Spring 2022 - Matthew Barry MEMS 0051 - INTRODUCTION TO THERMODYNAMICS - 1060 - Lecture

Project Title: **2224 - Teaching Survey Spring 2022**

Courses Audience: **45**
Responses Received: **35**
Response Rate: **77.78%**

Report Comments

Included in this report:

- Responses to numerical questions
- Responses to instructor added questions (if applicable)
- Student comments

Interpreting OMET Teaching Survey Reports

A guide to interpreting OMET teaching survey results can be found here - https://teaching.pitt.edu/omet/survey-results/.

Develop a plan using your student opinion of teaching results.

- Meet with a Teaching Consultant who can help you interpret your results and develop a course of action if necessary. Email teaching@pitt.edu to set up a consultation.
- Plan on collecting student feedback during the semester the next time you teach. OMET offers a midterm course survey option and there are additional ways to collect student feedback throughout the term. For more information, go to https://teaching.pitt.edu/omet/midterm/
- In the future, discuss, teach, and model giving meaningful feedback with your students. Give them multiple opportunities to practice giving feedback. We have several resources that can help guide the discussion and options for gathering student feedback throughout the term.

Go to: https://teaching.pitt.edu/omet/ for more details, references, and resources.

Creation Date: **Tuesday, May 10, 2022**

University Questions

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

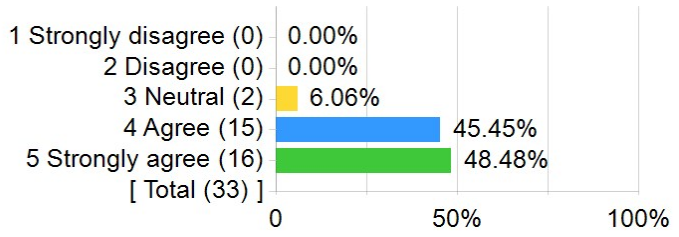
Question	Results		
	Response Count	Mean	Standard Deviation
The instructor stimulated my thinking.	33	4.42	0.61
The instructor was enthusiastic about teaching the course.	33	4.48	0.76
The instructor presented the course in an organized manner.	32	4.28	0.63
The instructor maintained an environment where students felt comfortable participating.	33	4.15	0.67
The instructor maintained an environment where students felt comfortable seeking assistance.	33	4.15	0.80
The instructor provided helpful feedback.	33	3.91	0.68
Assignments contributed to my understanding of the subject.	33	4.39	0.66
Overall	-	4.26	0.71

Instructor's overall teaching effectiveness

Question	Results		
	Response Count	Mean	Standard Deviation
Express your judgment of the instructor's overall teaching effectiveness.	33	4.18	0.77

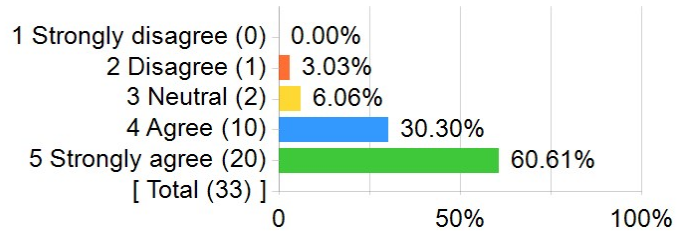
Instructor Items: Detailed Results

1. The instructor stimulated my thinking.



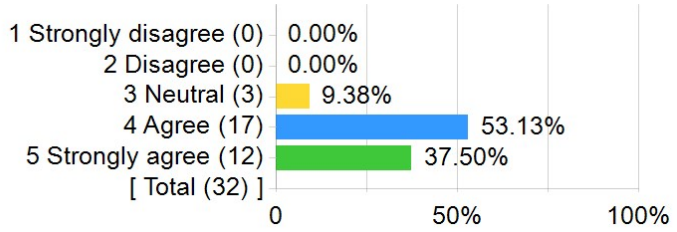
Statistics	Value
Invited Count	45
Response Count	33
Response Ratio	73.33%
Mean	4.42
Median	4.00
Mode	5
Standard Deviation	0.61

