



WashU Spring 2019 Instructor Report for SP2019.E37.MEMS.5403.01 - Conduction and Convection Heat Transfer (Michael Wendl)

Project Title: **WashU Spring 2019 Course Evaluations**

Courses Audience: **22**
Responses Received: **12**
Response Ratio: **54.55%**

Report Comments

Welcome to your Instructor Report for WashU Course Evaluations. Below you will find response data from the specified course section. Responses to personalized questions appear at the bottom of the report.

The intention of this report is to provide feedback, and also to prompt improvement in areas that may be lacking. This report is accessible to appropriate department level and school level users, as determined by your school. We appreciate your dedication to our learning community at Washington University.

If you have questions about this report, please contact evals@wustl.edu

Creation Date: **Tuesday, May 21, 2019**

Course Administration

Was a course syllabus or a course information sheet distributed or available online?

1. Was a course syllabus or a course information sheet distributed or available online?

Options	Count	Percentage
Yes	12	100.00%
No	0	0.00%

Did the syllabus explain the content and administration of the course (e.g., office hours, grading)?

1. Did the syllabus explain the content and administration of the course (e.g., office hours, grading)?

Options	Count	Percentage
Yes	11	91.67%
No	1	8.33%

Early in the semester, did your professor explain the expectations for academic integrity?

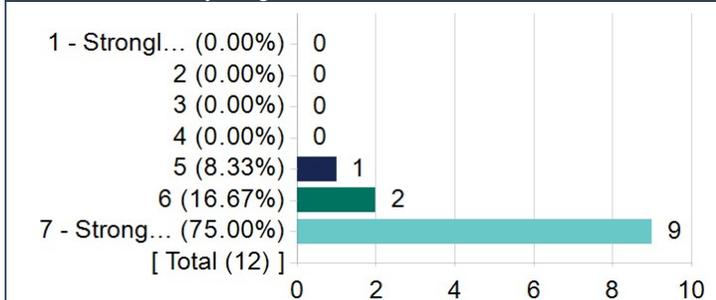
1. Early in the semester, did your professor explain the expectations for academic integrity?

Options	Count	Percentage
Yes	12	100.00%
No	0	0.00%

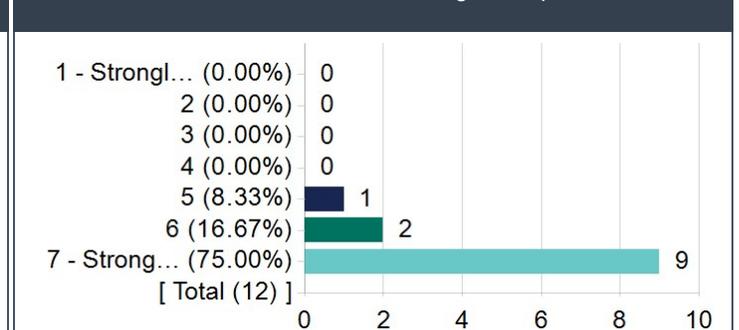
Rating Scale Responses

Question	Response Count	Score		
		Mean	Standard Deviation	Median
In retrospect, the syllabus was an accurate reflection of how the course was actually taught.	12	6.67	0.65	7.00
The course matched the course catalog description.	12	6.67	0.65	7.00

1. In retrospect, the syllabus was an accurate reflection of how the course was actually taught.



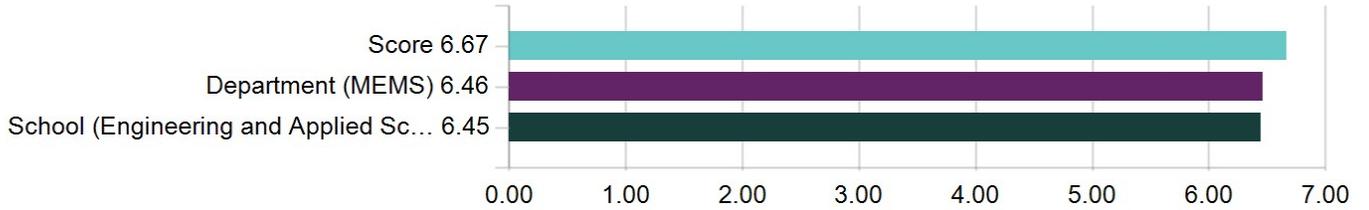
2. The course matched the course catalog description.



1. In retrospect, the syllabus was an accurate reflection of how the course was actually taught.



2. The course matched the course catalog description.

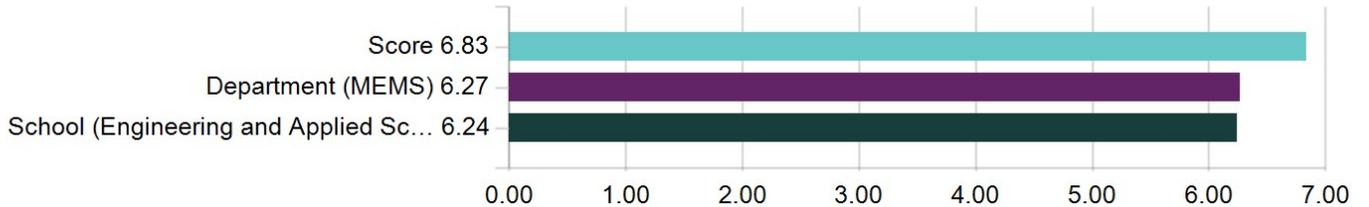


Please rate how well **Michael Wendt** promoted an inclusive learning environment with regard to the diversity of student personal backgrounds and identities.

1. Please rate how well **Michael Wendt** promoted an inclusive learning environment with regard to the diversity of student personal backgrounds and identities.



