Summer 2021 - Matthew Barry MEMS 0051 - INTRODUCTION TO THERMODYNAMICS - 1030 - Lecture

Project Title: **2217 - Teaching Survey Summer 2021**

Courses Audience: **17**
Responses Received: **17**
Response Rate: **100%**

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: **Monday, August 16, 2021**

University Questions

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

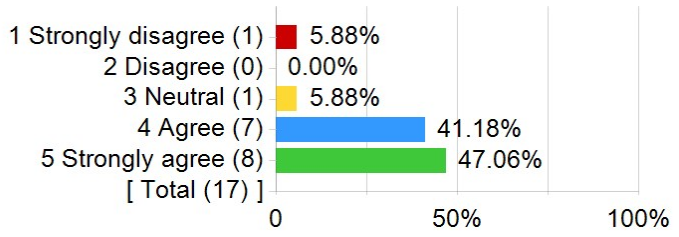
Question	Results		
	Response Count	Mean	Standard Deviation
The instructor stimulated my thinking.	17	4.24	1.03
The instructor was enthusiastic about teaching the course.	17	4.00	1.37
The instructor presented the course in an organized manner.	17	4.06	0.75
The instructor maintained an environment where students felt comfortable participating.	17	3.94	1.14
The instructor maintained an environment where students felt comfortable seeking assistance.	17	3.82	1.19
The instructor provided helpful feedback.	17	4.12	1.05
Assignments contributed to my understanding of the subject.	17	4.47	0.62
Overall	-	4.09	1.04

Instructor's overall teaching effectiveness

Question	Results		
	Response Count	Mean	Standard Deviation
Express your judgment of the instructor's overall teaching effectiveness.	17	4.00	0.94

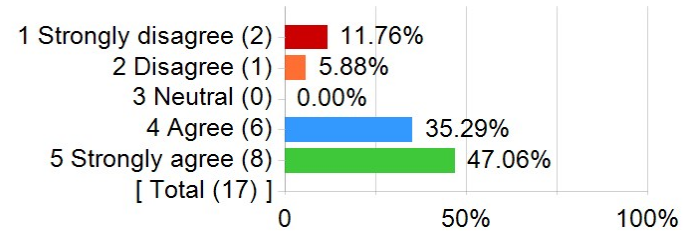
Instructor Items: Detailed Results

1. The instructor stimulated my thinking.



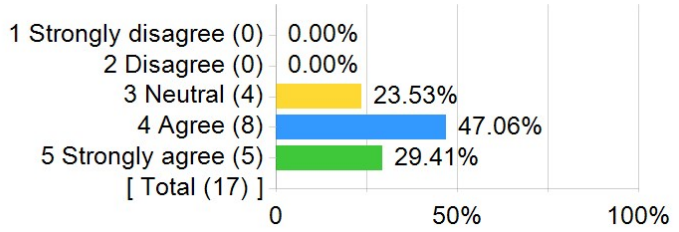
Statistics	Value
Invited Count	17
Response Count	17
Response Ratio	100.00%
Mean	4.24
Median	4.00
Mode	5
Standard Deviation	1.03

2. The instructor was enthusiastic about teaching the course.



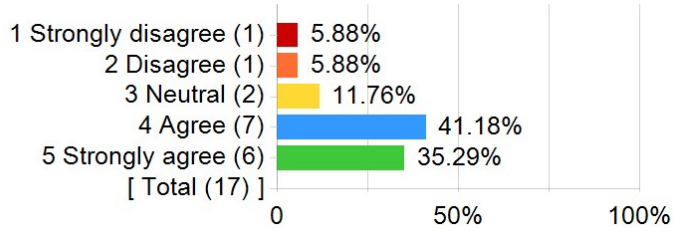
Statistics	Value
Invited Count	17
Response Count	17
Response Ratio	100.00%
Mean	4.00
Median	4.00
Mode	5
Standard Deviation	1.37

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



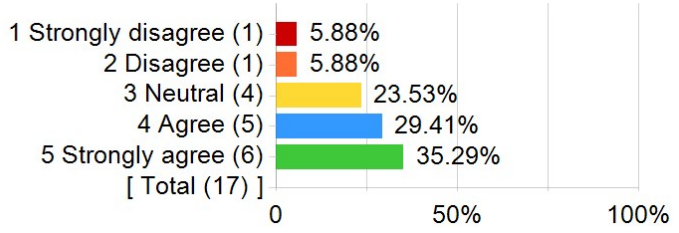
Statistics	Value
Invited Count	17
Response Count	17
Response Ratio	100.00%
Mean	4.06
Median	4.00
Mode	4
Standard Deviation	0.75

