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
Facilitated discussions that supported your learning.	3.36	3.00	10.53%	13.16%	26.32%	21.05%	23.68%	5.26%
Gave you useful feedback on your work.	3.46	4.00	18.42%	7.89%	13.16%	26.32%	31.58%	2.63%
Stimulated your interest in the core ideas of the class.	3.29	3.00	11.11%	16.67%	27.78%	16.67%	25.00%	2.78%
Challenged you to learn.	3.63	4.00	10.81%	5.41%	18.92%	32.43%	27.03%	5.41%
Helped you succeed in the class.	3.51	4.00	13.51%	10.81%	21.62%	18.92%	35.14%	0.00%
Was available and helpful outside of class.	3.44	4.00	13.89%	2.78%	22.22%	30.56%	19.44%	11.11%
Overall, this individual made a significant contribution to your learning.	3.24	3.00	16.22%	13.51%	21.62%	27.03%	21.62%	0.00%

How much did the following elements of the course contribute to your learning gains?

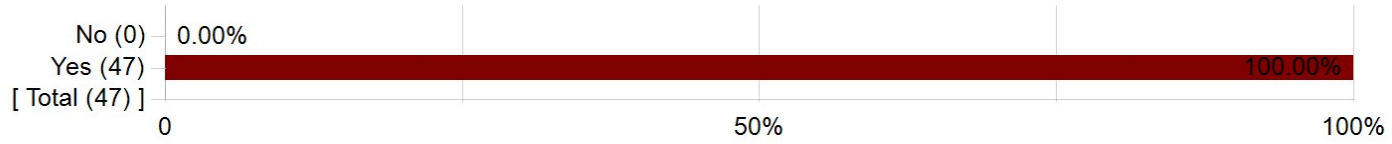
	Mean	Median	No Gain	A Little Gain	Moderate Gain	Good Gain	Great Gain	N/A
Laboratory Experience	3.26	3.00	9.52%	14.29%	35.71%	21.43%	19.05%	0.00%
Field Trips	4.50	4.50	0.00%	0.00%	0.00%	2.86%	2.86%	94.29%
Library Sessions	4.00	4.00	0.00%	0.00%	0.00%	2.86%	0.00%	97.14%
Review Sessions	2.82	3.00	5.71%	8.57%	2.86%	14.29%	0.00%	68.57%
Writing Seminars	4.00	4.00	0.00%	0.00%	0.00%	2.86%	0.00%	97.14%

Other course elements not mentioned above:

Comments
Discussion sections — good place to get homework done
n/a

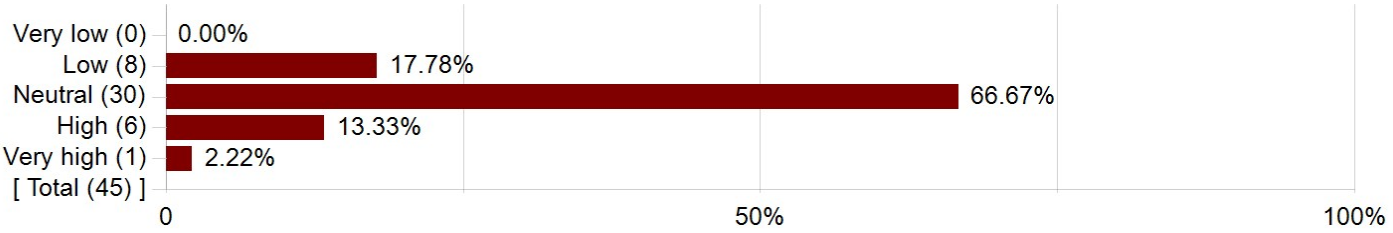
Is this class a requirement of some sort?

Is this class a requirement of some sort?



