University of Pittsburgh

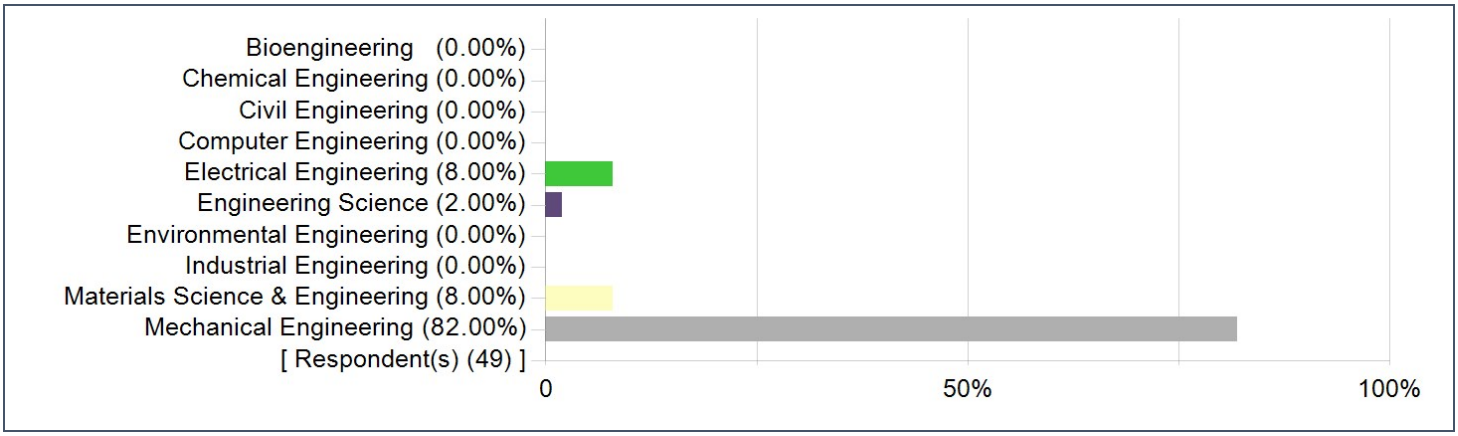
Summer 2018 - Matthew Barry MEMS 0051 - INTRODUCTION TO THERMODYNAMICS - 1030 - Lecture

Project Title: **2187 - Teaching Survey Summer 2018**
Total Enrollment: **50**
Responses Received: **50**
Response Rate: **100%**

Subject Details	
Name	MEMS 0051 - INTRODUCTION TO THERMODYNAMICS - 1030 - Lecture
DEPARTMENT_CD	MEMS
CAMPUS_CD	PIT
SCHOOL_CD	ENGR
CLASS_NBR	13887
SECTION_NUMBER	1030
TERM_NUMBER	2187
COURSE_TYPE	Lecture
CLASS_ATTRIBUTE	
First Name	Matthew
Last Name	Barry
RANK_DESCR	Assistant Professor
TENURE	NT

Creation Date: **Sat, Aug 25, 2018**

Please select the program(s) you are enrolled in. Check all that apply.



University Questions

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

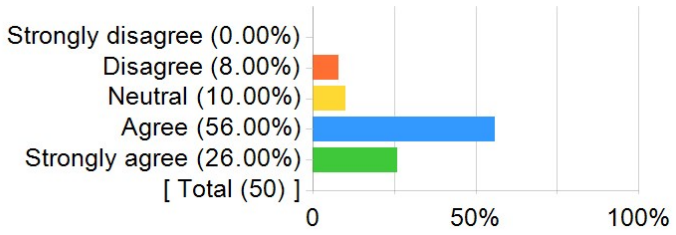
Question	Results		
	Response Count	Mean	Standard Deviation
The instructor stimulated my thinking.	50	4.00	0.83
The instructor was enthusiastic about teaching the course.	48	3.71	0.97
The instructor presented the course in an organized manner.	50	3.98	1.00
The instructor maintained an environment where students felt comfortable participating.	50	3.92	0.99
The instructor maintained an environment where students felt comfortable seeking assistance.	50	3.76	0.94
The instructor provided helpful feedback.	50	3.72	0.86
Assignments contributed to my understanding of the subject.	50	3.72	1.01