2. The instructor was enthusiastic about teaching the course.



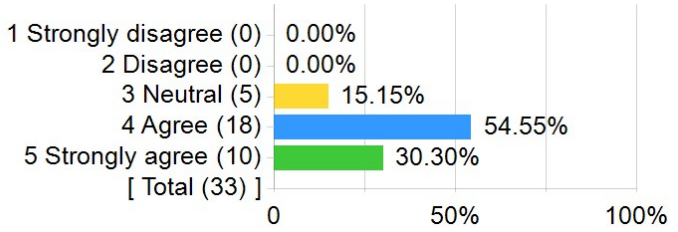
Statistics	Value
Invited Count	45
Response Count	33
Response Ratio	73.33%
Mean	4.48
Median	5.00
Mode	5
Standard Deviation	0.76

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



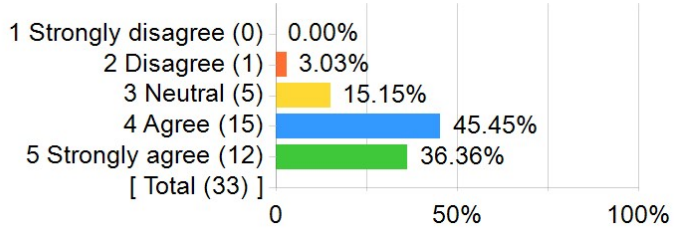
Statistics	Value
Invited Count	45
Response Count	32
Response Ratio	71.11%
Mean	4.28
Median	4.00
Mode	4
Standard Deviation	0.63

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



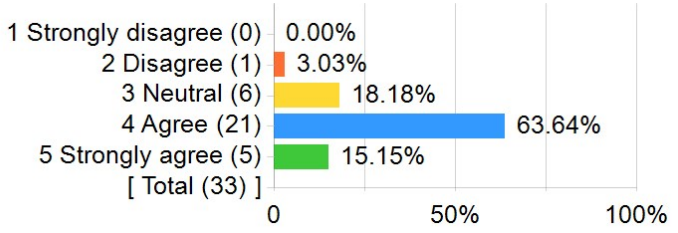
Statistics	Value
Invited Count	45
Response Count	33
Response Ratio	73.33%
Mean	4.15
Median	4.00
Mode	4
Standard Deviation	0.67

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



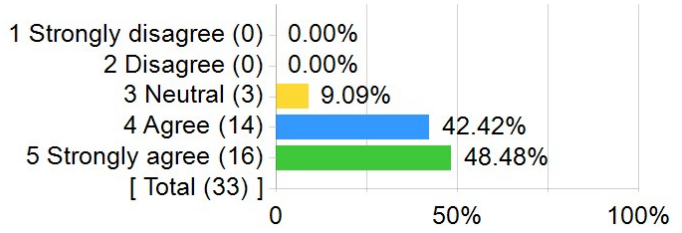
Statistics	Value
Invited Count	45
Response Count	33
Response Ratio	73.33%
Mean	4.15
Median	4.00
Mode	4
Standard Deviation	0.80

6. The instructor provided helpful feedback.



Statistics	Value
Invited Count	45
Response Count	33
Response Ratio	73.33%
Mean	3.91
Median	4.00
Mode	4
Standard Deviation	0.68

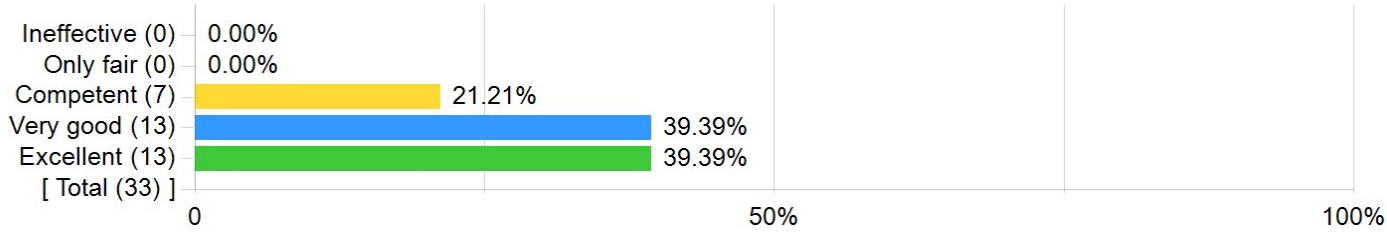
7. Assignments contributed to my understanding of the subject.



