University of Pittsburgh

Teaching Survey Spring 2024

Spring 2024 - Matthew Barry MEMS 0051 - INTRODUCTION TO THERMODYNAMICS - 1060 - Lecture

Created **Sunday, May 05, 2024**

Courses Audience: 66
Responses Received: 50
Response Rate: **75.76%**

Report Comments

Included in this report:

- Summary of responses to scaled questions
- Response breakdowns
- Student comments
- Results to instructor added custom questions (if applicable)

Understanding and using student feedback:

- We have resources to help you interpret and use results including our faculty worksheet with guided prompts and space to record summaries of feedback, actions, and outcomes.
- Members of our Pedagogy, Practice, & Assessment team are available for consultations and can help with:
  - Interpreting OMET results and developing a course of action if necessary.
  - Exploring various methods of assessment to improve teaching.
- In the future:
  - Discuss, teach, and model giving meaningful feedback with your students and give them multiple opportunities to practice giving feedback.
    - Gather important information about students at the beginning of the term by giving a pre-course survey.
    - Check in with students half way through the term by giving a midterm course survey.
- The Teaching Center offers multiple resources to support teaching and learning.

Office of Measurement and Evaluation of Teaching (OMET)
Contact us

University Questions

Summary table

Scale: strongly disagree (1), disagree (2), neutral (3), agree (4), strongly agree (5)

	Invited Count	Response Count	Response Rate	Mean	Mode	Median	SD
The instructor stimulated my thinking.	66	47	71.21%	4.30	5	4.00	0.86
The instructor was enthusiastic about teaching the course.	66	47	71.21%	4.38	5	5.00	0.80
The instructor presented the course in an organized manner.	66	47	71.21%	4.34	5	4.00	0.79
The instructor maintained an environment where students felt comfortable participating.	66	47	71.21%	3.91	4	4.00	0.97
The instructor maintained an environment where students felt comfortable seeking assistance.	66	47	71.21%	4.02	4	4.00	0.99
The instructor provided helpful feedback.	66	47	71.21%	4.15	4,5	4.00	0.91
Assignments contributed to my understanding of the subject.	66	46	69.70%	4.35	4	4.00	0.77
Overall of All Questions	462	328	71.00%	4.21	-	-	0.87

Overall effectiveness

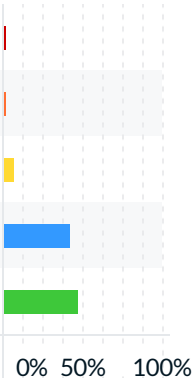
Scale: ineffective (1), only fair (2), competent (3), very good (4), excellent (5)

Question	Invited Count	Response Count	Response Rate	Mean	Mode	Median	SD
Express your judgment of the instructor's overall teaching effectiveness.	66	47	71.21%	4.09	4	4.00	0.88

Response breakdown

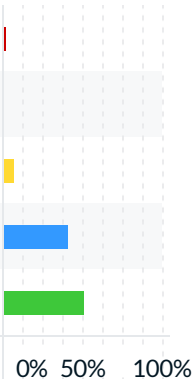
1. The instructor stimulated my thinking.

Strongly disag...	1	2.13%
Disagree	1	2.13%
Neutral	3	6.38%
Agree	20	42.55%
Strongly agree	22	46.81%
Total	**47**	



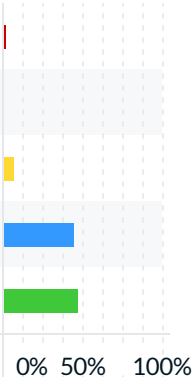
2. The instructor was enthusiastic about teaching the course.

Strongly disag...	1	2.13%
Disagree	0	0.00%
Neutral	3	6.38%
Agree	19	40.43%
Strongly agree	24	51.06%
Total	**47**	



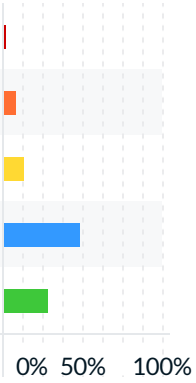
3. The instructor presented the course in an organized manner.

