University of Pittsburgh

Summer 2020 - Matthew Barry MEMS 0051 - INTRODUCTION TO THERMODYNAMICS - 1030 - Lecture

Project Title: **2207 - Teaching Survey Summer 2020**

Courses Audience: **45**
Responses Received: **43**
Response Rate: **95.56%**

Subject Details	
Name	MEMS 0051 - INTRODUCTION TO THERMODYNAMICS - 1030 - Lecture
DEPARTMENT_CD	MEMS
CAMPUS_CD	PIT
SCHOOL_CD	ENGR
CLASS_NBR	13611
SECTION_NUMBER	1030
TERM_NUMBER	2207
COURSE_TYPE	Lecture
CLASS_ATTRIBUTE	
First Name	Matthew
Last Name	Barry
RANK_DESCR	Assistant Professor
TENURE	NT

Report Comments

Student Opinion of Teaching Survey – Instructor Report

Report Guidelines for Spring/Summer 2020
Provost Cudd has provided guidelines for Student Opinion of Teaching Surveys for Spring and Summer 2020.

No copy of this report will be released to anyone other than the individual faculty member. If you choose to provide a copy of this report to your dean, chair, or other administrator, you may download a PDF copy to send.

Additional questions were added at the request of the Office of the Provost in order to gather student input about the remote learning experience.

Included in this report:
- Responses to Remote Instruction and Learning Questions
- Numerical results to Likert scaled items - Summary and Detailed Result
- Responses to Comments or Open-ended Questions
- Responses to additional School or Department Questions (if applicable)
- Responses to additional QP/Custom Questions (if applicable)

See our guide - Understanding Your Report - for more details about interpreting your results.

Collect student feedback early next term.
Read more about Midterm Course Surveys and the OMET option.

Creation Date: **Tuesday, September 29, 2020**

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Remote Instruction and Learning Questions

Students were asked to provide feedback about the move to remote instruction and learning as part of the University's response to the COVID-19 pandemic.

Instructor Interaction - Scale: Strongly Disagree (1) to Strongly Agree (5)

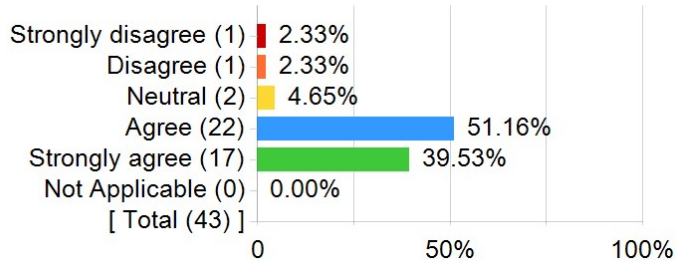
Question	Results		
	Response Count	Mean	Standard Deviation
I was able to interact effectively with the instructor during this term's remote instruction.	43	4.23	0.84

Course Resources - Scale: Strongly Disagree (1) to Strongly Agree (5)

Question	Results		
	Response Count	Mean	Standard Deviation
I had the resources I needed to finish my coursework in this term's remote instruction format.	43	3.98	1.01

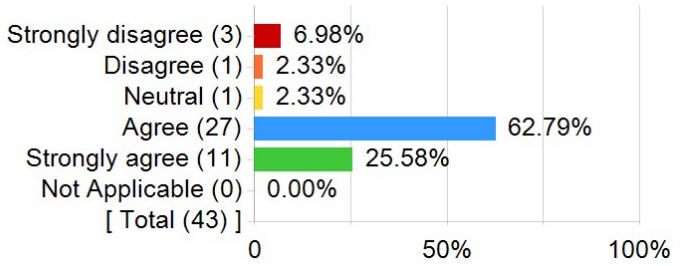
Instructor and Course Details

1. I was able to interact effectively with the instructor during this term's remote instruction.



Statistics	Value
Invited Count	45
Response Count	43
Response Ratio	95.56%
Mean	4.23
Median	4.00
Mode	4
Standard Deviation	0.84

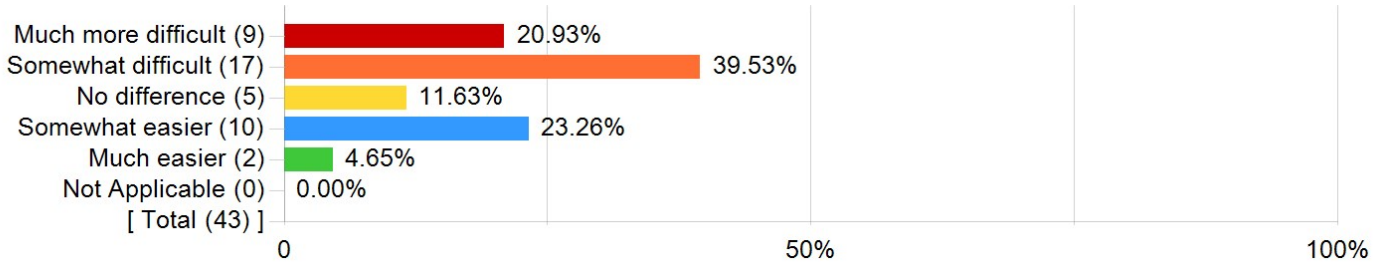
2. I had the resources I needed to finish my coursework in this term's remote instruction format.



Statistics	Value
Invited Count	45
Response Count	43
Response Ratio	95.56%
Mean	3.98
Median	4.00
Mode	4
Standard Deviation	1.01

Move to the remote environment - Scale: Much more difficult (1) to much easier (5)

Taking this course in a remote environment made it (blank) for me to learn.



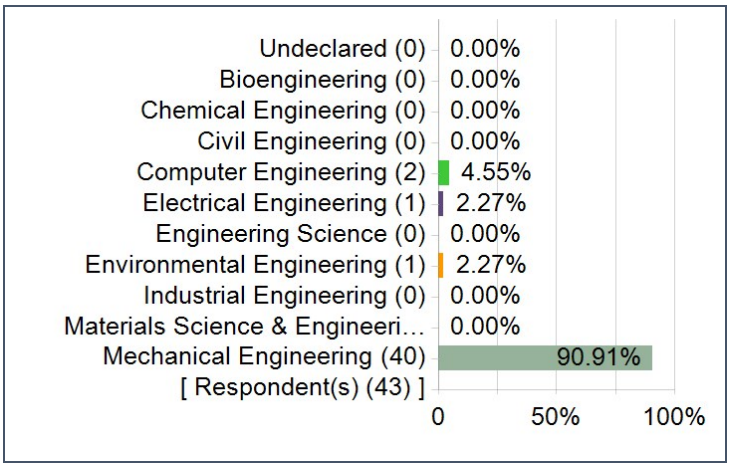
Statistics	Value
Invited Count	45
Response Count	43
Response Ratio	95.56%
Mean	2.51
Median	2.00
Mode	2

What do you think the University should know about your experience as a student in the current remote learning situation?