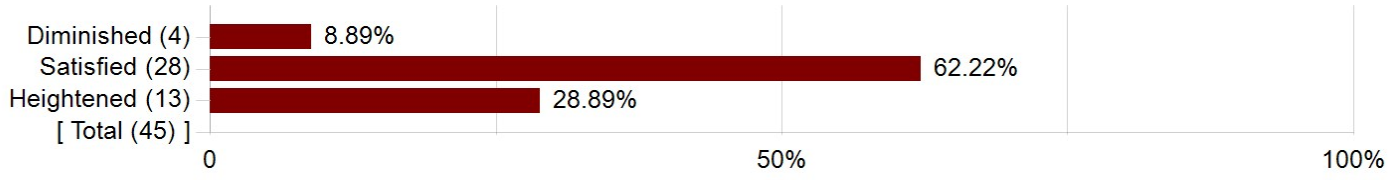
Prior to starting this class, your interest level was?

Prior to starting this class, your interest level was?

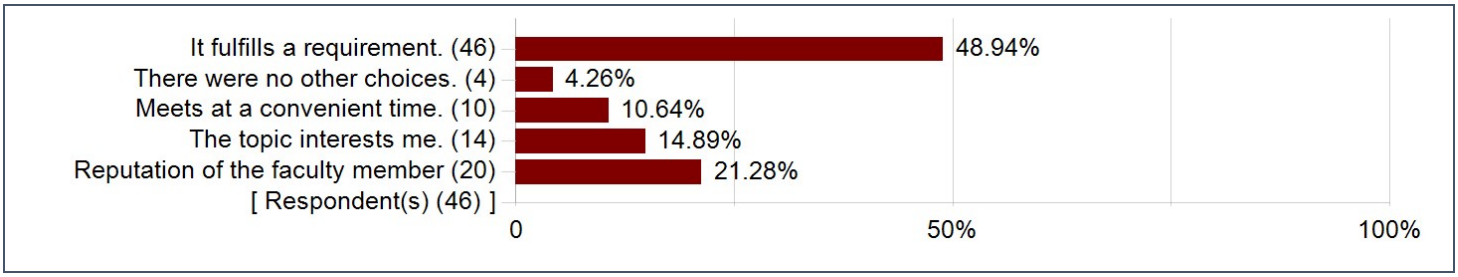


Now that this class is over, your interest is?

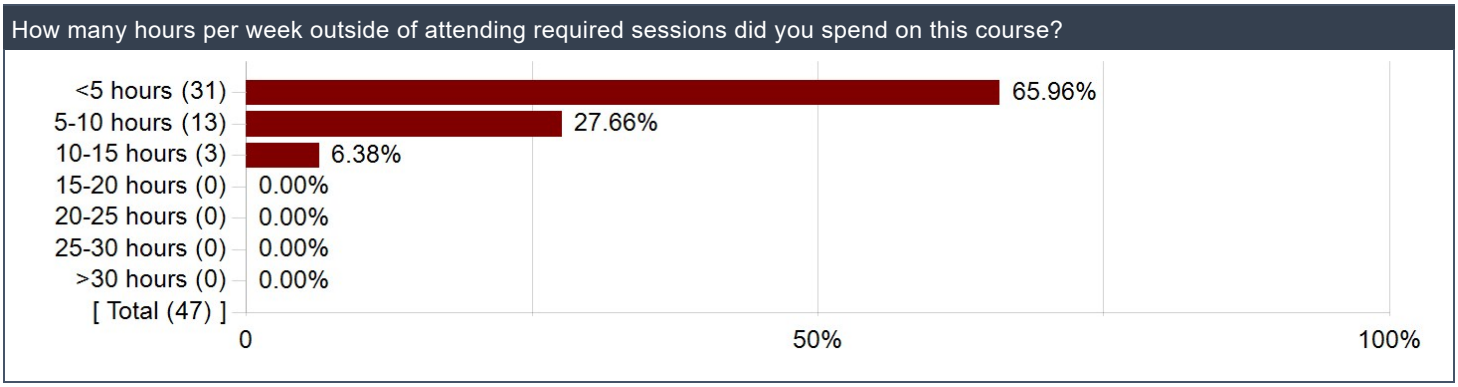
Now that this class is over, your interest is?