Strongly disag...	1	2.13%
Disagree	0	0.00%
Neutral	3	6.38%
Agree	21	44.68%
Strongly agree	22	46.81%
Total	**47**	



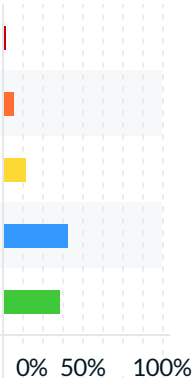
4. The instructor maintained an environment where students felt comfortable participating.

Strongly disag...	1	2.13%
Disagree	4	8.51%
Neutral	6	12.77%
Agree	23	48.94%
Strongly agree	13	27.66%
Total	**47**	



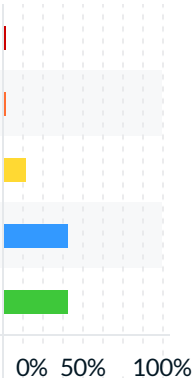
5. The instructor maintained an environment where students felt comfortable seeking assistance.

Strongly disag...	1	2.13%
Disagree	3	6.38%
Neutral	7	14.89%
Agree	19	40.43%
Strongly agree	17	36.17%
Total	**47**	

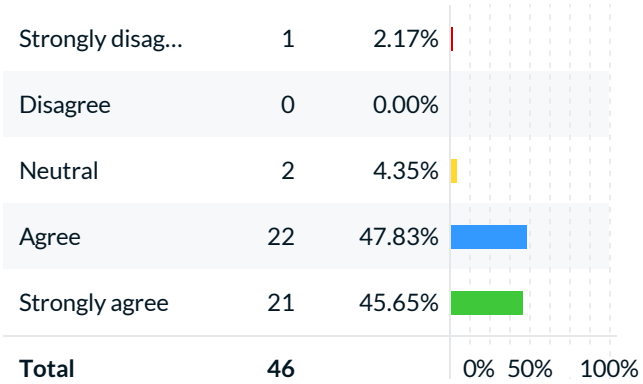


6. The instructor provided helpful feedback.

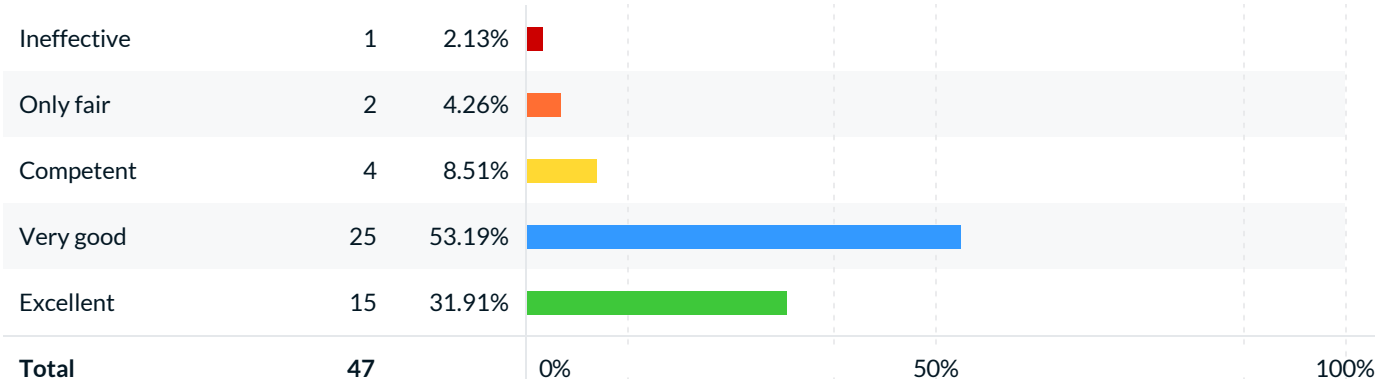
Strongly disag...	1	2.13%
Disagree	1	2.13%
Neutral	7	14.89%
Agree	19	40.43%
Strongly agree	19	40.43%
Total	**47**	



7. Assignments contributed to my understanding of the subject.



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



Comments

What did the instructor do to help you learn?