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



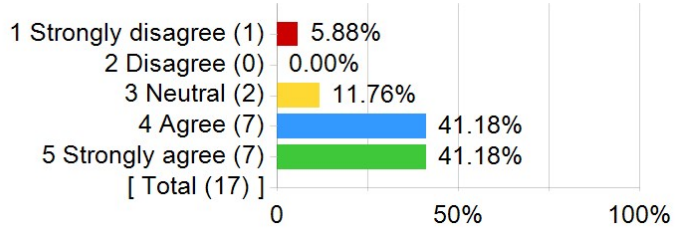
Statistics	Value
Invited Count	17
Response Count	17
Response Ratio	100.00%
Mean	3.94
Median	4.00
Mode	4
Standard Deviation	1.14

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



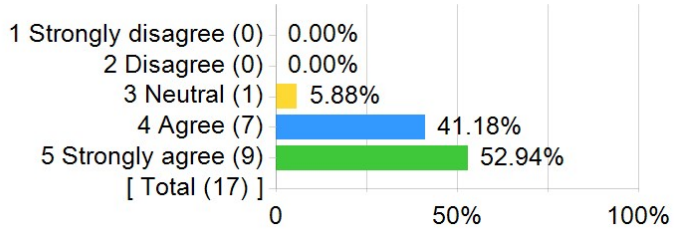
Statistics	Value
Invited Count	17
Response Count	17
Response Ratio	100.00%
Mean	3.82
Median	4.00
Mode	5
Standard Deviation	1.19

6. The instructor provided helpful feedback.



Statistics	Value
Invited Count	17
Response Count	17
Response Ratio	100.00%
Mean	4.12
Median	4.00
Mode	4, 5
Standard Deviation	1.05

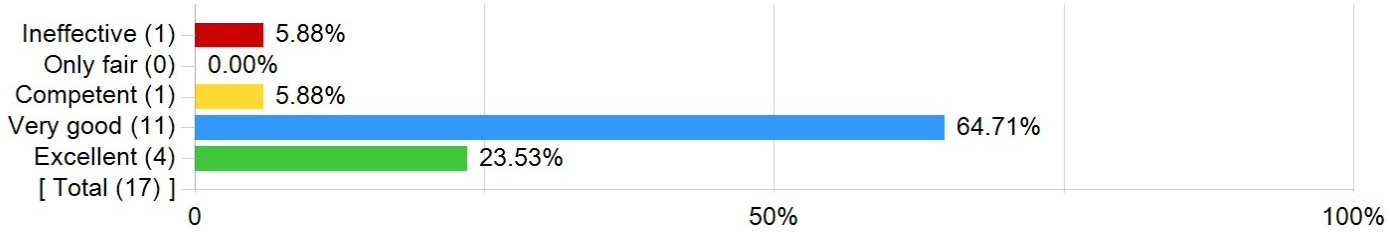
7. Assignments contributed to my understanding of the subject.



Statistics	Value
Invited Count	17
Response Count	17
Response Ratio	100.00%
Mean	4.47
Median	5.00
Mode	5
Standard Deviation	0.62

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
Dr. Barry has a good set up for online classes and is very accommodating.
This class was challenging which likely contributed positively to my ability to learn, but likely at the cost of some significant stress. The class was enjoyable because a lot of it felt like I was solving a puzzle. Additionally, the feedback I got on assignments was really helpful and the way grading was structured felt very fair (ie if I understood the concept but made an error that carried through the problem, I would get minimal points docked for the initial error and not lose points later just because my numbers didn't match).
The instructor helped me learn the importance of the subject of thermodynamics through studying the processes and applications. He helped me learn that just memorizing equations will not allow you to become a respectable and efficient engineer, but if I develop an understanding of the concepts and how to problem solve using the knowledge I have I will be far more successful.
Dr.Barry does a very good job breaking down material and giving the student a real–life example that makes the material a bit easier to digest.
Videos with corresponding Tophat questions to gauge understanding before examples done in class to further show concepts. The brief review of concepts during class also was helpful.
Very enthusiastic about the material
There were a lot of examples that assist in learning
Provided cohesive youtube videos that contained lecture material.
Professor Barry gave lectures, assigned homework and gave us access to plenty of older material that provided lots of examples to learn from.
The instructor simply read off slides.
How to approach the problems logically and understand what the situation is before proceeding to numbers and equations. Also was very good about making us learn to use the thermo properties tables rather than looking up values.
Barry is very good at giving challenging, yet realistic problems. Doing the problems he creates gives me a feeling like I could go out and do it for real.
Dr. Barry frequently reiterates fundamental issues and mistakes that students in the past have made, and he vocally emphasizes concepts that are important and used in assignments. Dr. Barry always answers fielded questions.
Despite how difficult many of the homework and quizzes were, the instructor and TA were available to provide guidance and feedback on the task which was extremely conducive to understanding the material.
Taught the class in an way that helped keep the information fresh and understandable