Instructor's overall teaching effectiveness

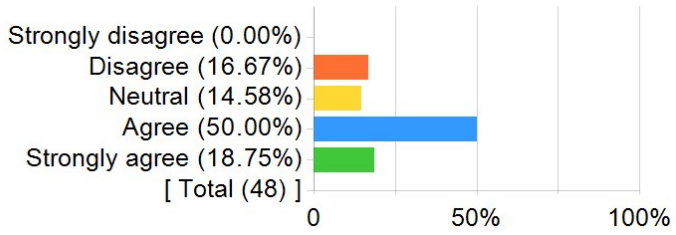
Question	Results		
	Response Count	Mean	Standard Deviation
Express your judgment of the instructor's overall teaching effectiveness.	50	3.50	1.04

Instructor Items: Detailed Results

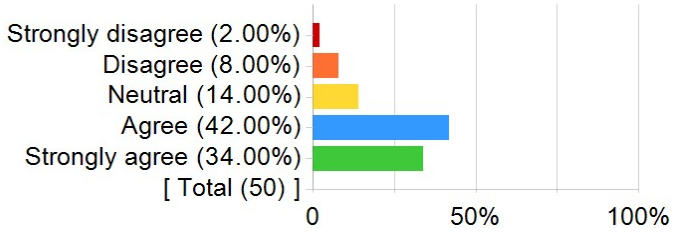
1. The instructor stimulated my thinking.



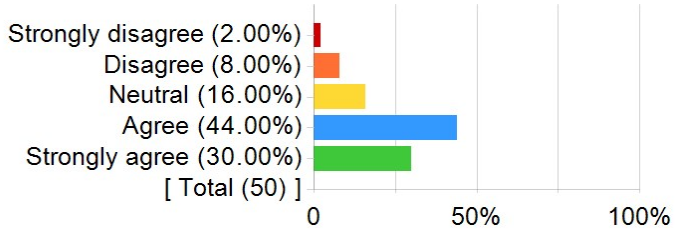
2. The instructor was enthusiastic about teaching the course.



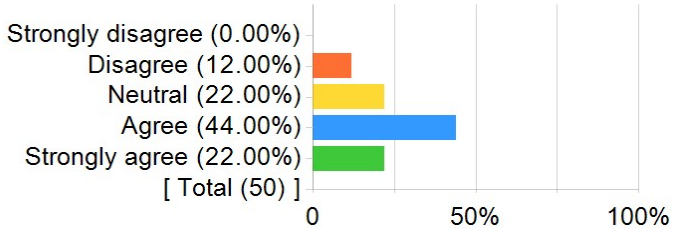
3. The instructor presented the course in an organized manner.



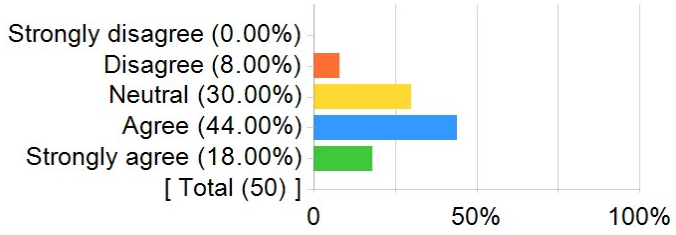
4. The instructor maintained an environment where students felt comfortable participating.



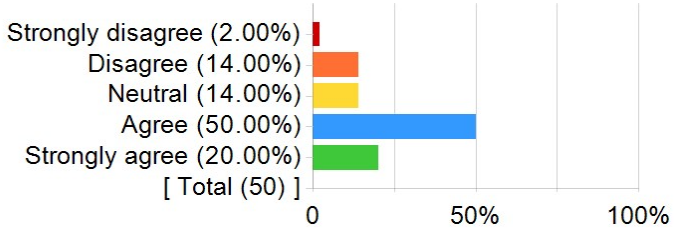
5. The instructor maintained an environment where students felt comfortable seeking assistance.