Comments
lots of problems to work through and good lec videos
Gave homework with multiple tries and hints and explanations
The homework and TopHat was very useful and set up in a way that helped me learn. I also liked how there were practice problems that weren't considered for grading. I also liked how Dr. Barry would relate concepts to real world engines and examples, it made me see the application and purpose in what we were learning. The practice problems before exams were also really productive to my learning.
In class worksheets; Office Hours; Examples
FE style questions, clear lecture videos
He included a lot of videos for the topics
Dr. Barry is an excellent Professor at teaching and keeping people interested. Taught me a lot about thermo and made it very interesting while doing it. The videos were the perfect length and taught everything in an organized manner.
Thermodynamics.
I liked the inclusion of his personal experience in the power–generation field. It shows that he actually enjoys what he is teaching, which makes me want to learn more.
The in class worksheets (when we still had them)
Very well structured course.
worked through examples in class
Dr. Barry does a really good job with his flipped classes compared to some of the other professors. Perfect bit size chunks that if you happen to fall behind due to sickness or other exams you can easily catch up and learn the material. His homework is challenging but the challenge I think is where I learn the most.
Did helpful and stimulating in class problems.
In–class examples that were solved using a variety of methods, well–made lecture videos, and an immense interest/knowledge base.
used his experience and enthusiasm about the subject in good ways to promote critical thinking. I like how his questions on homeworks were step by step so you did not feel overwhelmed
I liked the in class worksheets, as they were a good time to ask questions while TA's and Dr. Barry walked up and down the rows. It's extremely difficult to interrupt a lecture to ask a question, so the in class worksheet time was a convenient way to get smaller questions out of the way in a 1 on 1 setting. Also Dr. Barry's lecture videos are very good compared to other flipped classes.
Dr. Barry provided students with pre lecture videos and follow up questions to help students familiarize themselves with the content. In class, we would walk through example problems, sometimes coding together, and then answer a worksheet at the end. We were assigned a homework assginment each week. During times of exams, the TAs and Dr. Barry would create practice problems similar to questions on the exams.
was able to keep organized and online lecture videos were great. office hours are very accessible and does challenge students

Comments
Explains things different ways, accessible at office hours, relates topics to the real world
He would go over examples each class.
Basic foundations of thermodynamics.
How to approach thermo in a different perspective
The Top Hat exam review problems were very helpful.
Seeing the material and using it multiple times before the exam helped me learn it better. The top hat questions before exams provided a perfect way of practicing for exams
Thermodynamics
how to interpolate and use steam tables
I think the videos were presented in a very effective way that made the course material easy to understand. I also enjoyed the in class examples, as they helped with the homework but also deepened my understanding of the course material.
The flipped classroom was useful
Thermodynamics
Did problems in videos
He set up practice problems for the exams that were very helpful as a check of the studying I have done.
Provided concise lecture videos. Gave an appropriate amount of homework to help me learn and enough to where I could go back and study from. Provided lots of review problems before exams.
Related problems to real world examples
More about the Carnot cycle
His flipped lectures reinforced basic concepts and was effective.
Dr. Barry's lecture videos were quite effective at preparing me for the exams. The in class lectures complemented the videos quite well.
His lecture videos are relatively thorough and concise.
The tophat assignments were very well made and effective
Dr. Barry would break complicated topics down to its basic components and then was able to bring all the core concepts together so that I had a very good understanding of the concepts. Dr. Barry was also great in office hours as far as explaining difficult homework problems along with providing me with interesting real world examples that made me excited about thermodynamics and engineering as a whole.
Flip class format allows for continent review to lecture concepts
assignments were hard to taught the material
Managed the flipped style in a very good way that allowed me to learn the material myself without having to watch 3,1/2 hours of videos per lecture

What could the instructor do to improve?