Comments
For Projects, It really hurts when two people with poor internet get assigned to the same team because it makes it twice as hard to interact online, especially in meetings.
If I know ahead of time that I'm remote learning I can prepare
Remote learning is more difficult, but still possible. Having recorded lectures ahead of time, or what a structure that before remote learning was called "flipped" classes are best way to go about the situation in my opinion. This class did a good job of being flipped.
Remote learning has been challenging to adapt to, specifically in the workload between a full semester's course load is much more difficult to handle remotely than while on campus
N/a
Take home exams were well designed, realistic, and fair. They did a much better job approximating real world engineering problems. In real life, all possible resources are available to solve a problem, but it can still be difficult. The exams were designed to test knowledge and deduction related to the material. Passing the exams required real mastery. Online office hours were very effective. I felt I could get prompt assistance and answers in a convenient form. It is much easier to join an online call for a one minute question than it is to walk across campus. I felt this enhanced my ability to attain mastery.
It is hard to balance safety, home life, and school work, so the university should make it their priority to make sure professors are understanding and fair.
No big differences
Just because we are working remotely and in quarantine this does not necessarily mean we have more time to devote to classes then during a traditional semester.
Office hours made everything extremely easy to get in touch with the professors.
I have social anxiety and remote learning made it much more difficult to reach out to professors and other students. I avoided going to office hours because the zoom format makes me uncomfortable.
This is a very high level and complicated course and without being able to physically show a thought process out made it very hard to grasp material at the first pass.
I was appreciative of the detailed homework/quiz solutions on canvas. They really helped me figure out where I went wrong. I think sometimes the Q & A part of the zoom lecture was not very helpful.
Remote learning is no substitute for in–person learning.
It is much harder to work with others remotely
Certain subjects are harder to teach online I think. RBD, circuits and statics felt easier because I already had a background in circuits and free body diagrams. Thermo is really a different beast, unlike anything I had learned before. My lack of any existing knowledge made it harder to learn the material in a remote context.
I don't like the construction of this class.Also the stuff we learned didn't match the difficulty of the homework and exams. It has been the worst experience I ever had in the college.
Any assignment or evaluation that can easily be completed online (questions through canvas or other service) is extremely helpful. The less scanning the better. The less specific formatting, the better.
record class session lectures so that we can go back and watch these lectures on our own peace
It's lonely
Cant be done if professors don't work with students. Has to be a more passive and inviting professor.
I had the most trouble with keeping up with assignments due to the switch to canvas and the remote learning environment.
I found myself in more situations where I was on my own. Admittedly I could have utilized Office Hours more.
For a class like Thermo when everything is online it makes it a lot more difficult to deal with all the figures on a device where I cannot modify the document. I am aware this is not the fault of the professor but It was just a difficulty that came at a greater extent with remote learning.
I thought professors became more accessible because of remote learning. All it took was a simple email and 20 minutes later we were I. a zoom call for office hours
I think being able to watch and re–watch lectures was really helpful. I'd like more flipped classes in the future.
the availability of office hours in this course was very helpful. Being able to pop by office hours a few times a week to have questions answered helped me to stay engaged. Additionally, I appreciated the asynchronous parts of the class. watching presentation style lectures before class, and then having a more engaged zoom was really helpful
I'd have frequent issues with zoom staying open and my.pitt.edu working

Swanson School of Engineering Major/Program Area

Please select the major you are enrolled in. Check at most 2 programs. If you are currently a freshman or an undeclared major, select your anticipated major from the list (or select Undeclared if you are unsure).



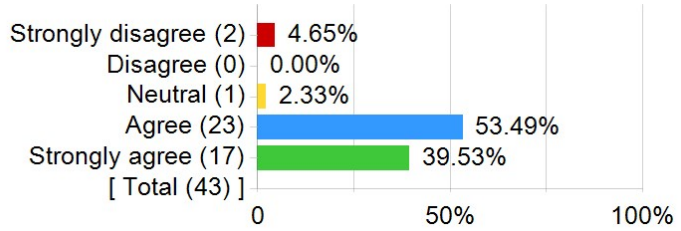
University Questions

Instructor Summary of Results - Scale: Strongly Disagree (1) to Strongly Agree (5)

Question	Results		
	Response Count	Mean	Standard Deviation
The instructor stimulated my thinking.	43	4.23	0.90
The instructor was enthusiastic about teaching the course.	43	4.23	0.92
The instructor presented the course in an organized manner.	43	4.14	0.86
The instructor maintained an environment where students felt comfortable participating.	43	3.84	0.87
The instructor maintained an environment where students felt comfortable seeking assistance.	43	3.81	0.98
The instructor provided helpful feedback.	43	3.88	0.91
Assignments contributed to my understanding of the subject.	43	4.00	0.90
Overall	-	4.02	0.91

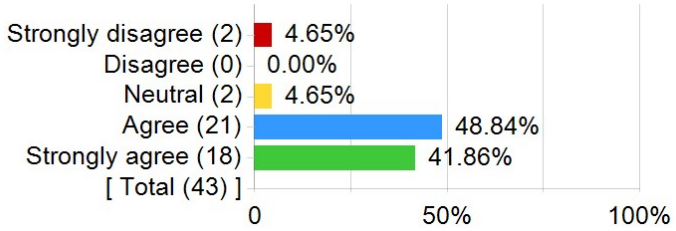
Instructor Items: Detailed Results

1. The instructor stimulated my thinking.



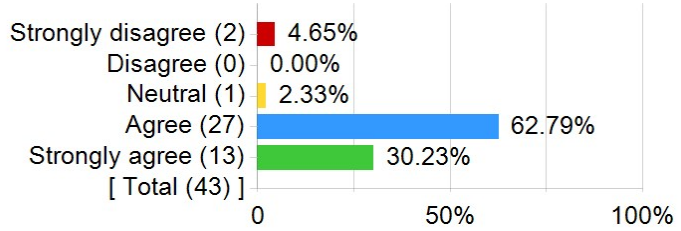
Statistics	Value
Invited Count	45
Response Count	43
Response Ratio	95.56%
Mean	4.23
Median	4.00
Mode	4