Statistics	Value
Response Count	12
Mean	6.83
Median	7.00
Standard Deviation	0.39

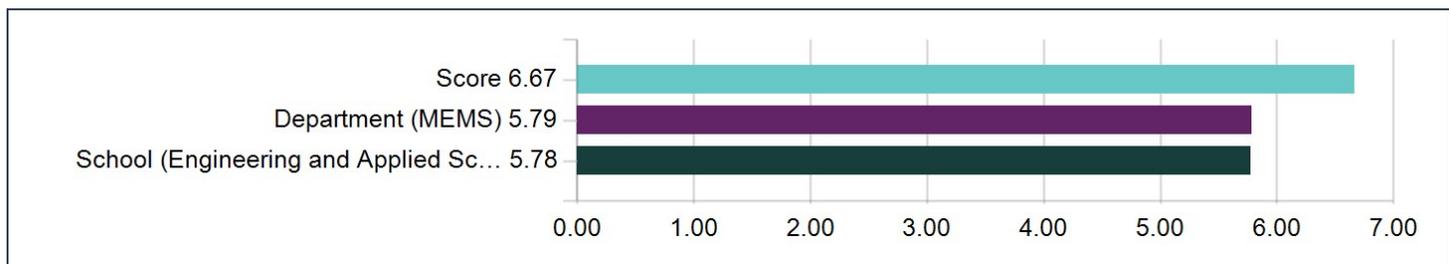
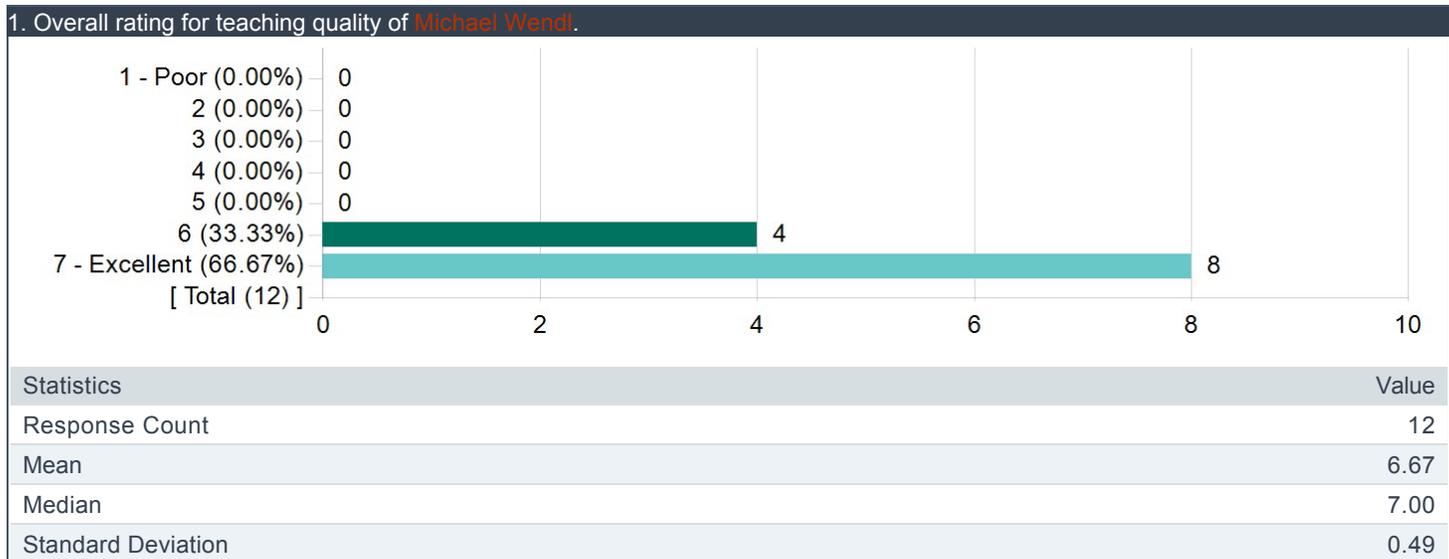


Where relevant, please give specific examples to explain your answer above.

Comments
For the syllabus, it included the order topics would be covered, but it did not include how grades would be calculated (based off of 5 homeworks, 1 midterm, and 1 final exam)
Dr. Wendl constantly asked if there were questions and if everything was understood. He was always available to help with homeworks and if anyone had questions he was very thorough in his explanations.
Always encouraged us to ask questions!