Statistics	Value
Invited Count	45
Response Count	33
Response Ratio	73.33%
Mean	4.39
Median	4.00
Mode	5
Standard Deviation	0.66

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
the process of how to approach and solve thermodynamics problems
The homeworks and quizzes were challenging and made you think about the subject in great depth. There were always large amounts of problems available to help you practice via Tophat, YouTube, and Canvas.
Hard problems on homework and quizzes
He helped me to about the basic concepts of thermodynamics. I have learned how to apply equations like the conservation of energy and the carnot cycle equations. Overall he has really helped me to understand the basics of thermo.
Dr Barry lays out exactly what needs to be done, provides extensive resources, and holds his students to a very high standard.
Very passionate about teaching thermo. He is very knowledgeable about all of the topics in this class which contributed to my learning.
Dr Barry often challenges us to go much beyond what other professors might deem necessary information. Often, this is super frustrating while its happening, however it makes us have a much deeper understanding of the content.
Good environment in class
The depth and speed of the course was challenging in a thought–provoking way, and the class resources are all incredibly helpful for understanding. I feel like the difficulty of the class was perfectly justified and the professor and TA's are very accessible. I cannot name a single time when I had a question that could not be clarified or explained.
He had office hours multiple times a week which was helpful and so did the TA
Providing multiple feedback sources allows for thorough understanding of the concepts.
His flipped format allowed me to go into the lecture already familiar with the material and able to ask questions and get a better understanding of what I don’t quite grasp
His lecture videos and his in–class examples really helped me understand the information.
Went through in depth examples.
He gave us balls hard homework assignments that actually forced us to learn the concepts in class and fully understand them.
Homework assignments were really challenging and while they do take a lot of time (and there are arguably enough to induce mild trauma every week), they're really great for understanding the material on a deep level. Office hours were usually really accessible and Dr. Barry was helpful about explaining his thought processes.
Dr. Barry’s extended office hours made it easy to come see him and ask for help.
Having a flipped schedule with multiple small videos for each day which allows me to pause the video while I take notes. It is nice that I can go as slow as I want without wasting time in class to do so. Also utilizing the software that pitt provides to us in homeworks helps further understand the material and gives us a chance to use the software in new ways. I've learned more useful matlab commands (and iterative ways to find solutions) this semester than all of last year.
He gave us plenty of opportunity to practice the material to be familiar with it.
The instructor makes the course topics interesting and fun. He takes the topics and applies them to real world scenarios; which seems like an obvious thing that a professor should do, but I actually have had some professors who just read from slides and lectures all class. Dr. Barry also provided us with a GitHub of his previous works, this helped me to learn the course topics because I was able to go back through his previous examples.
Dr. Barry was very approachable during and outside of class. His flipped lectures were also very helpful to have when going into class, as well as helpful for looking at later on.
Walk through lecture videos in class.
Very willing to answer any and all questions asked during class and had a lot of availability outside of class.
good explanations
He let us do everything at our pace but still managed to keep everything organized. All assignments, quizzes, and exams were take home as it would in the real world.
Challenged us with difficult yet intriguing content and assignments while also supporting us to understand the course.
went over relevant examples in class that reinforced our understanding of the lecture.
The organization of the overall course structure was helpful because when looking for additional resources, those resources were found relatively quickly leading to more progress overall.

What could the instructor do to improve?