2. The instructor was enthusiastic about teaching the course.



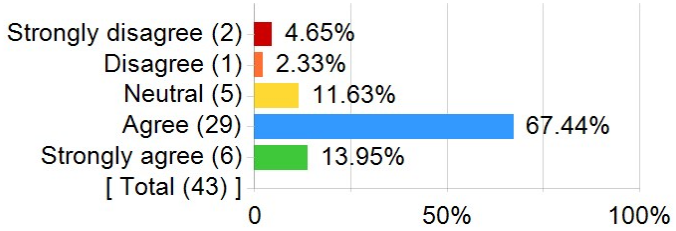
Statistics	Value
Invited Count	45
Response Count	43
Response Ratio	95.56%
Mean	4.23
Median	4.00
Mode	4

3. The instructor presented the course in an organized manner.



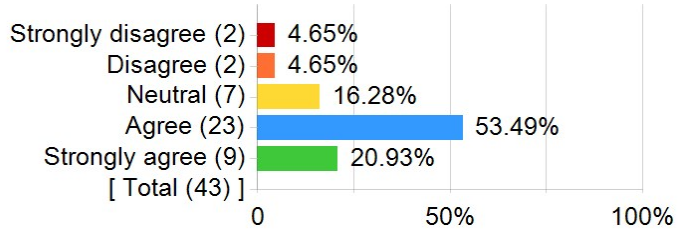
Statistics	Value
Invited Count	45
Response Count	43
Response Ratio	95.56%
Mean	4.14
Median	4.00
Mode	4

4. The instructor maintained an environment where students felt comfortable participating.



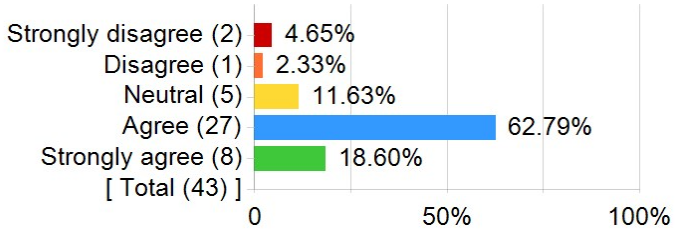
Statistics	Value
Invited Count	45
Response Count	43
Response Ratio	95.56%
Mean	3.84
Median	4.00
Mode	4

5. The instructor maintained an environment where students felt comfortable seeking assistance.



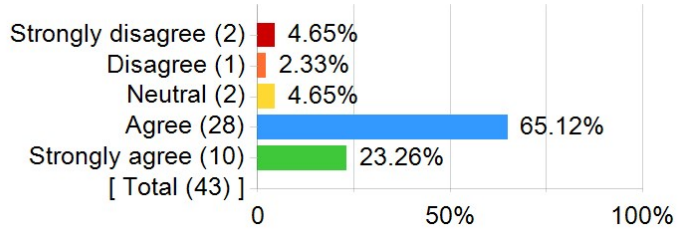
Statistics	Value
Invited Count	45
Response Count	43
Response Ratio	95.56%
Mean	3.81
Median	4.00
Mode	4

6. The instructor provided helpful feedback.



Statistics	Value
Invited Count	45
Response Count	43
Response Ratio	95.56%
Mean	3.88
Median	4.00
Mode	4

7. Assignments contributed to my understanding of the subject.



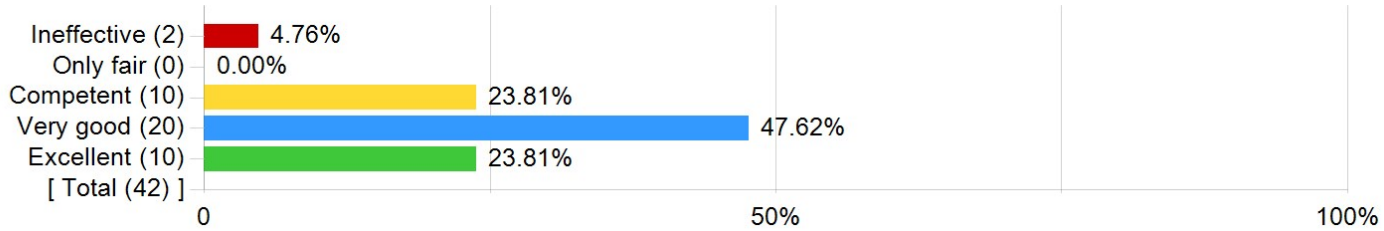
Statistics	Value
Invited Count	45
Response Count	43
Response Ratio	95.56%
Mean	4.00
Median	4.00
Mode	4

Instructor's overall teaching effectiveness

Question	Results		
	Response Count	Mean	Standard Deviation
Express your judgment of the instructor's overall teaching effectiveness.	42	3.86	0.95

Instructor's overall teaching effectiveness:

Express your judgment of the instructor's overall teaching effectiveness.



Comments

What did the instructor do to help you learn?

Comments
Homework were difficult but helped learn effectively. Held long office hours.
The videos neat, concise and very helpful. I also appreciated the week long test, but it sometimes felt that the problems were outside of my reach/understanding.
The complex principals of Thermodynamics
Having lectures recorded for a "flipped" classroom style works best for me for remote learning. His recordings are short, to the point, and contains all the information needed before going to class.
Dr. Barry was very good at explaining thermodynamic principles and focused on students gaining a conceptual understanding of the material
Lectured the class.
Online office hours were wonderful, and I came to rely on them. It is a system that should continue after things return to normal. Take home exams were a much more realistic test of knowledge and its application than a normal exam. Those too should stay after a return to in person instruction. This class and Electrical circuits were the best adapted of all of my courses this summer. Good job.
helpful office hours and course material
The video lectures were a helpful tool to look back on.
Being clear and concise on each of the topics
He was able to elaborate further on his lecture videos
You explain things in an excellent manner and it makes learning easier.
The videos were well done, and i liked that he kept them short and to the point.
made great lecture videos that were concise but informative
Same response as Lee
He explained concepts well in his lecture videos. The videos were well organized and easy to follow and understand.
Detailed solutions for past homework problems.
The homeworks for this course helped me learn greatly. I also appreciated the extensive office hours available for this course.
Dr. Barry provided concise lecture videos with content laid out in a very organized manner.
How to use steam tables, different properties of fluids and ideal gases and how to solve for them
He brought enthusiasm to a 2.5 hour evening thermo class. That isn't easy lol
Dedication to course and students. Can feel the effort and care put in and it is appreciated (usually in silence). I also liked when he stressed really important concepts and common mistakes; wish he did it more.
enough office office top hat having a teaching assistant too
Was available for office hours and answered any questions I had.
Your lecture videos were great at getting the material across, and organized nicely so that they were easy to reference later on.
Well structured class
n/a
The examples during lecture were really helpful, as well as having time to complete and turn in exams/quizzes rather than having them during class time.
Responded frequently to my emails and provided assistance wherever necessary.
Gave a lot of resources that we could look at ourselves. I should have done more practicing
The professor provided consise videos that he later went in depth more during actual lectures
I thought the lectures were very helpful and well thought out, a good mix of information and examples.
I liked the why he presented lectures and structured class
Concise lecture videos

What could the instructor do to improve?