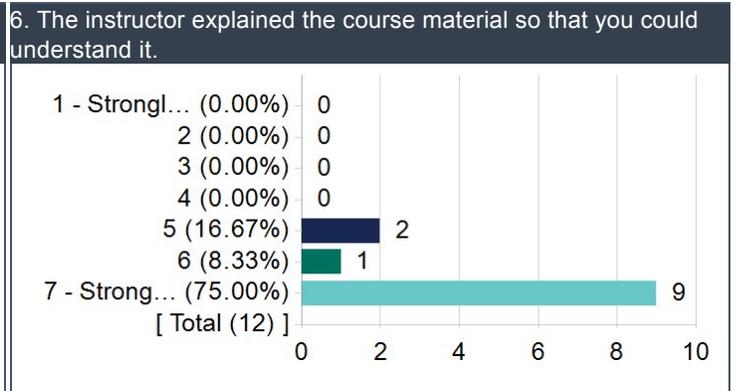
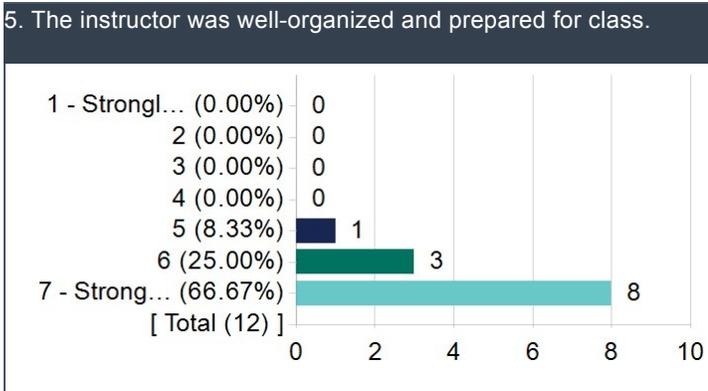
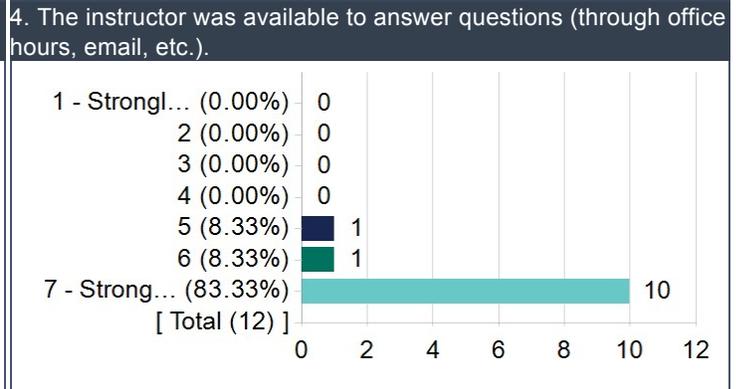
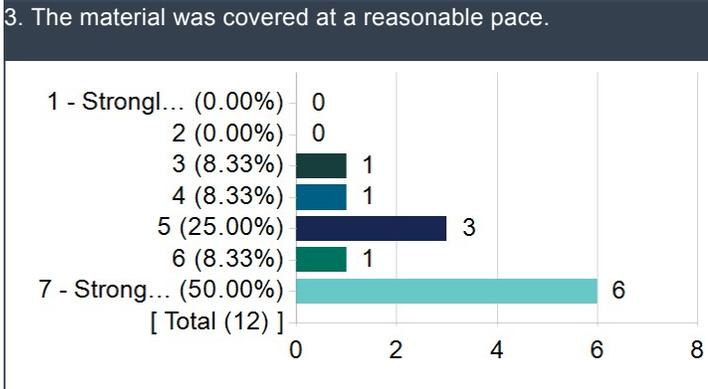
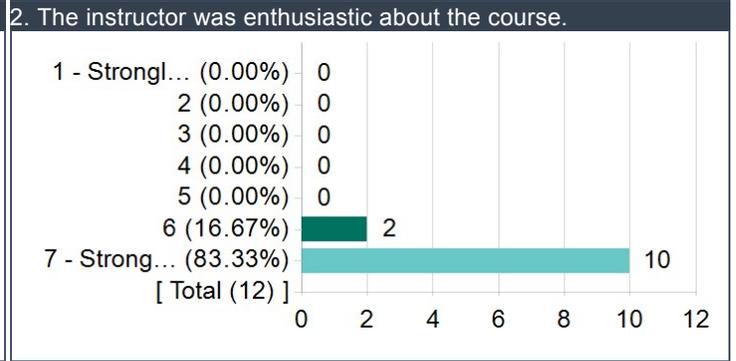
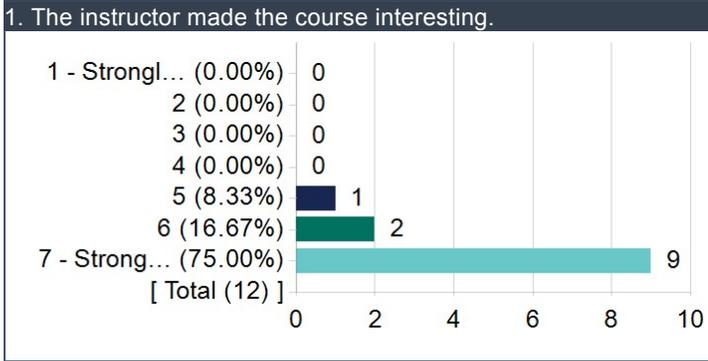
Instructor Evaluation

Overall rating for teaching quality of **Michael Wendl**.



Rating Scale Responses for **Michael Wendl**

Question	Response Count	Score		
		Mean	Standard Deviation	Median
The instructor made the course interesting.	12	6.67	0.65	7.00
The instructor was enthusiastic about the course.	12	6.83	0.39	7.00
The material was covered at a reasonable pace.	12	5.83	1.40	6.50
The instructor was available to answer questions (through office hours, email, etc.).	12	6.75	0.62	7.00
The instructor was well-organized and prepared for class.	12	6.58	0.67	7.00
The instructor explained the course material so that you could understand it.	12	6.58	0.79	7.00



1. The instructor made the course interesting.



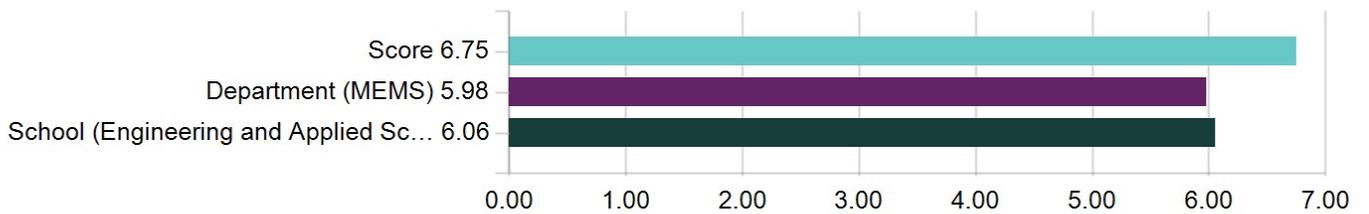
2. The instructor was enthusiastic about the course.