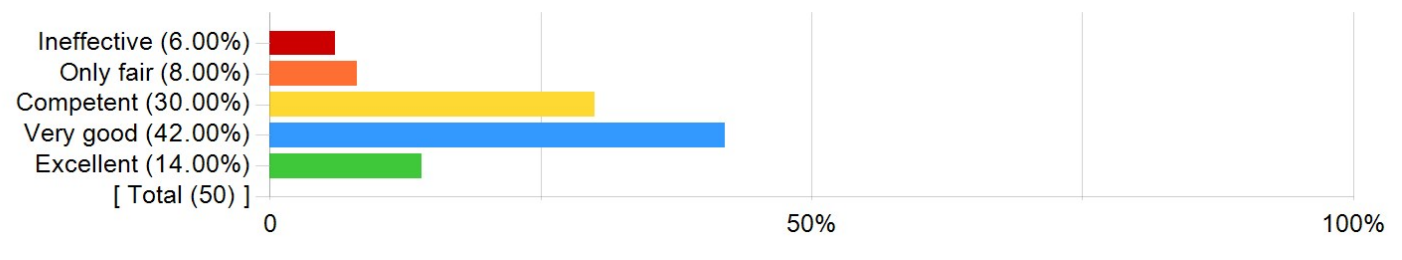
6. The instructor provided helpful feedback.



7. Assignments contributed to my understanding of the subject.



Instructor's overall teaching effectiveness:



Comments

What did the instructor do to help you learn?

Comments
Dr. Barry was great about answering questions in class
Provide outlined lecture notes
Explained how to solve problems.
Did problems in class
He helped me learn the mathematics of Thermodynamics. Specifically, how to use specific volume, enthalpy, entropy, internal energy, etc. to find different parameters of a problem and how to interpret the obtained data of the solved problem.
he understands how it works with college kids. his down to earth teaching style helped me focus and stay interested.
Gave difficult questions on homework to make it very challenging
introduction to thermodynamics
.
that intro classes are no joke
He provided very clear and detailed power points which we could take notes on if printed out.
Dr. Barry used the homework to help students to critically think about what is going on in the lesson. He also was available outside of office hours via email.
He provided review sessions before the exam.
Post practice exams online
He explained each top in detail so that we understood not just what was going on but the reasons behind each topic.
He was verry good at helping with assighnments at office hours
PowerPoints were organized and homework assistance cleared much of questions. Sincerely had desire to answer questions to fullest extent.
Lectures were well organized and homework was challenging.
The lecture and PPT are useful for reviewing
Explained things clearly.
Working out the examples, as well as giving realistic examples and carefully outlining and explaining each step.
Examples
Challenged out critical thinking with known concepts applied in ways we hadn't seen before. Forcing us to think differently than in other classes.
Weighting homework and quizzes more heavily helped because it allowed me to earn points by taking time to fully understand the assignments.
Derived formulas in class to better understand meaning behind equations on formula sheet.
He was a very organized lecturer.
He answered questions sent via email in a helpful and acceptably timely manner and explained concepts thoroughly in class.
Homeworks
His powerpoint were clear and to the point. They really outlined the important things on each slide.
Provided lots of examples and in class notes to students
Dr. Barry was always available to answer questions and very quick to respond to emails. I appreciate when professors respond promptly and with helpful answers, often times professors will take over a day to respond or not even at all, Dr. Barry would respond within the hour. I appreciate his review sessions before exams on the weekends. He also provided old exams and old assignments from prior classes.
Provided in class examples. Thought provoking homework.
Taught the content in an organized and well thought out manner. Held review sessions for each exam.
Gave me homeworks that were about as hard as the tests
tricky tricky
Professor Barry was very clear with his teaching of thermodynamics. In previous classes, these concepts have been difficult for me, but Barry's ground up method was clear yet well paced.