What could the instructor do to improve?

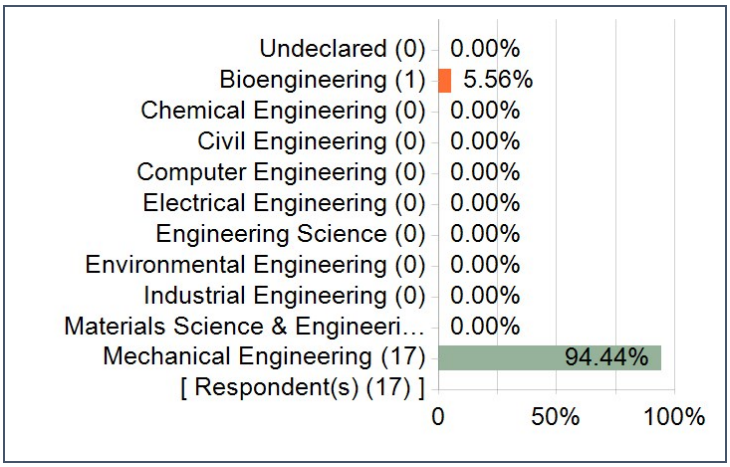
Comments
In class examples could be on a level of difficulty closer to that of the homework.
I don't typically mind a flipped–classroom experience, but it was frustrating to me that the live lecture examples were very similar to the lecture video examples and then the homework problems felt drastically different. I didn't mind so much that they weren't what we had seen in class as much as I was moreso annoyed that I felt like the examples I had seen made me expect something a little more repetitive like they were. Having examples of a wider variety for class would have been an improvement. Also, while there are many contributing factors to it, I would have appreciated sticking to a more rigid schedule with due dates. Actually weekly quizzes and homeworks rather than feeling like one here and there and assigning the project at the end in a way that it felt like an afterthought.
I would prefer if there were more assignments a week, but spaced out so that it would be like a problem a night or every two nights, rather than a whole assignment with many problems due a week or two later. I perform better when my schedule is really regimented, especially in an online setting. I think with a challenging class like thermodynamics it would allow other students and I to really depict the nuances of the class and prevent getting overwhelmed.
I find the lecture videos and the homework to have a pretty significant difficulty gap.
Occasionally would get sidetracked with students in the classroom who would chip in with not 100% related questions as it is easier for them to interject than online students.
Schedule went a little wonky in the middle– time management
N/A
Prepare more study materials for exams.
Professor Barry hear me out. I think that the little quizzes we did in top hat should be graded. There were times in the semester when I was up to my neck in homework and only prioritizing things that would get points. In those times the little quizzes fell by the wayside which meant I was going to class with no preparation at all and getting less out of the lectures. If those were graded I would have miraculously pulled energy out of my ass. I think that if you make the quizzes graded your future students will thank you. Also, having things due in finals week other then finals sucks. I was not a fan of that.
The instructor could start by fixing his teaching aproach. It should be understood that he has a Ph.D in the topic of Mechanical Engineering and further years of practice in thermodynamics. As such understanding topics for him are far easier than a student learning the topic the first time and he really needs to wake up and realize that.
It was a lot of information very quickly (probably as a result of this being a summer course) but it meant that some of the more confusing topics got less attention than they could have. Some of the homeworks were also very difficult. Again, all understandable within the context of a summer course but if anything can be done to improve in these categories that would be helpful.
This may be partly due to the shortened semester, but I feel we could've used more time on the Carnot cycle in general. I know I didn't get a very good understanding the first time through, and many of my peers had a similar sentiment.
Provide good reasons for being harsh on Thermodynamics. My example: a firm understanding of thermo will dictate whether an engineer will make a building–sized power plant or a building–sized pipebomb. Seriously, students taking thermo need to understand that this material deserves their focus and attention not because the assignments are hard, but instead that understanding the material is CRITICAL for engineers to succeed.
More concept quizzes, these helped to check my conceptual understanding of the material which often aids in the solving of the harder homework/exam problems.
N/A