Comments
not many ways
This isn't exactly on this professor, but being able to do numerical methods to solve complex equations isn't something I have learned very well. I think this might apply to other students in this class, as well. Going over these before they're needed might be a helpful refresher.
Lessen the workload, taking circuits and Thermo at the same time was 6 assignments every week on top of other things
I think it would be nice to go over the different terms like isothermal,isentropic and everything else in greater detail. I was a little confused about that in the begining and had to keep looking it up and it still doesn't stick in my brain.
Lecture videos need to be more stimulating in some way.
I think that overall there’s nothing significant i would change with this class
I think the main problem i had was dr Barry is very intimidating due to the fact that he’s often super sarcastic. I have many friends who felt comfortable in his office hours early on, but i felt it was super intimidating if you haven't had him previously.
Not sure
For all the complaining about reading the syllabus or not reading the syllabus, the syllabus says no extensions and you give extensions. I trust you. I don't actually trust the syllabus that much. I doubt anyone took thermo knowing zero matlab but the basic skills needed for the course could be helpful if compiled. Just things like plotting with [] for lines or what the . at the end of variables does; I found myself not comprehending some of the released solutions since the format was just different from how I've always done it. I really liked the TopHat questions and was sad when the in–class worksheets stopped and now the prework is a little inconsistent. Please continue with them, they kept me familiar with the textbook when I had questions and are really helpful to reference for key points, such as when an equation is valid or what terms actually mean. The main pain point of the class was timing. The time needed to complete a simple thermo homework is a full workday for me, which is crazy since the problems are fair and you are legitimately helpful with questions. I understand that I'm probably just slow and other students complete the work in seemingly less time but I also feel like the man–hours are felt by a lot of us. I think I've pinned it down. Thermo is very cumulative, but the homework, the quiz, and the current lecture material is almost always on three different weeks work. It really important to know how to do everything but having to do the hw and quiz takes enough time that I rarely get to the current week's textbook problems and then the next week comes and it happens again. That is what I would pin down as the major time sink; it takes a lot of time to understand thermo properly and having to deal with two week old information at the same time as trying to learn new, vital information takes about as much time as there is in a week.
Maybe spend less class time going over things we had to watch you do in the lecture videos already so that we have more time to spend on harder examples
Answer emails faster. Sometimes I have to email a homework question but I don’t get an answer for a few days
He could
He could work on creating less complex/complicated and less of a puzzle. I feel as if in a lot of the homeworks and quizzes there were puzzled questions in which we were assumed to understand and find a proper solution. Instead, a more straightforward question could have been asked to help reinforce what we learned, instead of completing the homework more puzzled/lost than going into it. Also DONT ASSIGN HOMEWORK AND QUIZZES DUE THE SAME WEEK AS MIDTERM WEEK!
There is a large gap in difficulty from the in class examples and homeworks. An additional lecture video example would be beneficial for some sections.
Hold back the cynicism. Just a little.
I think Dr. Barry genuinely cares that his students finish the class with as good of an understanding of the material as possible. However, I think that he has a strange way of trying to show that and it doesn't come off that way until later in the semester. It's like he wants people to dislike him as a professor, which takes away from their ability to focus more on the depth of understanding. My honors physics 2 class was taught with the same intention as Dr. Barry's but it was done in a way that was inspiring and encouraging to the class, as opposed to seeming like a cruel joke at our expense.
Sometimes Dr. Barry has unrealistic expectations for his students.
I really like the way the class is formatted and taught so I don't have much to say that I don't like. Some things I enjoyed that happened more was using matlab in class to find solutions. Obviously this is not usually necessary, but it is always really help when we do get to see code.
His attitude could be more palatable but I don't think that's the astetic he's going for.
Personally, I think Dr. Barry is in a good spot and doesn't need much to improve much. Many students don't like him, but I think it's more of the fact that the student's learning style and his teaching style don't match. The only thing I think Dr. Barry could do to

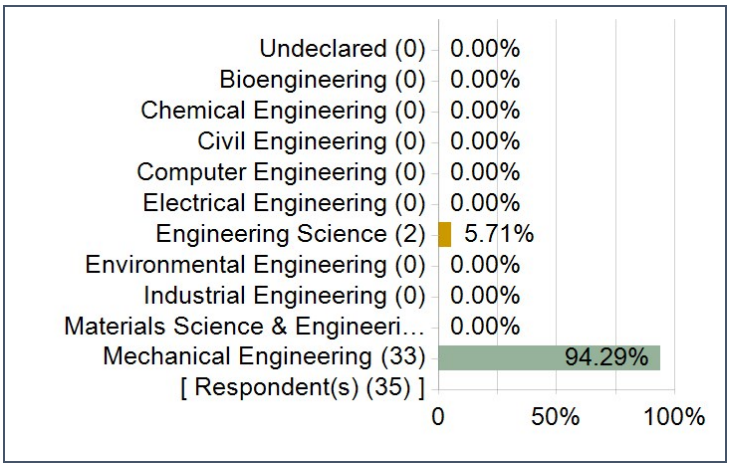
Comments
improve his class is to not have all the homework due on the same day throughout all of his courses.
The only thing that I disliked about Dr. Barry's thermodynamics class was the amount of work during some homework assignments. There were occasional assignments that took minimum 10 pages of work, but then others that only took maybe 3. I think that the workload should me more evenly distributed
I am not sure
Having physical objects to present during class to understand how various devices function would be very helpful
finish making the actual slides before teaching them
Nothing
Having a bit more available office hours would be nice, unfortunately a lot of them overlapped with other MEMS course times.
Not assign so much work. Its really unnecessary to assign a homework, a conceptual quiz and a written quiz for every single week. Then on top of that to also have a midterm as well with no break from homework.
While the youtube videos are a good introduction to material, I think, like most other students, it doesn't have the same effect as hearing material from a professor. I would have preferred more conceptual information being discussed in class and the math being the second focus.