3. The material was covered at a reasonable pace.



4. The instructor was available to answer questions (through office hours, email, etc.).



5. The instructor was well-organized and prepared for class.



6. The instructor explained the course material so that you could understand it.

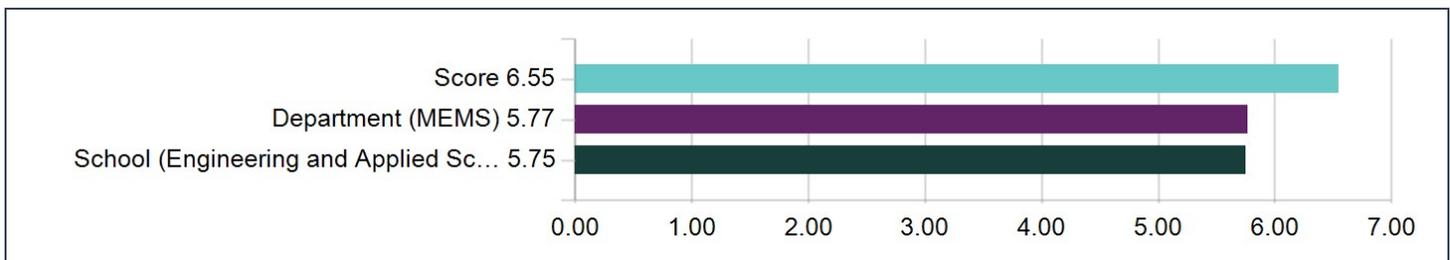
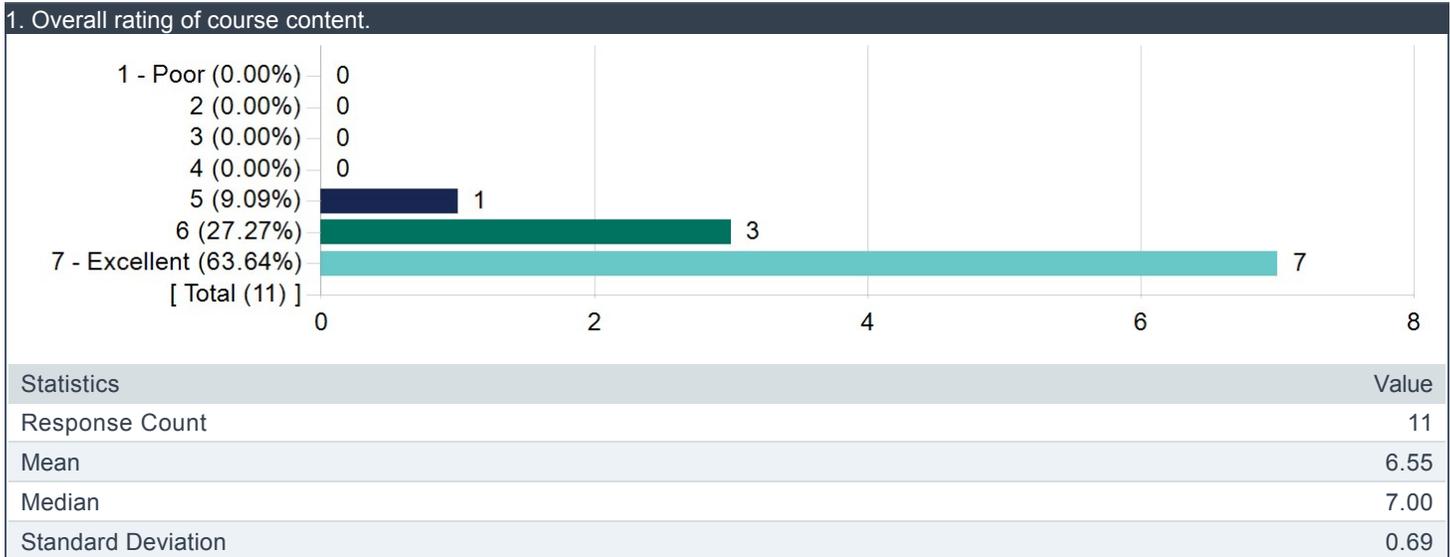


Please elaborate if you felt the material was not covered at a reasonable pace.

Comments
Some problems could have been covered more quickly, like skipping some steps in a derivation would be okay.
there were undergraduate materials that we went over that I felt was not necessary as I had already taken an undergraduate heat transfer class