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

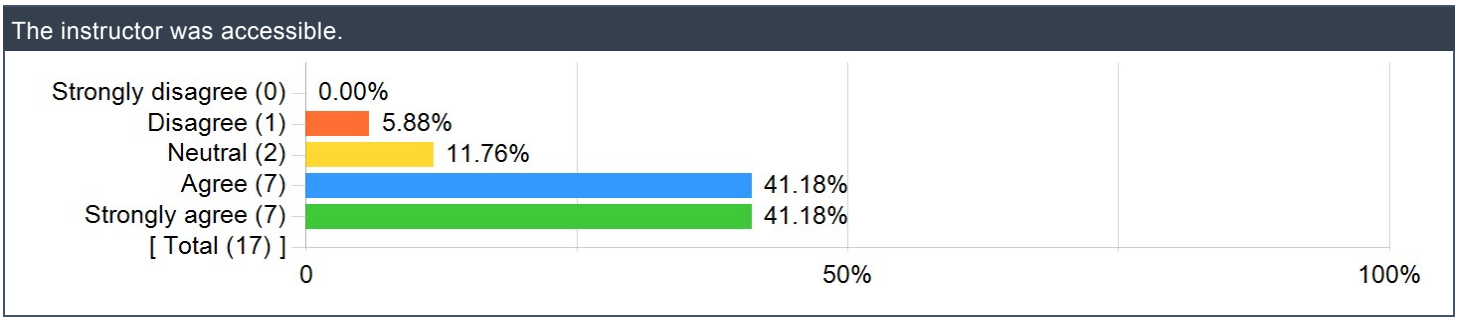
Comments
I felt uncomfortable asking questions in this course due to fear that I would basically be looked at like I was dumb for not understanding. While occasionally I appreciated the sarcastic wit, I was also sometimes frustrated by it because it made me not know how to go about asking for help on a subject that I felt may have been interesting to me if I wasn't so stressed about figuring the problems out and not knowing how to get constructive feedback.
Thanks for another great semester!
Three–hour classes were rough but the breaks were spaced well enough to help maintain focus.
N/a
N/A
No
Good job.
Smirky comments given out during lectures aren't useful neither a great use of time. Such as "I know everyone hates me" and etc. As a professor, you seem to have lost the spark of your own motivation to be teaching the topic itself. Maybe a different avenue may be useful.
Thanks for taking the time over the summer to teach this course, its clear that you care a lot about the subject and your sense of humor is much appreciated. The only thing I'd like to mention is that there are a few things that I don't think add much to the course that have large affects on grade without having anything to do with knowledge. Firstly, not boxing answers while making it harder for the graders to grade, doesn't have any correlation with effort or understanding. I understand a one or two point penalty, but getting entire problems wrong for the lack of a rectangle seems unfair and acts against the common goal of grades aligning with knowledge and effort. Also, the paper that we were required to write on was helpful in keeping things organized (I always know what I'm looking at if I find an older assignment) but due to the common travel and motion associated with summer, it can be difficult to always have this paper on hand. I think providing it is a nice idea but it seems to add unnecessary stress that again doesn't correlate with effort or knowledge, only printer access.
Overall, Barry does a very good job. Top tier professor at Pitt. Challenging, but you can tell he really cares about engineering at Pitt.
I'll be seeing you in Fluids this fall. My schedule is such that I will have to run uphill to Chevron in less than 10 minutes from the end of your class. Please be considerate of my time constraint this fall.
None
N/A