Comments
Make the examples more similar to homework in difficulty.
Make it more clear what is expected of students in their project so that they have a better understanding of the direction needed to be taken.
making sure Lee doesn't struggle with technology
Switch the Q&A section of lecture to the end and have example problems first since I usually do not have questions until I start doing problems on my own.
N/a
Minor suggestions. Tophat assignments were not particularly effective for me. I was usually already exhausted by the end of class, and a full day of homework. It might be better to post it along with the lecture videos. That would give more time to work on it, and might help stimulate more questions during class. There was usually insufficient practice of material taught immediately prior to exams. It might be better to delay the exam a week, start teaching material for the next exam, and provide more practice of the last material taught for an exam. I often found myself with questions on that material that, had there been a homework, I would have asked in office hours. I feel entropy generation could have used more time and detail. It is an important concept that was somewhat underdeveloped.
Give a fair amount of work and don't test students on their MATLAB skills. The homeworks were helpful but the exams did not test my knowledge on the material.
N/A
to keep a regular schedule for releasing the lecture materials
Go over more example problems and also more involved example problems in class.
I felt that i missed some of the fundamentals along the way because you were more focused on giving complicated problems than teaching the basics. I know it's partially on me, and I should have reviewed more on my own, but i think the basics couldve been laid out more clearly before getting more complicated.
also be more clear about changes to the schedule
Same response as Lee
Sometimes when answering questions in class, the explanations were confusing.
Lectures should be more relevant to the tested material.
Keep energy for the entire semester. Cut down on comments that aren't related to the class.
Dr. Barry's example problems were very "This is what you do," with not much "This is why you are doing it." More explanation on the thought process on how to approach a problem would be much more beneficial. The exams relied heavily on analyzing the problem and fitting together taught information, so some more in–class practice of going through the thought process would prepare the students for their exams and their careers more.
For online classes – release the top hat work after a while, like a week after if you want people to talk to you for help – I'm personally more comfortable doing the problems myself then looking through the work, then coming to you if I have further questions.
I like the idea of the flipped classroom. But I found your videos to be not so engaging. They are well organized, well made, and succinct. But, your delivery was very robotic—reading directly off the slides. And the time you spend reading off numbers, calculations and equations was unnecessary (we can see them on the slides). I think the videos would be better if you just talked like you normally do and with more colloquial explanations, even if it means the videos are longer. I find Khan academy videos to have a good pace and delivery. I think I learned more from your in–person lecture on feed–water heaters compared to if it were a video. Quick tip: use a finer pen when writing on the surface. Your handwritten stuff in lecture can be hard to read.
record class session
no more top hat
Being more interactive during office hours.
Your class is obviously tough, which is fine. However, I think it would help students out if there was a better scaling of difficulty. For instance, your example problems in the lectures were the basic examples of the topics, then, to me, the tophat questions, homework questions, and quiz questions were all relatively the same difficulty, and then your exams were by far the most difficult. I think that if the quizzes or homework were actually harder in difficulty, it would better prepare students for the critical thinking needed for the exams.
spend more time on the pre–class lectures
Maybe notification in class that there's a quiz? which did happen most weeks but there were one or two weeks where it wasn't mentioned in class, I thought the week was a quiz free week, and missed the quiz. I just found it a lot harder to keep track of

Comments
assignments from week to week compared to in person classes. My other classes this semester gave a weekly announcement of what was due each week which seemed to work?
Have less vagueness in the questions asked on the homework and exams.
Little less intense homeworks. Not a big fan of week long exams because I studied less and exams seemed a lot harder. Also, more time for the exam gave me more time to go mentally insane. Literally had a mental breakdown during exam 1. I am a very chill guy I don't have those. It was fun
Your lectures were great, but your online lectures were not. It might make lectures more engaging if you taught during the zoom and, then did like... a reaction video for questions? IDK
Sometimes he would say theres something tricky about the concepts and then when no one would notice it, he would skip over it and say well you'll figure it out later. If he could have just told us that would be nice. I think he also needs to lower his expectations of how well we understand the material after the first time we see the new material
I sometimes found your jokes at the expense of the class a little disheartening. It's hard to be worried about a project or homework or midterm and hear your professor joke about failing you. I don't think it was every really mean spirited, but it really up–ed my anxiety about the course.
more "challenge" problems. Sometimes, I would do all the textbook + practice problems given, feel like i understood them, but was still lost on exams and HW. Also, the section on iterative techniques for matlab could improve. I found that part really confusing.
Make a LOT more of the class focused on examples and various direct applications. Left class most nights feeling like I had wasted roughly 1.5 of the 2.5 hrs of class.

Do you have any other information that you would like your instructor to know?

Comments
I often felt Dr. Barry could be a little condescending when answering questions. This sometimes made you feel like you were asking "dumb questions" and didn't make me want to ask questions.
No
The week–long take home test were very helpful, in that if I was stuck on a problem I could allow it to sit in my mind overnight and get a better idea on how to solve it
I have taken classes with Barry before, and his slides are in an organized manner and the way they are presented makes sense. I think he is a good lecturer and good at answering questions. However, he takes pride in having exam grades with generally low averages. One way he does this is by having "gotcha" moments on exams and quizzes where the only way to avoid getting "got" is by knowing a small piece of information mentioned once months ago that makes the entire problem very different. The problem I have with this is it generally does not help with learning by trying to make problems to "trick" students, rather than help them learn. Midterm 1 had a relatively high average compared to previous semesters Barry taught Thermo, and for that reason he felt the need to make Midterm 2 much more difficult. I am not asking that exams be "easier" in the future, but I believed that these exams tested my knowledge of Matlab, EES, or how to avoid "gotcha" moments more than it tested my knowledge of the actual material. It does not feel to me that Barry is an ally/mentor. Since he tries to trip people up all the time, it feels like he is actively out to make others fail, rather than try and help them succeed. This creates a toxic learning environment where students don't feel comfortable asking for help as often out of fear, and is not an environment that is conducive to learning. The grading in this class is also unfair to all students. Dr. Barry took off 1/4 of the total points on a quiz if units weren't attached. The correct answer to the solution is 0, and the general scientific community would agree with me that you don't need units when the value is zero since it creates confusion and does not help explain the story better. One final point I want to make is with his attitude. Lee and Dr. Barry sometimes make jokes whenever a simple question is asked that is obvious to a veteran ME who has taught thermo for years, but isn't known as well for the first–time thermo student. This only makes students not want to ask questions, which hinders learning, and only adds confusion to others.
N/a
Even though this class was very difficult I feel I learned more from your teaching style than from other Profesors.
nope
Nope
Same response as Lee
No
Dr. Barry has a particular sense of humor that can sometimes come off as condescending. There were times I would choose to go to Lee Dosse's or the TA's office hours rather than his solely for the reason that they did not make me feel like an idiot for asking for