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

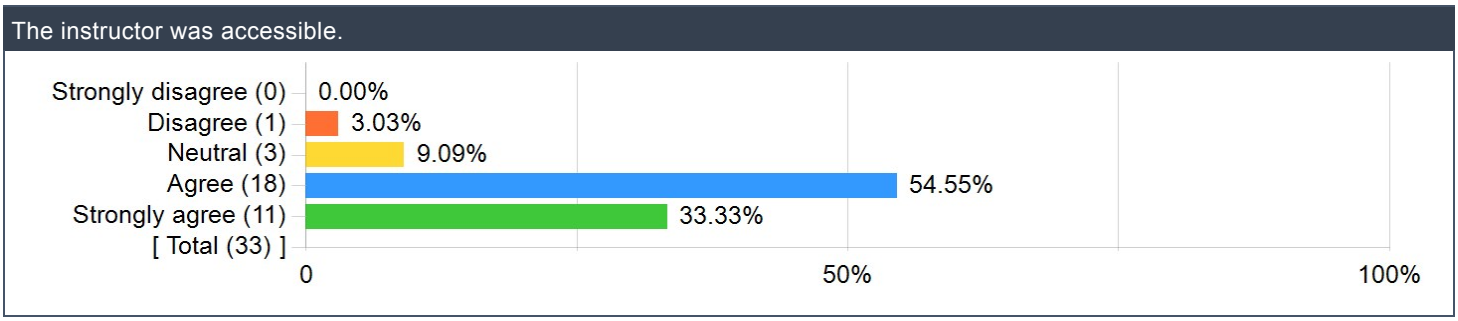
Comments
the class was over all good but homework is a bit hard to contribte to the overall grade
I can appreciate the heavy workload but sometimes I just need a break.
n/a
I think dr Barry is overall an above average professor overall, however a main issue was also how often he was not in his office during his office hour since its so long. I think the sentiment of him saying he is in his office for a chunk of 5 hours was nice but id much rather a guaranteed hour or so a week.
No additional info
I think you've made me a better engineer. Thanks for being good at your job; even if you like to act mean sometimes, I respect you a great deal.
You can be pretty intimidating when it comes to asking for help, I avoided getting help from you on occasion because I felt like you would judge me pretty hard
It’s sort of hard to really internalize the information when everything is open note
The instructor is
While I appreciated the use of matlab occasionally, please don't make it an often occurrence for the next semesters towards the end, it was just a huge time waste and didn't really stimulate much learning for me.
N/A
No.
After taking this class, I’m coming around to like Dr. Barry. Thermo content is sometimes confusing and counterintuitive but I appreciate how approachable he is for this class, and how much you can tell he likes the content. The constant real life applications really helped with my conceptual understanding of some subjects.
Having the last project be only in grounds of two is fantastic because there is no way to hide from work when there are only two people in a group. With four people in the statics project there would always be one or two people that just didn't do a single thing.
I will see you in the summer:)
Dr Barry, I think that you may be one of the best professors at Pitt. You really make students put in the work, but in return we get to really understand the materials. Every course I have you for I also have a friend taking the course with a different professor. In all these course, I think I have a deeper understanding of the material in comparison to them.
N/A
No
Great prof with great energy.
Keep up the great work. I learned a lot from your course
Thanks for the experience Dr. Barry, its been fun, its been real, hasn't been real fun. Irregardless though your class has taught me a lot, thank you.
I think you're a good professor and I really did feel like I learned a lot in you're classes, I just strongly disliked every second of it.

Swanson School of Engineering Questions

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).



The instructor was accessible.