Comments
INTRODUCE XSTEAM A LOT EARLY IN THE SEMESTER
Perhaps just explain why some assumptions can be made a little more clearly
I really liked the set up of this class and the only thing I would prefer is if we had more time to work on the final project. It felt like it was just given to us in a rush, although I do understand that it's because we hadn't fully learned the content needed for it.
Flow chart of the different variables and how to obtain values for them
Office hours. Being available 10am–4pm twice a week isn't attainable. Maybe shorten them and consistently be there. Also why no more Top–Hat in–class worksheets? You were raving about them and they all of a sudden disappeared.
Maybe deliver the content in away that's not so dependent on programming. Sometimes (more towards the end of the semester) it was difficult to understand concepts because I was trying to process the code portion of it and the concept itself (in class) was being delivered purely on code.
N/a Dr. Barry is perfect
Nothing
I feel like we got blamed for collectively blowing the first exam, but if we all blew it, I don't think it was entirely our fault. It certainly was partially our fault, but I find it hard to believe that it was entirely on us.
Know that his teaching staff would be able to support him for all of his endeavors (make us homework, and worksheets)
I think that more time investing in topics that students are struggling with
more clear explanations on the homeworks
Maybe add more videos showing us applications in the real world.
Continue to post the in–class worksheets the whole way through the semester.
N/A.
Continue the in class worksheets through the end of the semester. Give more practice and preparation for the final project.
Maybe provide students with the project a little earlier or tell them what the project will be so they can mentally prepare for it.
improvement of attitude and moral.
The top hat is unorganized sometimes
Allow for more questions to be asked
Not too much
Break problems into steps
The 100% flipped classroom model is incredibly unengaging. As is Dr. Barry's incredibly rude and condescending attitude, which he constantly displays towards his students. During lecture, he constantly complains about low attendance, but fails to realize that the flipped lecture style makes class unenticing.

Comments
It would be helpful to cover some harder problems in class as most of the problems were a lot simpler than what was seen on the homework.
Idk nothing lowkey, he the man.
post more in class practice
Nothing really.
I think the project should be a solo effort and more condensed. The main reason being, when you assign a project like this due at the very end of the semester, it is very hard to coordinate availability with another student and have time where both can work on it, especially if they are a stranger. If both students have other projects, finals to study for, it makes thing a lot harder. It would be conducive to have students work on it individually when time allows at the end of the semester, as working with another person during that time of the year doesn't go so well.
Lecture videos and length videos seem too long at times making is harder to keep focus
Nothing, I like the way he instructs
Make class more engaging (less lecturing and more problem solving). Continue to post in–class example slides throughout the semester.
Let us know at the beginning of the semester if he's going to do pop quizzes.
Some more review problems
Make exams less trick questiony
Dr. Barry could maybe include more projects
Release the project before 2 weeks before finals.
I miss the in class worksheets from statics
Some days I felt the pacing of the concepts was a little too fast or a little to slow, but generally it was paced pretty well.
More practice problems! Best part of the course for my learning
not sure
Na

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

Comments
no
No, Killin it
See circuits omet.

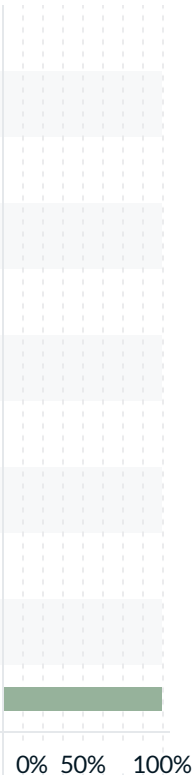
Comments
I think this class is very difficult to understand over the flipped format. Thermodynamics depend quite a bit on situational changes, and with the information in packed/ condensed videos it was personally really hard for me to retain the right nuances. This was even while taking very in−depth notes and pausing the video each time I wanted to write something. I would just highlight the wrong thing or remember something that was for a specific example, not for the general topic. Overall, I think I just learn poorly in flipped lectures but it was specifically difficult in this class.
Good videos, good lectures, big smart
nope
Thermo is very difficult and he makes it much easier to learn with the well put together videos and real world applications and examples.
sorry Barry you are a very good teacher
Thanks for your help making me understand thermo more.
This class shaped up to be one of my favorite classes so far. I found the topics to be very interesting and I appreciated your engagement with the course.
no
I wish I knew meters cubed to liters...but I did better on the second exam so it's fine :)
thanks
No
no
None at this time
I hope your summer goes better than the semester :D
no
I appreciate you teaching us thermo this semester, even if we made you hate it as much as circuits.
Do not have this class in that crappy old lecture room, can hardly hear you, the seating is super uncomfortable, and the class time should be later in the day, too early for an interesting class. Would help with attendance
NA
no
Thank you for the nice semester
Thank you for the semester!
Dr. Barry did an excellent job of covering the basics of thermodynamics
I very much prefer normal/classic lecture setup over flipped classes. The way it was setup only encouraged me to not go to class and encourage others to not go to class.
not particularly

Comments
Dr. Barry's enthusiasm for teaching this course and why thermodynamics is so important meant a lot to me. In some ways helped me to recall why I wanted to study mechanical engineering in the first place.
Nope
no thank you for a great semester
Na

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).