Comments
help. I do not believe that this is Dr. Barry's intention, but it is something he should be aware of.
Having both you and Mr. Dosse teach the class together was nice in that it allowed different viewpoints on the subject matter. It was a very good idea imo.
Please make the exams shorter. Not necessarily "easier", just shorter. Also, you expect us to know too much MATLAB
Same as Prof. Dosse: Students can tell that you are very (very) proud of your questions. It doesn't sit well. Sometimes I felt that pride got in the way of effective teaching. It felt like you didn't want us to solve these problems. The little tricks or wordings that make the problems a little bit harder were unnecessary. I think it led to me putting in extra time and work into the class, but not learning any more from the extra time. More time was put into deciphering questions. I would have preferred more questions, but straight forward questions that gets right to the point of the material. Thermo is a tough course, I don't think it needs to be made tougher.
no
death to top hat
I think you did a great job with the online class this semester. As much as I dislike online classes, you made it work. Everything seemed to have a meaning to your class. The lecture videos and zoom meetings weren't repetitive and your assignments were fair.
N/A
none
Thanks for teaching me again. I'll probably see you in the spring :/. Also Sarah was a great TA just wanted you to know she did an amazing job.
I wish I knew this was not a class for CoEs. calc2 and phys2 should not be the only prerecs... did not feel prepared for this punch in the face. Also, not relevant for this class but, it would have made my class schedule for this semester better: If a class is Asynchronous, why does it have a class time? I you can do the work whenever, why cant I take a class when that class is. It would have saved so much stress this summer for me. (it's BS and, thats the reason a CoE had to take this class :( )
I really liked the layout of this course! I found the exams very challenging but do–able. The pacing is also good, I didn't feel like too much information was crammed into the end (which can happen in summer courses).
no
I'd say the tests were not particularly reflective of the content, and far above the magnitude of the in person tests. While I understand we got a few days and plentiful resources to do them, the in–person tests would have been much much easier, even with only 50 minutes and no open notes. So, I suppose I feel a little cheated with this disparity. I was throughly disappointed there was no bonus. Looking at the provided past tests, man I would have answered those in a second and done a (marginally) better on the tests.

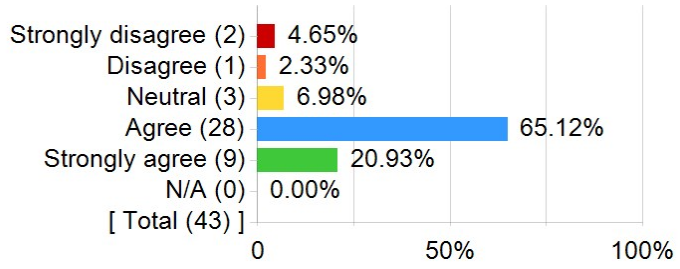
Arts and Sciences Questions

Summary: 5-point scale - Strongly Disagree to Strongly Agree

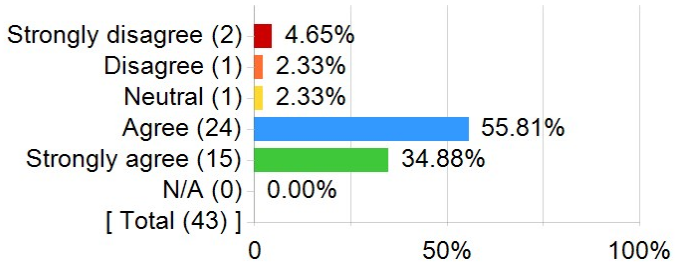
Question	Results		
	Response Count	Mean	Standard Deviation
The instructor created an atmosphere that kept me engaged in course content.	43	3.95	0.90
The instructor was prepared for class.	43	4.14	0.94
The instructor treated students with respect.	43	4.00	0.95
The instructor was available to me (in-person, electronically, or both).	41	4.34	0.79
The instructor evaluated my work fairly.	41	3.80	0.95
The instructor provided feedback that was helpful to me.	42	3.93	0.92
I learned a lot from this course. If there is no basis to judge or not applicable, answer N/A.	43	4.28	0.98

Detailed Responses

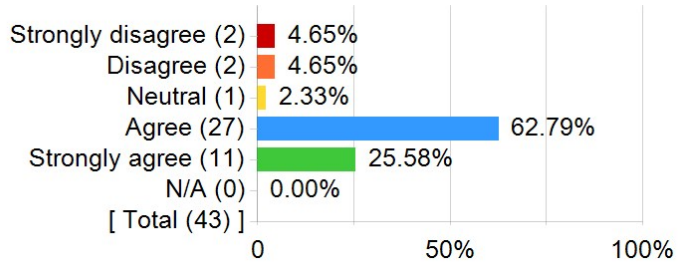
1. The instructor created an atmosphere that kept me engaged in course content.



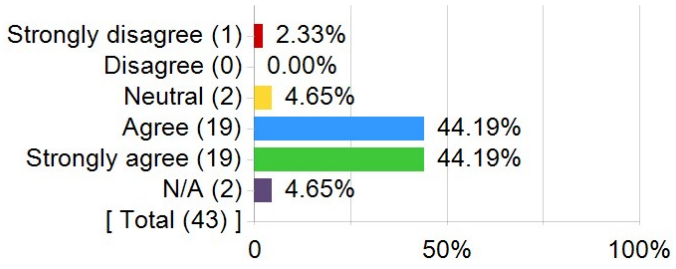
2. The instructor was prepared for class.



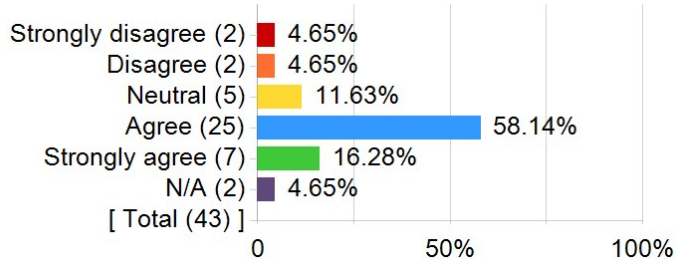
3. The instructor treated students with respect.