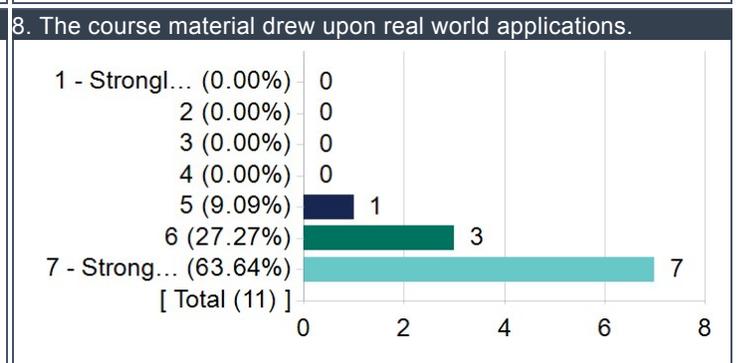
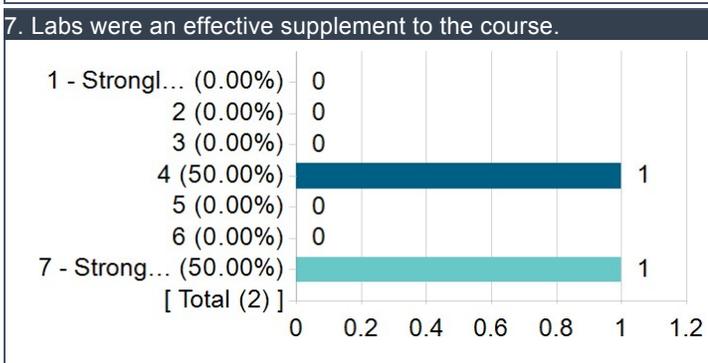
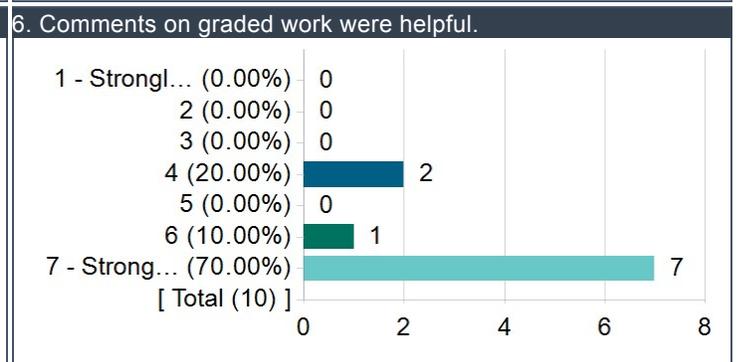
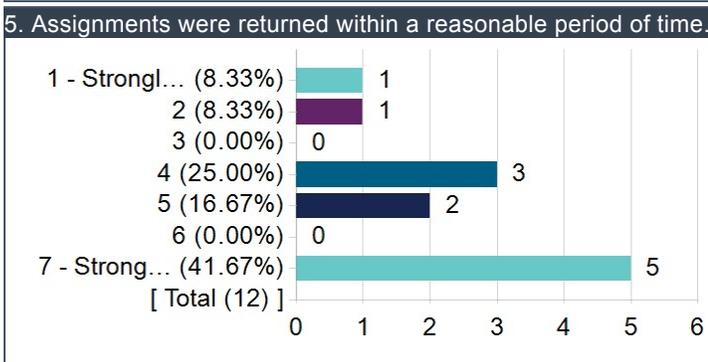
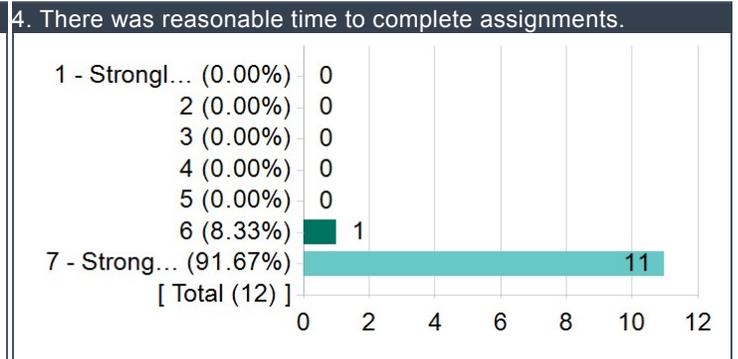
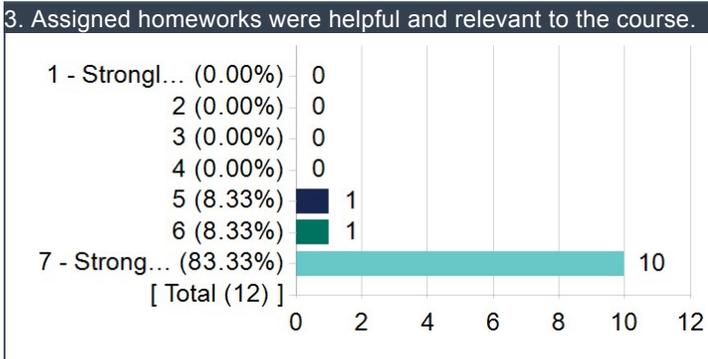
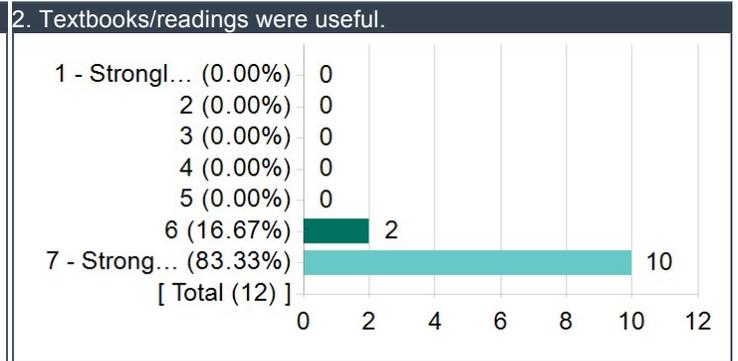
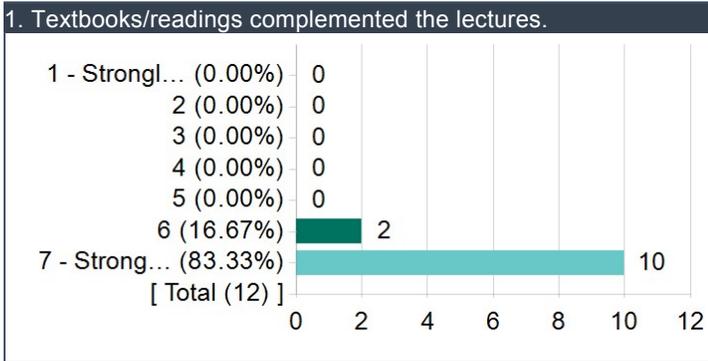
Course Materials and Assignments

Overall rating of course content.



Rating Scale Responses

Question	Response Count	Score		
		Mean	Standard Deviation	Median
Textbooks/readings complemented the lectures.	12	6.83	0.39	7.00
Textbooks/readings were useful.	12	6.83	0.39	7.00
Assigned homeworks were helpful and relevant to the course.	12	6.75	0.62	7.00
There was reasonable time to complete assignments.	12	6.92	0.29	7.00
Assignments were returned within a reasonable period of time.	12	5.00	2.09	5.00
Comments on graded work were helpful.	10	6.30	1.25	7.00
Labs were an effective supplement to the course.	2	5.50	2.12	5.50
The course material drew upon real world applications.	11	6.55	0.69	7.00



2. Textbooks/readings were useful.



3. Assigned homeworks were helpful and relevant to the course.



4. There was reasonable time to complete assignments.



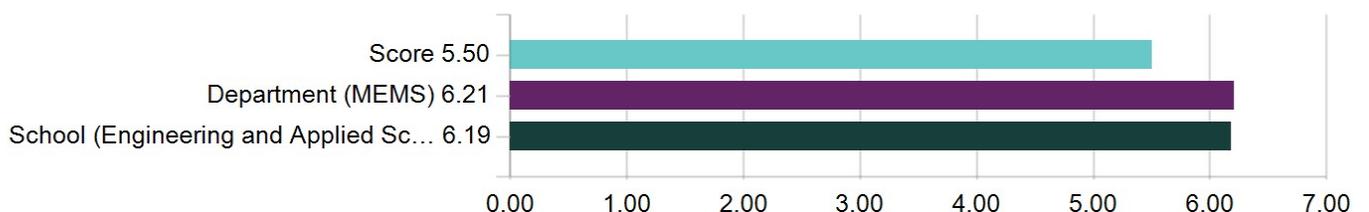
5. Assignments were returned within a reasonable period of time.



6. Comments on graded work were helpful.



7. Labs were an effective supplement to the course.



8. The course material drew upon real world applications.



Please elaborate if you felt the textbooks/readings were not useful.

Comments
 The first 2 homeworks which were turned in on February 12th and March 2nd were not returned until after the 1st exam was graded and returned (after March 26th) which meant we had no idea of how we were doing or feedback on these problems for the midterm. The other 3 homeworks (due April 2nd, April 4th, and April 23rd) were also never returned before the final.