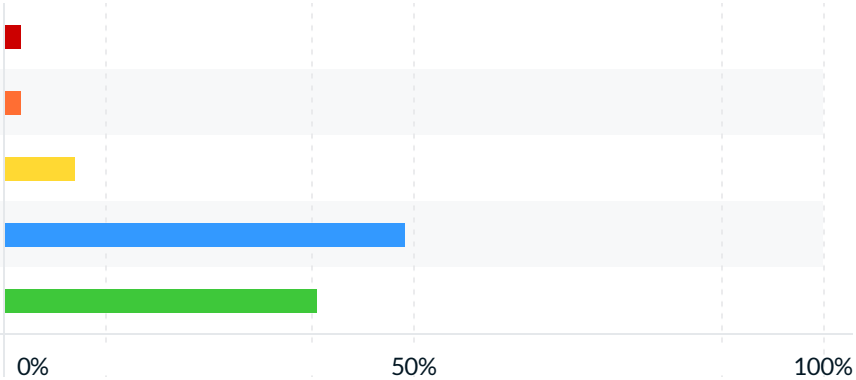
Undeclared	0	0.00%
Bioengineering	0	0.00%
Chemical Engi...	0	0.00%
Civil Engineeri...	0	0.00%
Computer Eng...	0	0.00%
Electrical Engi...	0	0.00%
Engineering Sc...	0	0.00%
Environmenta...	0	0.00%
Industrial Engi...	0	0.00%
Materials Scie...	0	0.00%
Mechanical En...	49	100.00%
Respondent(s)	**49**	



The instructor was accessible.

The instructor was accessible.

Strongly disagree	1	2.13%
Disagree	1	2.13%
Neutral	4	8.51%
Agree	23	48.94%
Strongly agree	18	38.30%
Total	**47**	



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

Comments
do practice problems
Actually do the homework
I would have spent more time fully understanding the homework.
Understand when to use the various methods to get a value
Take homeworks seriously
It's a difficult class to catch up in if you skip even just one lecture. Attend all of them that you physically can.
Watch the videos go to lectures. He's very fair on exams
nothing
Get XSteam early. I waited a while to get it because I was lazy and it is so much easier now with computerized tables.
Barry will do whatever he says he will do, if says there is a pop quiz then there is a pop quiz. Or if he says 100% response rate on the omet means no final, then there will be no final. He always follows through with what he says he will do.
do the work.
gone to office hours more when I was struggling on the homework
If you put in the work to do the assignments and show up to class you will succeed.
Make sure you do all the assignments and material provided to you.
Attend office hours if there are problems you are confused about, complete top−hat questions when studying for exams, and work with a group.
watch videos and go to office hours ASAP
Talk to TA's and go to office hours as much as humanly possible.
Do as much practice as possible. Make sure to review the homework and do the provided practice before the exams. Make sure to know your units.
go to class and do the exam practice problems you'll be chilling
Make sure to go to lecture and study before tests
Make sure you watch the videos AND take notes.
Took the practice test more seriously
It is very important to do many or all of the problems posted to Top Hat to get additional practice.
Just do the work like he says and you'll be absolutely good.
remember unit conversions

Comments
I could have read the textbook more frequently.
Review your notes and make a habit of studying regularly
Go to lecture
Gone to see him more in office hours.
Start homeworks early. Ask questions. Do the review problems before the tests.
Study a lot on your own time, not just for exams
Go to office hours, practice review problems on tophat for studying for exams
Stay on top of online lectures and review often
I would consistently learn the material throughout the semester instead of studying right before exams
Go to class.
attend office hours whenever you are confused
If something does not make sense to you rewatch the lecture videos, read the textbook, or better yet, go talk to the instructor/TA.
Watch the lecture videos in advance, do every practice problem and post lecture wrap up assignment
go to class watch the videos and do the hw
Try to stay on top of the work, it will help significantly. Start going to office hour’s immediately