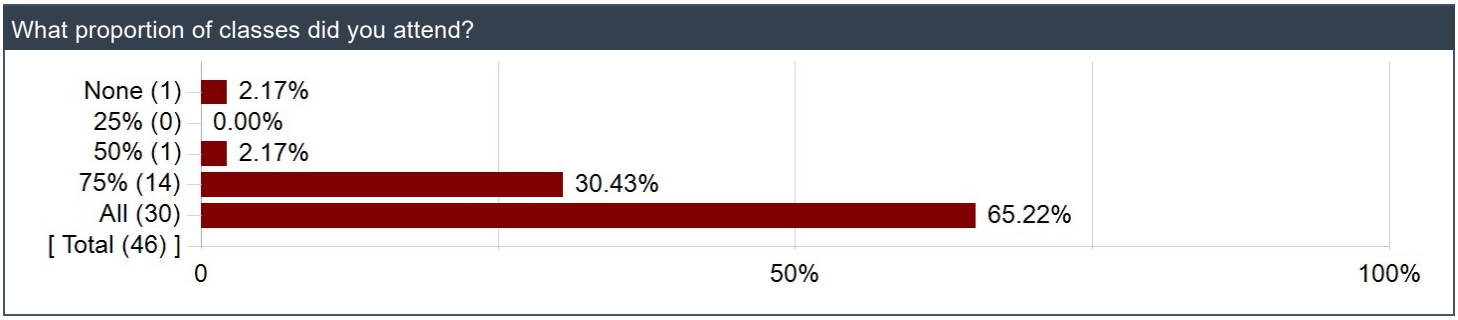
Why did you choose to take this course? (Select all that apply)



How many hours per week outside of attending required sessions did you spend on this course?



What proportion of classes did you attend?



Please comment on the level of difficulty of the course relative to your background and experience.

Comments
I have a very limited background in physics but have read a fair amount on Renewable Energy; therefore, this class wasn't extremely challenging.
Not difficult but very frustrating
if you have some physics background knowledge, the beginning may feel repetitive, but overall quite engaging even with some background knowledge
Not hard
The content of the class: very easy a high school freshman can easily understand it. The work load of the class: very annoying and depending on the TA, your grade can suffer since many questions have subjective elements to them.
Not very difficult. Professor Kharel will do everything he can to give you an A.
this part of the sequence was definitely more difficult than PHSC 116. while we still got correction points back for the midterm like in 116, the psets were much harder and the readings were longer. at times it felt like busy work and i didn't feel as intellectually challenged/invigorated so much as frustrated and often bored.
I only took 9th grade physics before this course, and I also took AP Environmental Science in 12th grade. I felt that the physics of the course was so basic that not much background knowledge was required except for weeks 6–8. My knowledge of energy from APES proved useful, but not necessary
I was very thankful to find a physical science class that did not require an understanding of calculus. This class is even less math–heavy than I expected it to be, but I feel that was good for many of my classmates. Not a difficult class, but it does ask you to actually engage with the material.
Definitely doable for people of any academic background
I took Physics 116 during the fall, which helped build a good foundation for this quarter. However, I do think that Professor Kharel did a good job and building the quarter from energy to quantized energy.
It was very doable with very little prior physics.
appropriate
You do not need prior experience in physics.
The class was fairly easy, having taken AP Physics I two years ago. Quantum physics was harder, but its quantum physics so y'know.
Good for people who are not so experienced in physics.
Great for people with non–STEM backgrounds and want to learn more about energy and how to apply that knowledge in other settings like politics and economics.
Easier than high school physics but the estimation could be difficult and frustrating
not too difficult overall but lots of busy work —- psets can take a long time but we didn't have them on exam weeks which was nice —- and no final exam was great
high school physics helped
Minimal experience is needed to do well!
I really needed the first quarter of physics with Kharel to do this quarter, but that's because I had no physics background from high school at all.
Not difficult
Easier than it seems
It is for anyone to take at all levels
Very Managable, and Kharel is a great instructor
only experience is the autumn quarter of the sequence: definitely manageable but a lot more work than expected
satisfactory