TA and Recitation

Rating Scale Responses

Question	Response Count	Score		
		Mean	Standard Deviation	Median
The assistant to the instructor was effective.	0	N/A	N/A	N/A
The assistant to the instructor was available and responsive to questions.	0	N/A	N/A	N/A
Recitation section served to enhance your understanding of the course material.	0	N/A	N/A	N/A

1. The assistant to the instructor was effective.

1 - Strongl... (0.00%)	0
2 (0.00%)	0
3 (0.00%)	0
4 (0.00%)	0
5 (0.00%)	0
6 (0.00%)	0
7 - Strongl... (0.00%)	0
[Total (0)]	

2. The assistant to the instructor was available and responsive to questions.

1 - Strongl... (0.00%)	0
2 (0.00%)	0
3 (0.00%)	0
4 (0.00%)	0
5 (0.00%)	0
6 (0.00%)	0
7 - Strongl... (0.00%)	0
[Total (0)]	

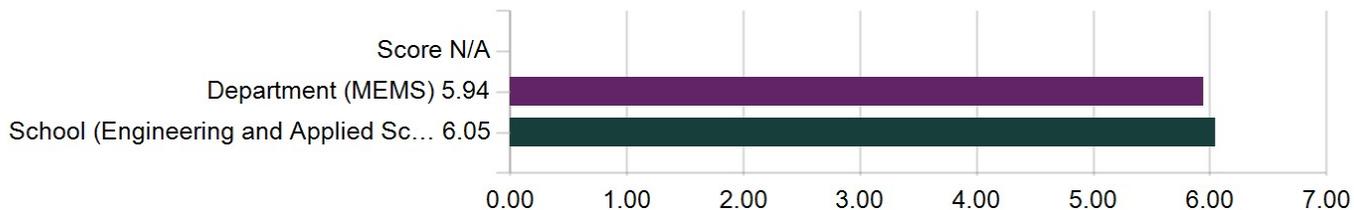
3. Recitation section served to enhance your understanding of the course material.

1 - Strongl... (0.00%)	0
2 (0.00%)	0
3 (0.00%)	0
4 (0.00%)	0
5 (0.00%)	0
6 (0.00%)	0
7 - Strongl... (0.00%)	0
[Total (0)]	

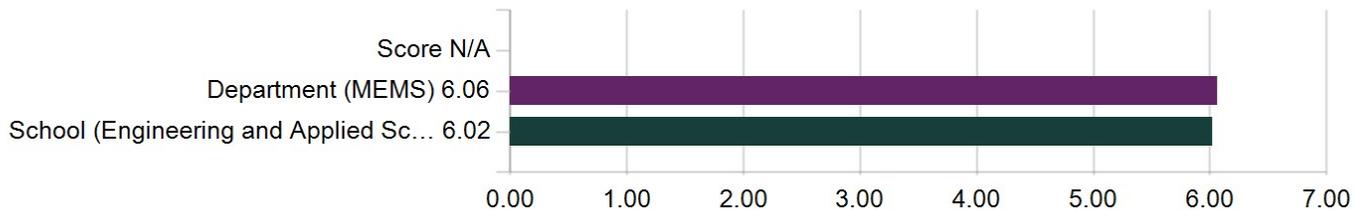
1. The assistant to the instructor was effective.



2. The assistant to the instructor was available and responsive to questions.



3. Recitation section served to enhance your understanding of the course material.



Please comment on the effectiveness of the TA.

Comments

The was no assistant in this class. This class would benefit greatly from having a grader or teaching assistant to help Dr. Wendl return tests and homeworks quicker

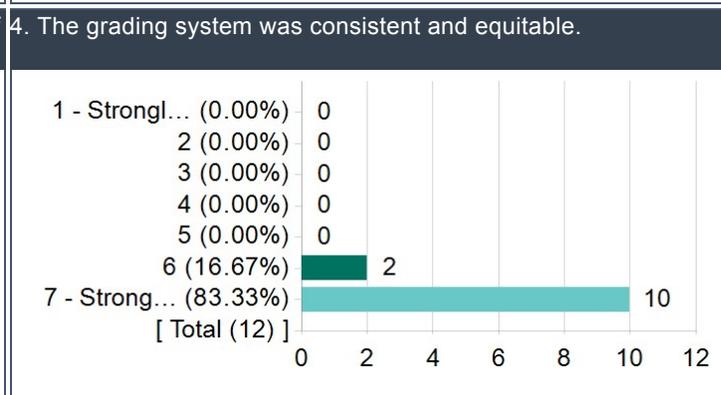
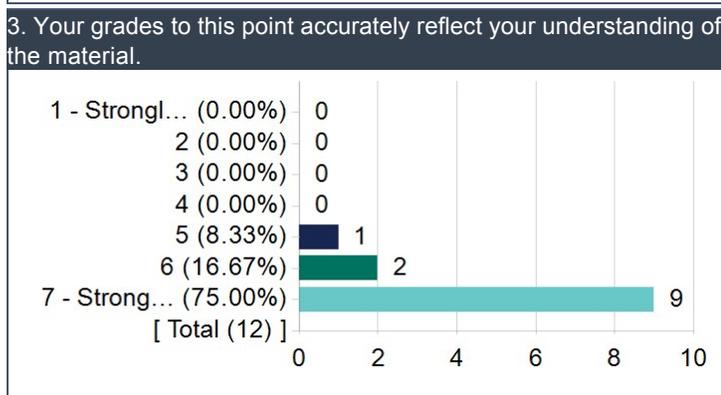
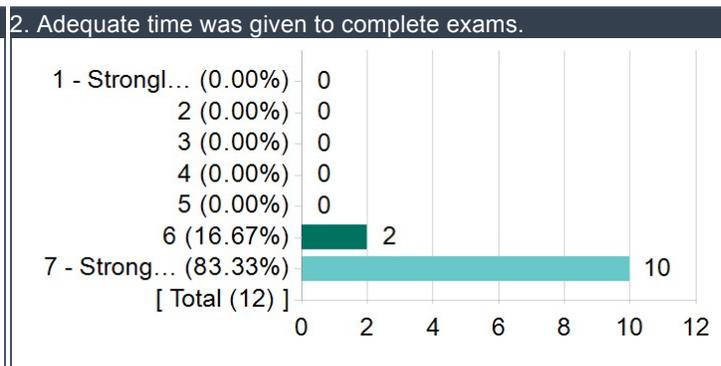
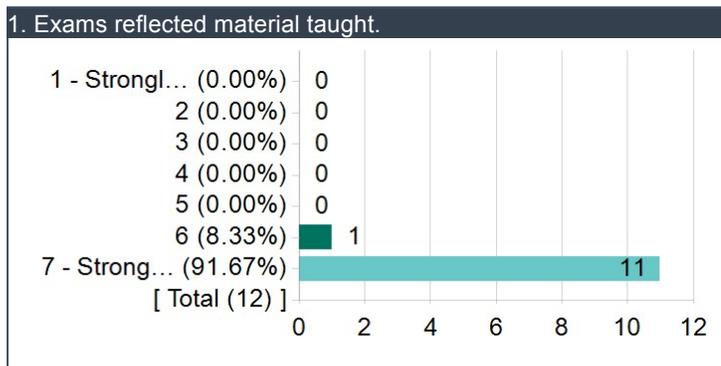
Exams and Grade