Comments
Worked through examples in class
He did examples in class.
He did a good job of reviewing many different variations and ways that problems could be presented to prepare us for exams
That I still don't know how to prepare for an exam.
Discussed lecture slides, gave assignments, and graded assignments.
The homework and exam questions were challenging, but there were multiple ways to get help (TA, office hours, etc.).
Addressed any and every question, and he held review sessions before exams.

What could the instructor do to improve?

Comments
Dr. Barry could be a bit more lenient on late work. Since nothing is accepted past the beginning of class on the day that its due, when I would realize that I had waited too long to start an assignment, I wouldn't even bother looking at it. If I had been able to hand in late homework, I would have learned more.
Provide more homework and practice problems to help prepare for exams
Tests were very tricky
Prepare students for a variety of problem types more similar to those found on the exams
He could do more research since he is totally into that shit, just let him research if that's what he wants to do.
the homework was more time consuming than helpful. maybe try a different style of homework?
Make the HW a little less challenging, sometimes I just got fed up with the HW and just skipped problems when they were too much of a pain to deal with
tests/homeworks: less tricks, make more about whether or not one understands the content vs figuring out the puzzle
.
Homework was harder than class, might as well go over hard stuff in class so we can figure it out.
Go over more practice problems or maybe even go over the homework.
He could slow down in lectures, or offer better lecture notes that correlate closer to what is important in the lecture instead of having 4–5 slides of deriving an equation.
Teach the class in more context rather than just deriving equations in class.
Post the homework the day of class. Actually be at office hours.
The tests could be less speed–based.
There doesnt seem to be enough focus on problem solving. he gives us the components but not the skills to put them together to solve the problems on our own.
Have more consistent office hours. Post powerepoints consistently so that students have time to print them before class. If possible, post all PowerPoints on the efisrt day of class.
The example problems in class could be more difficult and more similar to some of the homework problems. Specifically for the first exam, making it shorter would have been better.
Example in lecture is too simple
Provide a fair amount of time on the test if the grading is going to be strict. If you are going to take off for math errors, there should be time to check for them.
The instructor could put more emphasis about which resources to use. Making the book by Moran and Shapiro the required text As the Sonntag and Bornakke listed in the syllabus was inferior to the text Dr. Barry recommended us use, in terms of worked out problems and the style of questions on the exam were more similar to the Moran Shapiro text. Be more consistent with the tests in future exams.
More examples
The biggest help to students would be to provide more examples of problems similar to test questions either in class or as suggested practice. Class examples are often trivial explanations of concepts rather that an accurate representation of the application we are expected to know. Also, not giving homework questions that are fully explained, such as giving a value in the problem that is incorrect without indicating that we should be mindful of that possibility. Teaching the importance of checking values is important, but expecting students to check every given value with no pretense doesn't help our learning, instead it just takes points away without giving us a chance to perform.
Provide more examples in class and clarify on homeworks whether there is a trick that may be expected to do to complete. Perhaps,

Comments
add a recitation to allow for my in–class practice where questions can be answered.
Give homework that tests the topics more rather than trying to trick us.
While I see the pedagogical utility of learning when you can't solve a problem, I'm not sure that not presenting/warning about this possibility (to my memory anyway) before applying it to the homework was the best move (I learned about the insolubility of Problem 4 on HW4 from a friend on the day it was due). The idea of looking things up online to solve homework problems might not be something on most people's radar
Don't preach about not making mistakes because in industry you can't make them, and then continuously make mistakes and come up with excuses for them. Practice what you preach.
Give quizzes back sooner
Barry can sometimes be a little contradicting with statements throughout the semester.
Having access to the solutions to in–class examples would be helpful
Referencing sections in the textbook as we go through lecture will be helpful to the understanding of the material. There is usually a large portion of the lectures dedicated to deriving the equations we use in the class, this is very important although, more explanation of how to apply the equations to exam like problems after we have derived them would be beneficial.
more examples in class. Go over complicated concepts more in depth.
Make sure the homeworks are error free.
I have never sat in a class this boring. Maybe doing more homework and test like problems in class.
Some problems were needlessly tedious and involved for an intro level course
Don't have the homework be impossible. Making problems not solvable just confuses students and wastes their time. HW is supposed to be used as study material, and shouldn't make students have to use google to get values to answer the questions
I don't know
Instead of spending so much time deriving equations, it would have been helpful if Dr. Barry went through many more examples and gave better conceptual explanations.
Not sure.
Post annotated lecture slides on Courseweb
He could make the exams either shorter so people can actually finish them in time and check their work, or else grade with more partial credit as we don't have time to check our arithmetic.
I think if he taught using a little more sarcasm and jest it would really liven up the class
I think a croissant alternative would fair well for overall productivity of the class.
Create and grade his assignments more fairly.
My favorite parts of the course were when we talked about real world examples, so I would have liked more of those in lectures.
I think a flipped curriculum would be a better format for this information.