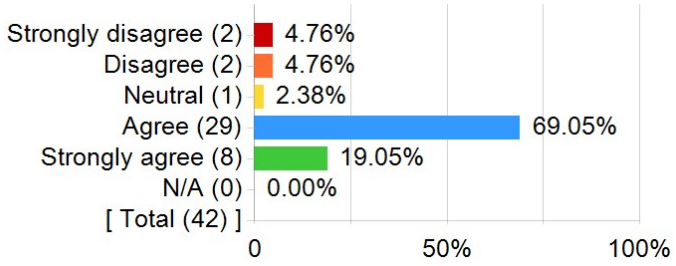
4. The instructor was available to me (in-person, electronically, or both).



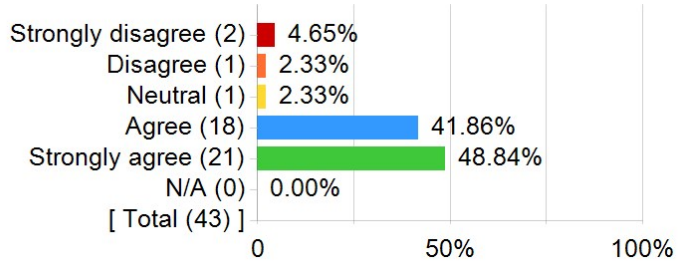
5. The instructor evaluated my work fairly.



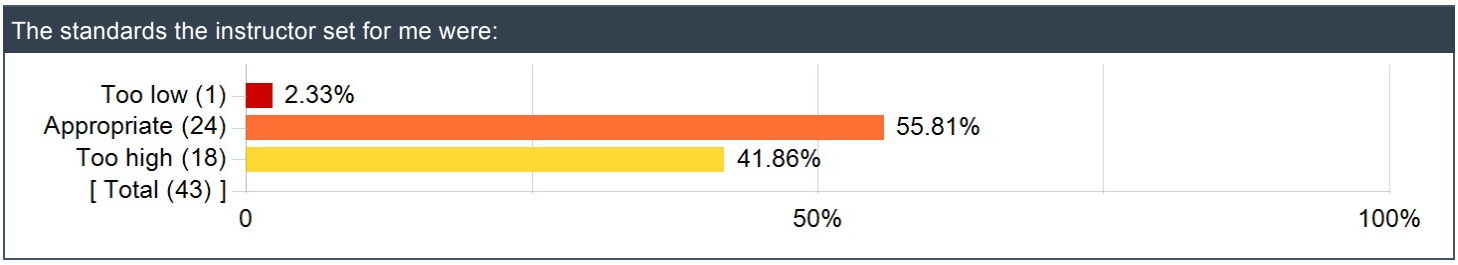
6. The instructor provided feedback that was helpful to me.



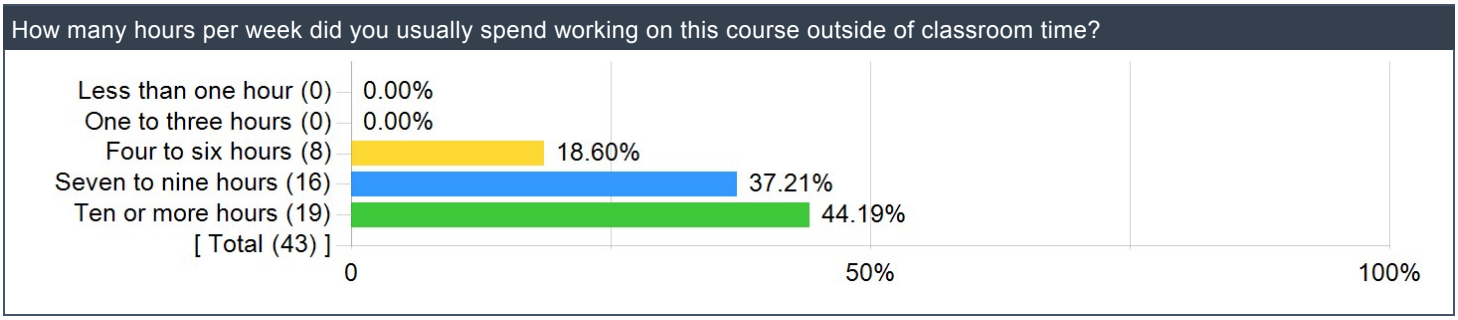
7. I learned a lot from this course. If there is no basis to judge or not applicable, answer N/A.



The standards the instructor set for me were:



How many hours per week did you usually spend working on this course outside of classroom time?



Comments

What did you like best about how the course was taught?

Comments
The short lecture videos, lots of examples, lots of office hours
I liked the flipped style, though maybe give some pointers on the HW during class.
The Rankine cycle was very interesting to me
The flipped lectures, which allowed me time to learn the general material before applying it in class
The modules before class and lecture notes.
Almost everything was good.
The video lectures were clear and concise.
Having tophat worksheets.
I think this was a class that worked well with the remote environment. The professors also worked really hard to make a strong product.
I liked how class was structured and it was broken up into sections instead of one giant block. I also really liked how the rankine cycle was taught, i think thats the one section i feel like i have the firmest grasp on
the way live class was structured with answering questions, example problems and top hat examples
Challenging us to apply the material in new and strange ways
I liked the lecture videos. They were helpful.
All material is available to look back for review.
The wide availability of office hours
Lecture time was mostly devoted to examples to explain how to approach a problem.
Flipped classroom format – doing extra problems in class was pretty helpful
Lots of opportunities and platforms to ask questions. Solutions to all questions available online so that it can be referenced to later.
enough time to work on assignments thanks alot
Showing real world examples, practicality.
I liked the take home exams over live exams, I felt they really helped me to understand the material.
I liked that everything had a meaning, especially the zoom lectures. I've had professors that used the zoom meetings to just repeat the information in the lecture videos, but you guys figured out early on that this wasn't helpful and made the changes to the structure of your class.
I mostly just enjoyed the material
videos you can rewatch if you are confused.
I found the time given to answer questions and go over examples in during lecture to be really helpful.
Overall the zoom calls were a friendly atmosphere.
Liked the examples given. I kindof wish Tophat were mandatory then I might have better chance of passing but thats my fault
You found a way to make the online course interactive. That was super cool. The crazy tangents you guys went on to explain the "Why" and "how" were super interesting and, kept lectures fun.
I liked how we watched videos first and then went more in depth in class
I really liked the recorded lectures.
I liked the lectures format ! It can be hard to focus when we are on zoom zoom all day, so being able to split watching the lectures into multiple shorter components was really helpful in motivating myself and not feeling overwhelmed.
If I had to pick, probably the homework. They were fun puzzles to do with not very many repercussions (being only 10% of the grade)

If you were teaching this course, what would you do differently?