Expected grade for this course.

1. Expected grade for this course.		
Options	Count	Percentage
A	11	91.67%
B	1	8.33%
C	0	0.00%
D	0	0.00%
F	0	0.00%
P	0	0.00%

Rating Scale Responses

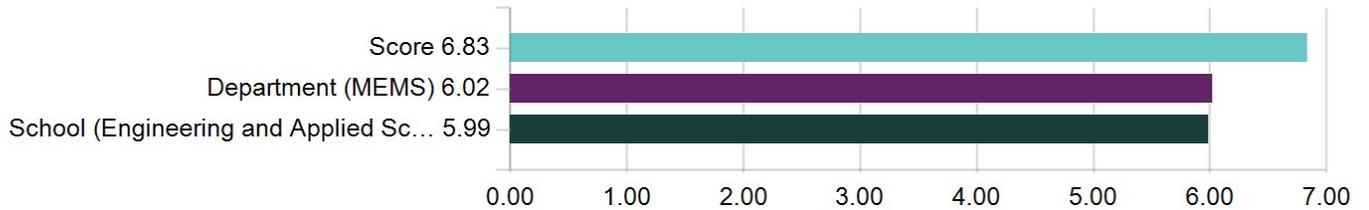
Question	Score			
	Response Count	Mean	Standard Deviation	Median
Exams reflected material taught.	12	6.92	0.29	7.00
Adequate time was given to complete exams.	12	6.83	0.39	7.00
Your grades to this point accurately reflect your understanding of the material.	12	6.67	0.65	7.00
The grading system was consistent and equitable.	12	6.83	0.39	7.00



1. Exams reflected material taught.



2. Adequate time was given to complete exams.



3. Your grades to this point accurately reflect your understanding of the material.



4. The grading system was consistent and equitable.



Please elaborate if you felt the grading system was not consistent and equitable.

Comments

I just have no idea how I did in this class because I only got 2 of 5 homework assignments and my midterm back.

Overall

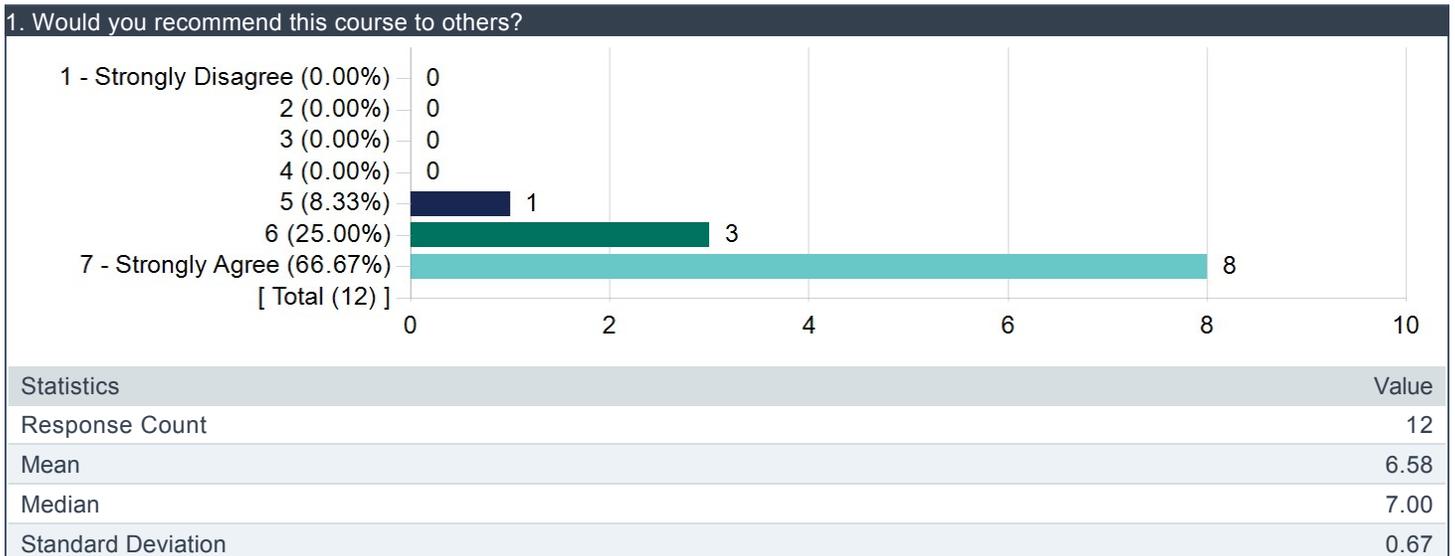
About how many hours per week did you spend on this course outside of class?

1. About how many hours per week did you spend on this course outside of class?		
Options	Count	Percentage
0	0	0.00%
1-3	4	33.33%
4-6	5	41.67%
7-9	3	25.00%
10-12	0	0.00%
13-15	0	0.00%
Over 15	0	0.00%

What percentage of the lectures did you attend?

1. What percentage of the lectures did you attend?		
Options	Count	Percentage
0%	0	0.00%
10%	0	0.00%
20%	0	0.00%
30%	0	0.00%
40%	0	0.00%
50%	0	0.00%
60%	0	0.00%
70%	0	0.00%
80%	0	0.00%
90%	6	50.00%
100%	6	50.00%

Would you recommend this course to others?