Engineering Undergrad Courses

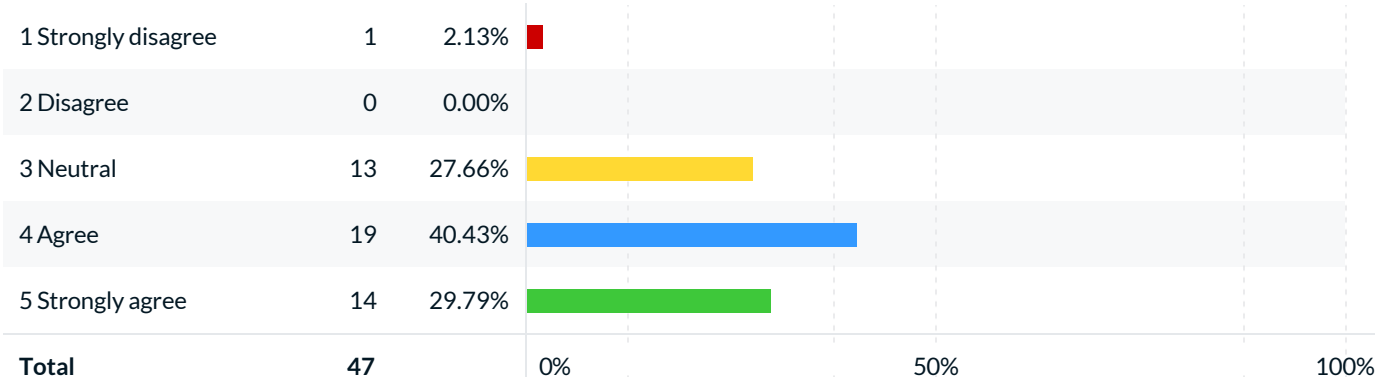
Please rate the degree to which this course has improved...

Question	Results		
	Response Count	Mean	Standard Deviation
Your ability to identify, formulate, and solve complex engineering problems by applying principles of engineering.	47	4.36	0.74
Your ability to identify, formulate, and solve complex engineering problems by applying principles of science.	47	4.30	0.66
Your ability to identify, formulate, and solve complex engineering problems by applying principles of mathematics.	47	4.21	0.75
Your ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare.	47	3.62	1.15
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).	47	3.38	1.28
Your ability to apply engineering design to produce solutions that meet specified needs with consideration of environmental and economic factors (i.e., sustainability principles).	47	3.36	1.34
Your ability to effectively communicate verbally with a wide range of audiences.	47	2.96	1.40
Your ability to effectively communicate in writing to a wide range of audiences.	47	2.91	1.43
Your ability to recognize ethical and professional responsibilities in engineering situations.	47	3.28	1.41
Your ability to make informed judgments that consider the impact of engineering solutions in global and societal contexts (i.e., sustainability principles).	46	3.24	1.39
Your ability to make informed judgments that consider the impact of engineering solutions in economic and environmental contexts (i.e., sustainability principles).	47	3.15	1.33
Your ability to function effectively on a team whose members together provide an inclusive environment, collaboration, and leadership.	47	3.60	1.10
Your ability to function effectively on a team whose members together establish goals, plan tasks, and meet objectives.	47	3.62	1.09
Your ability to develop appropriate experiments.	47	3.13	1.42

Question	Results		
	Response Count	Mean	Standard Deviation
Your ability to conduct appropriate experiments.	46	3.09	1.44
Your ability to analyze and interpret data and use engineering judgment to draw conclusions.	47	3.79	1.14
Your ability to embrace new learning strategies to independently acquire and apply new knowledge to solve engineering problems.	47	3.96	0.93

Diversity and Inclusion

The instructor creates an inclusive learning environment for all students.



Statistics	Value
Invited Count	66
Response Count	47
Response Ratio	71.21%
Mean	3.96
Median	4.00
Mode	4
Standard Deviation	0.88