Comments
Make the examples similar to homework and exam problems. More review.
I would make the test a day long, day of class test that is only marginally harder that an hour long exam. Just because people have a longer time period over which to work on the test doesn't mean they have more time to give to the test.

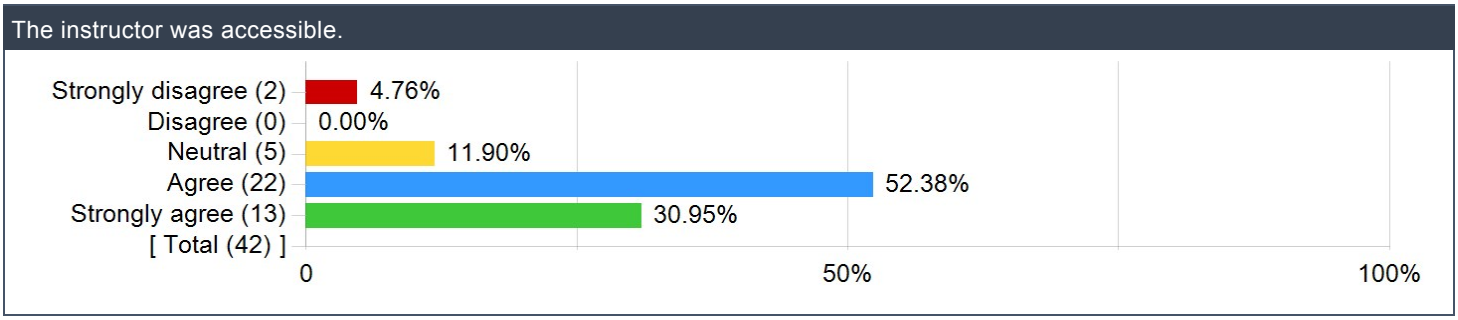
Comments
Go over the basics of Matlab for those who forgot how to use it
I would have questions at the end of class, and go over problems at the beginning. I would also allow students more time to work on practice problems during class time.
I would set aside more time to discuss key points, as sometimes confused students would be asked if the had questions but felt behind and weren't aware what question to ask
I would offer more complex examples in class. I always found that the in class problems were simple and didn't reflect the difficulty of the homework
The posting times and due dates for homework and quizzes should be more consistent. Especially being in a different time zone, there were times I missed or almost missed deadlines because posts were inconsistent.
Make an answer key for tophat. Respond more quickly to slack questions during midterms.
Have some understanding regarding students' lives and time and the current global situation.
Maybe not giving test questions that require Matlab.
nothing
Make it more concise and remove unnecessary "busy work". We weren't learning and I felt there was no critical thinking involved. I would do this course completely differently.
I would give some required homework problems that were much simpler than the ones given. On the homework that you gave on the different types of rankine cycles where we could get the answers pretty much directly from the lectures i felt like i ended up with a much better understanding of the material than after previous homeworks. It forced me to go back through your examples and prove i understood them by reproducing them myself. I had instant feedback when i did something wrong. Usually homeworks were very frustrating and demoralizing and by the time i got the assignment feedback and saw i got something like half credit, i didnt even want to think about it anymore. Im not saying there should be no challenging questions, but they should come after more basic questions that actually help me learn the material.
for the projects let students pick partners or make a separate partner feedback sheet so they don't have to see what we think of their performance ...
STOP HAVING THE MIDTERMS ENCOMPASS NEW OR MATERIAL THATS NOT GENERALLY UNDERSTOOD ON THE MIDTERM. THE CHALLENGES ON THE MIDTERMS ARENT FAIR SOMETIMES! LIKE THE MIDTERM WHERE YOU HAD US WRITE A MATLAB SCRIPT AND WENT OVER IT IN 30 SECONDS IN A RANDOM LECTURE VIDEO
Make homework assignments more aligned with textbook problems.
Focus more on entropy, it is a confusing subject.
More instructed examples, rather than Tophat questions would be more beneficial. Students were hesitant to work together or engage one another with Tophat questions, so it seemed like a waste of 30 minutes per week that could have been used for more instructor–based instruction.
Release the top hat work after a few days so people can go over it. It pushes people to practice if they can check their work by themselves and come to you with questions
I will not read off the slides, record it as "useful" videos, throw them to the students, and pray they can learn something.
The structure of the course seemed really good at first. But as time goes on, students want to use their time as efficiently and effectively as possible so that there is more time for sleep and video games. That is to say, there were some redundancies. Lecture: Do the example problems before time for questions. I rarely had questions on the videos; I just assumed they were true. Questions don't come until you start doing problems. I think this would lead to more interaction during example problems, and more questions afterwards. Lots of the questions asked at the start of lecture felt forced and rarely applied to me; it's like I was just watching office hours. Another thing that would be really helpful would be to review previous quizzes or homeworks to point out common mistakes. If I structured lecture... review (old material) —> worked out examples (new material) —> TopHat —> questions (at the end and throughout) TopHat: I think because there was no solutions to them, I never used it for practice. And the fact that they were ungraded and at the end of lecture... hard to gather motivation. Quizzes: felt just like another homework. I would scrap it; it felt unnecessary. If anything, I'd do it in class. Replace TopHat time for it.

Comments
HW: I think I would have got more from simpler problems, but more of them. These longer, more complicated HW problems would touch upon all concepts, but didn't reinforce anything. I think the TopHat questions would work better as homework, with a couple standard homework problems as "challenge" type questions.
record class video sessions
I would revise the quiz schedule. It doesn't make sense to me that we would have a quiz and a midterm to work on at the same time. I would also get rid of the group project. I feel that I learned the material sufficiently through homework and take home exams (plus, take home exams are practically the same as a project anyway). If you insist on keeping the project, I would make it individual instead of a team. In this remote learning environment teamwork is really difficult, especially with varying time zones and having to do everything entirely electronically.
I'm not sure what options you have for the breakout rooms during the zoom meeting, but I think that possibly keeping us with the same group the entire semester might facilitate more discussion on the questions than randomly giving us groups with different people that we might not know. If it were the same group, we might get to know them over the semester and be more comfortable asking questions and discussing the material. This might fix itself with the at least partially in person classes you will be teaching in the fall, but I think this could help if they become online once again.
More real world examples of power plant designs and common problems engineers face in the field
Try to introduce a topic with barebones examples and eventually work up to more complex problems. Applying this concept to homework as well.
I would probably be a very bad professor and make it kinda easy tbh. I could prob never grasp this material enough to teach it tho.
This was hard and, the problems (mostly) felt impossible.
I would taught entropy a bit sooner in the class and made sure that it was covered in great detail since it's a very easy topic to get confused on
I don't know if the coding–heavy problems on the midterms were necessarily a great assessment of thermo knowledge, or just coding ability. I feel like I approached some of them the "wrong way" in terms of thermo knowledge but just muscled through by making the code more complicated.
I think the take home format of the examinations was too stressful // too much. Since we had a whole week, I spent days mulling over the answers in a way that was not really productive. I would have prefered maybe a shorter period (2 days or less) so that it didn't feel like I should be spending a whole week working on it.
I would make the tests a little more reflective of what was covered

ENGINEERING

Swanson School of Engineering Items

The instructor was accessible.