Any comments on why you did or did not attend lecture?

Comments
Out of town
The lecture was super engaging and interesting to me! When I had to miss I always felt like I would be missing an important part of the problem we were working through.

Comments

What did you like most about this course?

Comments
Very interesting material and the instructor is very enthusiastic.
The material was fascinating, with great avenues to real world application. Above all else I appreciated how all the mathematical concepts and physical observations all seemed to just fall into place on the chalkboard. Even with the approximate solutions and the more hand-wavy derivations, the course in its entirety made each result and concession seem expertly developed and earned. And although small in the grand scheme of the course, I also enjoyed the discussions for coding solutions: it was a great additional tie to the application of these problems.
The material was well taught and explained by the instructor.
This class was mathematically rigorous but Dr. Wendl was very thorough in explaining everything. I greatly appreciated seeing what level of mathematics is required to model real world problems.
The material was very interesting and if you have a strong understanding of math, it isn't actually too difficult.
Great professors was very engaged, the textbook was extremely helpful, and i felt like i learned the material in a meaningful way
The lectures and I thought the homeworks were hard and made me think without being impossible

How could this course improve?

Comments
None
The main area for improvement would have to be organizing the problem on the board. Especially toward the end of the semester when we started to speed up, it became harder to follow the derivations, even though the math was arguably simpler. I did like the occasional book keeping to re-organize. That did help.
There are currently no office hours... We just had to ask questions after class, but half the time I had another commitment I had to get to.
It would be nice to include more real world examples of the difficult situations covered in class.
Maybe more organized notes on the board and covering problems at a slightly faster pace.
Having an undergraduate heat transfer course as a prerequisite so that we can assume all the student have the same heat transfer background coming into the class.

What did you like the most about Instructor Michael Wendl?

Comments
Very enthusiastic and gives great lectures.
I am greatly impressed by Dr. Wendl's ability to make what is essentially a math course my favorite course of the semester. I appreciate the light atmosphere he kept in his classroom and his efforts in encouraging discussion/questions from the students.
His enthusiasm and knowledge of the course material.
I love his teaching style. He is 100% more worried about you understanding the material than anything else. You can tell he is passionate about the topics and that comes through in his teaching.
It is very apparent that Professor Wendl cares about his students and wants to make sure that they understand the material. With a class that can be difficult like this one, it's really nice knowing that he won't judge you if you need to ask a question or need help.
The textbook was amazing and I can't believe it's just available for free, the homework was challenging but not impossible and it made me critically engage with the material
From the very beginning he always encouraged us to ask questions, he often overexplained things which I don't feel is very common in my professors.
His enthusiasm for the topic

How could Instructor Michael Wendl improve?

Comments
None
Covering all the material seemed like a bit of an issue at the end. Made it so that it was a bit hard to follow. Not so much that the writing was worse or anything, but more so that I personally couldn't always absorb the what an expression meant before we had to move on and keep deriving.
When manipulating equations, please rewrite the equation with the changes made. It is hard to keep up with what is happening on the board when you keep erasing before I am done writing (especially because when this is happening, he is often standing in front of the board so I cannot see it and he is saying things that I want to write down). Also, he should set his warning alarm for right when class is up and just stop where he is. Currently he has an alarm for 3 minutes before class is up, but he continues to teach/do work until it is 7 minutes past when the class ended (causing me to be late to other commitments).
Some times lectures could seem a bit disorganized. He would kind of switch from one idea to another as they came up in his head. A little bit more organization when he's presenting the material or writing on the board could help make it easier to follow.

What would you tell another student who asked you to describe this course?

Comments
Very good course for learning high level math.
I would tell that student that it is a good course, a must take if you want to feel like an accomplished graduate student. You'll spend a reasonable amount of time reading the text and doing the homeworks, and will sharpen your skills with solving differential equations.
This class is well described as a course on differential equations in the application of heat transfer. The course does well in introducing the foundational strategies in solving differential equations.
Great course, one of my favorite at Washu, math heavy but in a great way
One of the best classes and professors you might get at Wash U! Geniunely cares about your understanding of the material. Slightly difficult concepts but you can do well if you take notes during the lectures!

Have you observed any violations of academic integrity (e.g., cheating) in this course?

Comments
No
None whatsoever
No
no
no

Any additional comments?

Comments

honestly loved this course a lot, it's similar to what I want to go to grad school for so I really enjoyed it

Personalized Questions

Please comment on the relative difficulty of this course as compared to other "500"-level courses

Comments

On par with other courses.

Moderate to high difficulty. Definitely one of if not the hardest I have had so far, if not solely because it is so math intensive.

Fairly equivalent.

about the same.

This is my first semester so I don't have much to compare it to.

The material can be pretty difficult because it's very math heavy, but it's not hard to get help. I would say the difficulty is pretty average when compared to other 500 level courses.

I think its more mathematically challenging but fair in the expectations and there's enough supplemental material that the math isn't impossible. I think it looks more challenging than some of my other grad course on paper but because the lectures are helpful and the textbook is well written, i was never lost on how to approach a homework or exam problem while still actually learning the material and not just regurgitating lecture notes onto an assignment

Adequate

The content was slightly more difficult to understand but the lectures made the graded work very doable.

Relatively easy because I took an undergraduate heat transfer course very recently

Please comment on whether the instructor effectively linked the physical phenomena discussed in the course to their engineering application

Comments

Yes, he did.

Effectively linked. That was basically the focus of the class: each heat transfer problem was formed with some basis from a real application.

Yes.

yes.

Yes, Dr. Wendl constantly commented on the engineering application of what we were learning.

I think there's room for improvement here.

I think so

Dr. Wendl did a great job

I think so

Please comment on whether the instructor effectively used mathematical principles to explain physical phenomena discussed in the course

Comments
Yes, he did and he did that very well.
Yes effectively used as well.
Yes.
yes.
This is the entire point of this class. We dove in deep into the mathematics behind heat transfer.
The whole course kind of felt like a math class, so I would say yes. To be honest, this kind of made it easier to understand concepts sometimes.
Yes, the math was very relevant and connected well so i understood why it was being used.
He did a great job connecting mathematics to physical phenomena
Definitely, I've never understood the mathematical aspects of engineering problems so much.