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

Comments
watch the online lecutes before class and do the tophats
Go to office hours.
If you have questions go ask.
I could have done the tophat worksheets more often. they are available for us to use and it is important to get the practice
not taken circuits at the same time as this class.
Don’t be scared of how mean he is its all sarcasm.
Do your work
Take a light enough course load where you'll have time to really understand it. If you have a schedule where you can dedicate a thermo–day, this class is very good. Also go to office hours I haven't done that enough and it shows. They are helpful even when you only are kind of confused.
No idea, I worked my ass off and it was still really hard
Make sure to keep up with the lecture videos and top hat questions. Writing down questions before class is helpful so you know what to ask during class
If I had kept up with the in–class assignments on tophat, I believe I would have had more understanding of concepts throughout the course.
Go to office hours
pretending Top hat aas required and reading the boo
If given the option take the other professors teaching this course, the workload for this class is INSANE.
Start assignments early and be consistent.
Go to office hours I swear they help a lot.
Take advantage of office hours. Find friends to do work with. And get to know Dr. Barry and the TA's.
For all Barry courses, having a study group and making good relations with the TA’s and Barry himself is crucial. The content is tough but manageable.
Go to office hours if you need help. Actually watch the examples
Do what he says. It's a lot of work but you know stuff afterward.
Make sure you actually watch the lecture videos before class and come to class ready to participate. If you go to class without knowing the lecture, you won't be engaged. Being engaged is the best way to succeed in any of Dr. Barry's classes
Review lecture videos
Read the textbook.
Definitely go to office hours and try do some of the book problems
do tophat
Do all of the assignments, if you're able to keep up with all the homework's and quizzes, you'll do well.
Stay on top of your work because once you start to drift back its very hard to get back ahead of the curve

Engineering Undergrad Courses

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

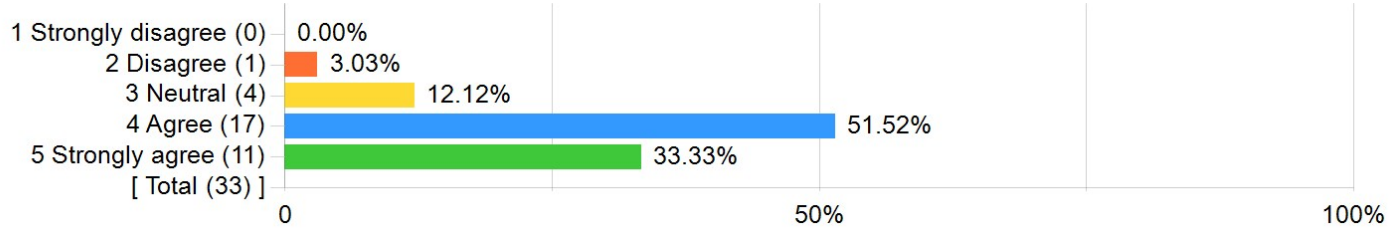
Question	Results		
	Response Count	Mean	Standard Deviation
Your ability to identify, formulate, and solve complex engineering problems by applying principles of engineering.	33	4.18	0.64
Your ability to identify, formulate, and solve complex engineering problems by applying principles of science.	33	4.09	0.72
Your ability to identify, formulate, and solve complex engineering problems by applying principles of mathematics.	32	4.06	0.72
Your ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare.	31	3.23	0.80
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).	33	3.03	0.92
Your ability to apply engineering design to produce solutions that meet specified needs with consideration of environmental and economic factors (i.e., sustainability principles).	33	3.33	1.11
Your ability to effectively communicate verbally with a wide range of audiences.	33	2.70	1.02
Your ability to effectively communicate in writing to a wide range of audiences.	32	2.69	1.12
Your ability to recognize ethical and professional responsibilities in engineering situations.	33	2.97	1.05
Your ability to make informed judgments that consider the impact of engineering solutions in global and societal contexts (i.e., sustainability principles).	33	3.03	1.10
Your ability to make informed judgments that consider the impact of engineering solutions in economic and environmental contexts (i.e., sustainability principles).	33	2.91	1.07
Your ability to function effectively on a team whose members together provide an inclusive environment, collaboration, and leadership.	33	3.45	0.75
Your ability to function effectively on a team whose members together establish goals, plan tasks, and meet objectives.	33	3.45	0.79
Your ability to develop appropriate experiments.	33	2.97	1.19
Your ability to conduct appropriate experiments.	32	2.88	1.16
Your ability to analyze and interpret data and use engineering judgment to draw conclusions.	33	3.79	0.70
Your ability to embrace new learning strategies to independently acquire and apply new knowledge to solve engineering problems.	33	4.12	0.70

Diversity and Inclusion

Question	Response Count	Mean	Standard Deviation
The instructor creates an inclusive learning environment for all students.	33	4.15	0.76

Details

The instructor creates an inclusive learning environment for all students.



Statistics	Value
Invited Count	45
Response Count	33
Response Ratio	73.33%
Mean	4.15
Median	4.00
Mode	4
Standard Deviation	0.76