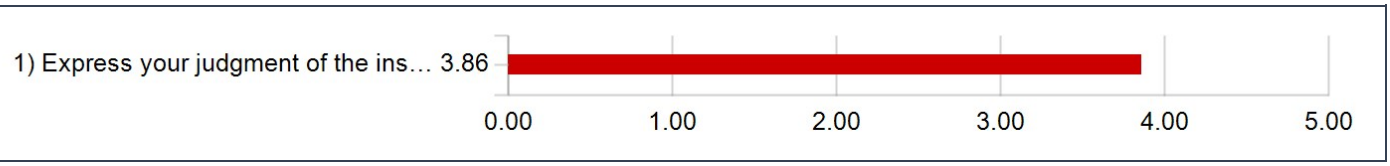
Please provide advice to future students: What could you have done to improve your learning in this course?

Comments
Understand that Thermo is hard and you should try to minimize whatever else is going on in your life so you can spend more time practicing, solving, doing, etc. Also, utilize ALL resources at your disposal.
GO TO OFFICE HOURS IF YOUR ARE CONFUSED, THEY ARE EXTREMELY HELPFUL!!!
Check canvas regularly (as often as possible) and reach out to professors for help
Study and study some more.
Go to office hours early and often. Ask questions in class. Expect to spend your waking life on this class.
Reading the written part of book without stressing too much on the example problems at first supplements the instructors' slides well.
Do not take this class if Dr. Barry is teaching. I cannot judge if Lee is a good professor for this course because he barely taught it.
Best to learn the fundamentals and work through the homework problems instead of trying to search for it online which will take way more time to do with no good results.
do not over think this content but do not underestimate it.
Take a different teacher.
I could have done the tophats all the way through or done more of the suggestion questions before doing the homework
read the textbook!
Take advantage of office hours more and finish up the top hat worksheets after class. Start homework earlier.
Do as many suggested problems as you can. Make sure you learn from your mistakes (from quizzes, homeworks, exams). I visited office hours much more than I would have during normal, in–person classes, because it was wayyyy easier to do so, so definitely take advantage of that.
Go to every office hour you can and ask lots of questions, most of this material is pretty foreign.
Consult your text book more.
Go out of your way to do the top hat – it's that knowledge of how to use the equations that is strongly needed on exams. Go to office hours multiple times per week with questions – I only went about once a week because I thought that was enough but it certainly was NOT and I regret that
Find some thermodynamics video sets on Youtube and watch them like u are watching "official videos." "Official videos" are not gonna help u much.
Avoid classes taught by Barry
I don't think the grade is worth the work. I think if you can allow yourself a 'C.' You'll learn more.
Give us some time to be used to software like math–lab some of us are transfers and have never used it put it as part of the exam when we arent used to it .Makes us less advantageous
Read the textbook, review old exams, and start the HW early so you can attend office hours with any questions. Also, review your assignments after they are graded so you can fix any mistakes going forward.
Especially if online or hybrid classes continue, it is definitely hard to motivate yourself to do extra work or extra example problems. I think in this class, the more problems from the text that I could have motivated myself to do, the more confident I would have been with the material, and the better I would have done.
Read the book
taking classes at home during a global pandemic isn't necessarily the Best/Healthiest learning environment but work with what you can.
Do the tophats (if they exist). don't work a job while in school. Go to office hours for help on hw.
Pay attention a bit more in class. It's hard to focus during a zoom call for 2 and half hours but if I focused a bit more I could have performed bettef
Office hours all the way. Definitely super helpful to have your questions answered early before they lead to wider confusion later down the road.
Really make sure you watch the lectures and do the practice before class. come with questions ! go to office hours (Dr. Barry and Lee are super nice in office hours, and will help you if you are stuck! don't be afraid to go even if your question is " i don't even know what question to ask.") :–)
I couldnt tell you; just suffer I guess and move on

ENGINEERING UNDERGRAD

Please rate the degree to which this course has improved...

Question	Results		
	Response Count	Mean	Standard Deviation
Your ability to identify, formulate, and solve complex engineering problems by applying principles of engineering.	42	4.00	1.01
Your ability to identify, formulate, and solve complex engineering problems by applying principles of science.	42	3.95	1.01
Your ability to identify, formulate, and solve complex engineering problems by applying principles of mathematics.	41	3.90	1.02
Your ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare.	42	3.17	0.99
Your ability to apply engineering design to produce solutions that meet specified needs with consideration of global, cultural, and social factors (i.e., sustainability principles).	42	2.95	0.99
Your ability to apply engineering design to produce solutions that meet specified needs with consideration of environmental and economic factors (i.e., sustainability principles).	42	2.81	1.06
Your ability to effectively communicate verbally with a wide range of audiences.	42	2.50	1.23
Your ability to effectively communicate in writing to a wide range of audiences.	42	2.69	1.26
Your ability to recognize ethical and professional responsibilities in engineering situations.	42	2.95	1.08
Your ability to make informed judgments that consider the impact of engineering solutions in global and societal contexts (i.e., sustainability principles).	42	2.98	0.92
Your ability to make informed judgments that consider the impact of engineering solutions in economic and environmental contexts (i.e., sustainability principles).	42	2.88	1.02
Your ability to function effectively on a team whose members together provide an inclusive environment, collaboration, and leadership.	42	3.14	1.05
Your ability to function effectively on a team whose members together establish goals, plan tasks, and meet objectives.	42	3.14	1.00
Your ability to develop appropriate experiments.	42	2.38	1.23
Your ability to conduct appropriate experiments.	42	2.40	1.25
Your ability to analyze and interpret data and use engineering judgment to draw conclusions.	42	3.50	1.04
Your ability to embrace new learning strategies to independently acquire and apply new knowledge to solve engineering problems.	42	3.64	1.06

Personalized Questions

Express your judgment of the instructor's overall teaching effectiveness.