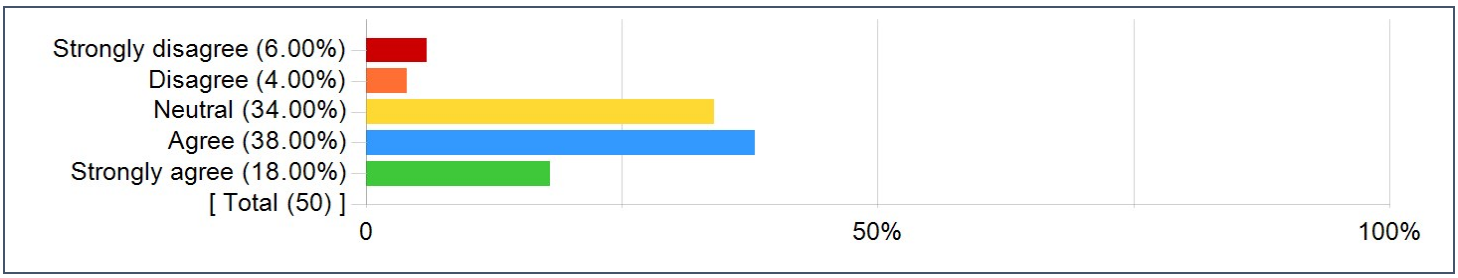
Do you have any other information that you would like your instructor to know?

Comments
No
No
Your name is a type of fruit, and you made thermodynamics interesting, and this is a run on sentence. I now know how to find the flux capacitance of a piston cylinder.
you are on of the better professors i've had at pitt even though I hated thermo
n/a
.
I liked Dr. Barry and enjoyed him as a professor, but sometimes I thought some of the questions presented in the homework and exams were unfair.
Provide more interactive examples in class and offer homework every week because the only way we have an idea of what is on the exam is through those problems and the practice exams. There were weeks during the semester where no homework was given and I was unable to retain the necessary information because we did not look at the material again until two or three weeks after the initial instruction.
A lot of times, I felt like I did not know how to study because I couldn't completely follow the book, the example problems in the notes

Comments
and practice exams do not reflect how the exams will be. Please let students know what they should focus on (give heirarquy scale on what to study).
For the first exam, it was way too long. I know a lot of people struggled to finish not because of the difficulty, but the amount of tedium that was required. There was so much interpolation that was necessary and that made the exam difficult to complete within the given time frame. I was punished for not finishing, simply because the exam took too much time. I did not get any points off for the work that I did complete on the exam, so if I had more time then I would have been able to get a significantly higher score on that last exam. It was curved, which was nice, but the length and how not finishing hurt me so much annoyed me significantly.
It would help if the homework questions were more related to questions we might see on an exam.
I feel like the exams were too difficult and did not reflect understanding of the subject. If you want people to understand the subject and not just memorize how to do problems, don't give exams where there is only time to immediately know how to do a problem. Especially exam one.
The previous worked out homework solutions and final exams were extremely helpful. I found https://www.learnthermo.com/ to be an excellent reference.
No
In homework problems that we were expected to research values that were not given in the steam table, I struggled to realize that I had to research a value because in the beginning of the semester we were told that if a value isn't included in the steam table that we were doing something wrong. I disregarded methods that included information that wasn't in the steam table and lost points for that reason.
Overall, the class was very organized and your responses help explained confusing concepts. Homework was a little tricky and contradicting since if values were not on the table, you were doing it wrong.
No.
n/a
No
N/A
n/a
Cool guy.
Can this just like not be a class anymore.
When learning the fundamentals of something it is counterproductive to be evaluating problems that are extremely difficult. It makes it difficult to lay the groundwork and build off of to ultimately attack harder problems down the line
The hw and exams were bull. He throws a lot of curveballs that aren't really fair on exams and HW. Googling values because without it the HW is impossible, as in it is required to solve the problems, is completely unfair and unreasonable. A solid 20 percent of the HW problems are no solution, or give you values that you need to double check because they are written specifically to be incorrect, which is also not okay
not at this time.
Nope
No
Everything I know about cars has come from your casual remarks regarding things I should already know about cars
Dr. Barry did an excellent job teaching the class. His style of teaching might be challenging and frustrating at times but all he wants is for you to use your noggin.
Your list for good beer during the day is contagious.