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
Being an engineering major sometimes means you have to pick and choose what classes are most important. If you’re in that boat like I am now, you have to pick this class. It’s hard so you have to give it the time it needs.
I'm not exactly sure what I could have done to improve other than asking more questions and probably going to office hours. Doing more practice problems from the textbook or something may have also been beneficial, but there are only so many hours in the day.
Read the textbook before watching his video lectures and before classes. It will allow you to understand the material better because when you hear him presenting it won't be the first time being exposed to the material. Complete the questions that he suggests in the textbook, for he will grade you on questions that are very similar.
Make sure to not hold off on assignments and to do them gradually. Also, helpful information on all assignments can be found inside most of the class material and prior examples. make sure to utilize the solutions of all assignments.
Use the resources provided and try to understand early concepts as much as possible because everything builds.
Ask whatever questions come to mind.
Paid more attention to classes
Get smarter dude!
Take control of your own learning, you are paying for the credits, not the instructor. Read the textbook and go online and practice as much as you can with open source resources.
Despite any amount of time given, start assignments early, before lecture so you can ask about them. Also don't try to work a full time job and take this class unless you want to do badly at both.
Oh my god learn how to efficiently do these problems in MATLAB and EES. Absolute life saver.
Don't fuck around and find out! USE OFFICE HOURS! Do your homework on a pace that allows you to ask questions for office hours! Keep that TA busy and accountable! Take initiative and organize your classmates on a group chat! This will help lead to study groups and build coordination for the projects.
Review your notes and make sure you understand everything, get help if you do not understand something, Dr. Barry will always seem to find a way to test you on the very problem you are unsure about.
Watch the provided bonus lectures

Engineering Undergrad Courses

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

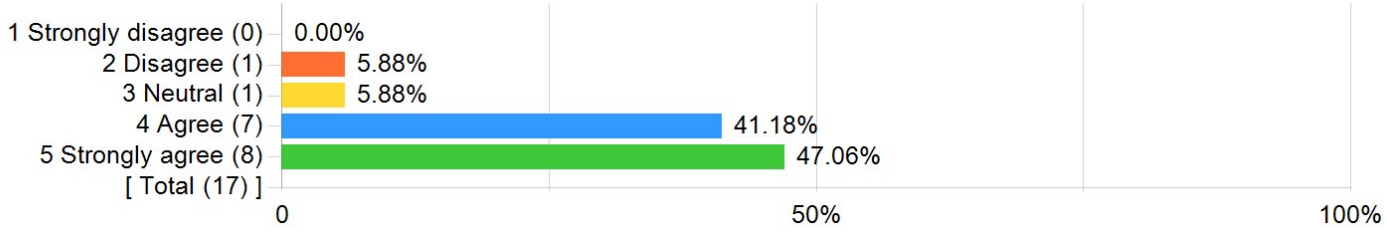
Question	Results		
	Response Count	Mean	Standard Deviation
Your ability to identify, formulate, and solve complex engineering problems by applying principles of engineering.	17	4.18	0.73
Your ability to identify, formulate, and solve complex engineering problems by applying principles of science.	17	4.18	0.73
Your ability to identify, formulate, and solve complex engineering problems by applying principles of mathematics.	17	3.82	0.88
Your ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare.	16	3.81	1.22
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).	17	3.59	1.23
Your ability to apply engineering design to produce solutions that meet specified needs with consideration of environmental and economic factors (i.e., sustainability principles).	17	3.82	1.07
Your ability to effectively communicate verbally with a wide range of audiences.	17	3.53	1.18
Your ability to effectively communicate in writing to a wide range of audiences.	17	3.71	1.26
Your ability to recognize ethical and professional responsibilities in engineering situations.	17	3.59	1.18
Your ability to make informed judgments that consider the impact of engineering solutions in global and societal contexts (i.e., sustainability principles).	17	3.35	1.32
Your ability to make informed judgments that consider the impact of engineering solutions in economic and environmental contexts (i.e., sustainability principles).	17	3.47	1.28
Your ability to function effectively on a team whose members together provide an inclusive environment, collaboration, and leadership.	17	3.88	0.93
Your ability to function effectively on a team whose members together establish goals, plan tasks, and meet objectives.	17	3.88	0.86
Your ability to develop appropriate experiments.	17	3.53	1.28
Your ability to conduct appropriate experiments.	16	3.56	1.15
Your ability to analyze and interpret data and use engineering judgment to draw conclusions.	17	4.18	0.88
Your ability to embrace new learning strategies to independently acquire and apply new knowledge to solve engineering problems.	17	4.29	0.77

Diversity and Inclusion

Question	Response Count	Mean	Standard Deviation
The instructor creates an inclusive learning environment for all students.	17	4.29	0.85

Details

The instructor creates an inclusive learning environment for all students.



Statistics	Value
Invited Count	17
Response Count	17
Response Ratio	100.00%
Mean	4.29
Median	4.00
Mode	5
Standard Deviation	0.85