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
Start preparing for exams earlier
Study
Find practice problems more challenging than those found on the homework and practice tests to study with. These materials did not prepare me well for the difficulty of the exams.
I could have studied more. This stuff came relatively straight forward to me, but I forgot it. There are always outside sources like youtube and people tutoring on chegg, but his problems are not from the book, so going to chegg for his hw problems is not going to help you because he makes his problems up or something.
you have to be on the ball from the beginning. don't miss lectures and pay as much attention as possible
do every single homework problem completely on your own
prepare for surprises
actually take good notes and don't rely on the online lecture slides
Read the textbook. Go over notes ahead of time. Do homework. Bother Barry in office hour as much as possible.
This course with Barry is not like the other courses at Pitt. Making assumptions is key in this course and thinking about what the process is doing prior to any calculations will help.
Take it with Qing Ming Wang
Go see the TA more
study all the practice he gives you, but know that it is likely you still wont be able to solve some of the problems on exams.
Try putting yourself in the shows of students and ask their learning methods. I am heavily reliant on having the PowerPoints before class for this specific course since it is fast paced, and has lots of formulas; the book is not completely reliant and helpful.
Be able to work through problems quickly. This was the hardest part of the exams and the class, simply finishing things in the time given, if you understand the homework and know how to problem solve, you should do well, but you need to be able to work through the problems quickly.
I will practice the problems from previous assignments
Attend lectures, The worked out examples are key for studying. If you miss lecture, Dont bother with reading sonntag and bornakke, you will get confused parsing together what the hell the author is saying. "Fundasmentals of thermodynamics" by Moran and Shapiro has much better examples and concise writing.
Read and practice out of the supplemental text earlier in the course.
Expect the unexpected. Take nothing for granted. Study the little things.
Try the homework by yourself and then work with other people
Pay attention in class
You will be expected to google information to complete the homework.
Understand how to navigate the steam tables and equation sheet, and leave ample time to complete the homework because it's never straight forward
Read the textbook and make sure that you have a conceptual understanding of the content.
Reading ahead of lecture will allow you to get more out of each lecture. A lot of the material in intro to thermo is new to most students so being familiar with the topic covered in the lecture prior to each class will be beneficial.

Comments
Always read the book. It is very helpful and has good examples
Just studied more before exams. Don't stress too much.
Just lower your grade expectation by a letter grade and the whole experience will be more enjoyable
Do not take this during the summer with 18 credits because with this professor because even though its 3 credits you need to work on the material as if it were 6. Start studying at least 2 weeks before the exam
do more homework.
Make sure you fully understand all methods used on the homework before the exams.
Do all the homework, pay attention, and go to office hours when needed.
Worked more problems
study harder
Used the textbook examples to review for tests
Start your homework early.
Study a lot and don't underestimate the material. Put in maximum effort.
Make sure to understand what is happening with the processes on the P–v/T–v and T–s diagrams. Understanding that there are multiple ways to get a "solution" but there are different assumptions/approximations that go with each one.
Read and review the book for concepts and relatable practice