



Spring 2021 Engineering Instructor Report for SP2021.E37.MEMS.5403.01 - Conduction and Convection Heat Transfer (Michael Wendl)

Project Title: **Spring 2021 Course Evaluations - Danforth Campus**

Courses Audience: **14**

Responses Received: **5**

Response Ratio: **35.71%**

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: **Wednesday, May 19, 2021**

Course Administration

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

Was a course syllabus or a course information sheet distributed or available online?		
Options	Count	Percentage
Yes	5	100.00%
No	0	0.00%

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

Did the syllabus explain the content and administration of the course (e.g., office hours, grading)?		
Options	Count	Percentage
Yes	5	100.00%
No	0	0.00%

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

Early in the semester, did your professor explain the expectations for academic integrity?		
Options	Count	Percentage
Yes	5	100.00%
No	0	0.00%

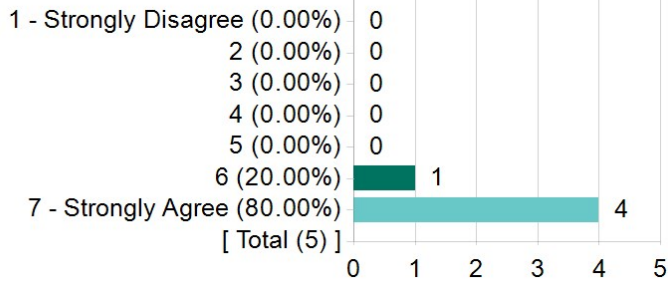
Meeting schedules, assignment due dates, and course expectations were clear.

Meeting schedules, assignment due dates, and course expectations were clear.		
Options	Count	Percentage
1 - Strongly Disagree	0	0.00%
2	0	0.00%
3	0	0.00%
4	0	0.00%
5	0	0.00%
6	0	0.00%
7 - Strongly Agree	5	100.00%

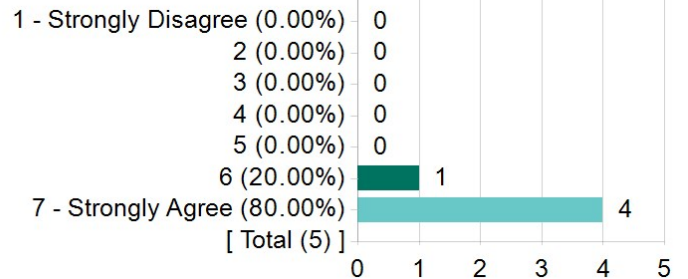
Rating Scale Responses

Question	Response Count	Subject		
		Mean	Standard Deviation	Median
In retrospect, the syllabus was an accurate reflection of how the course was actually taught.	5	6.80	0.45	7.00
The course matched the course catalog description.	5	6.80	0.45	7.00

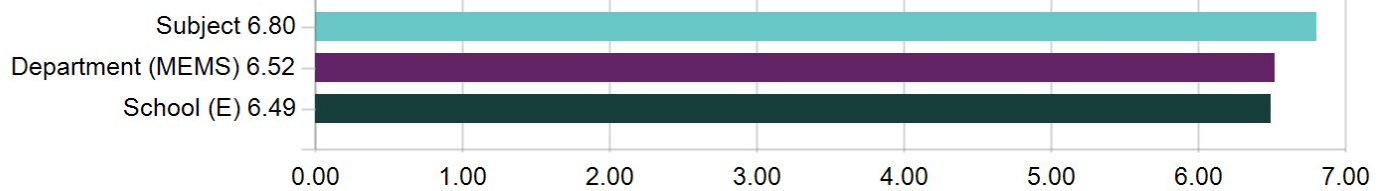
1. In retrospect, the syllabus was an accurate reflection of how the course was actually taught.



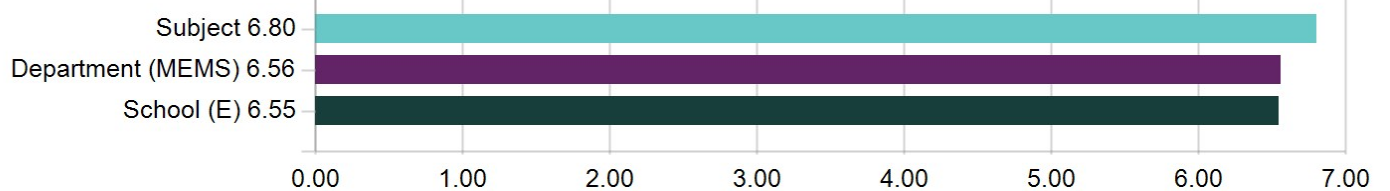
2. The course matched the course catalog description.



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



2. The course matched the course catalog description.



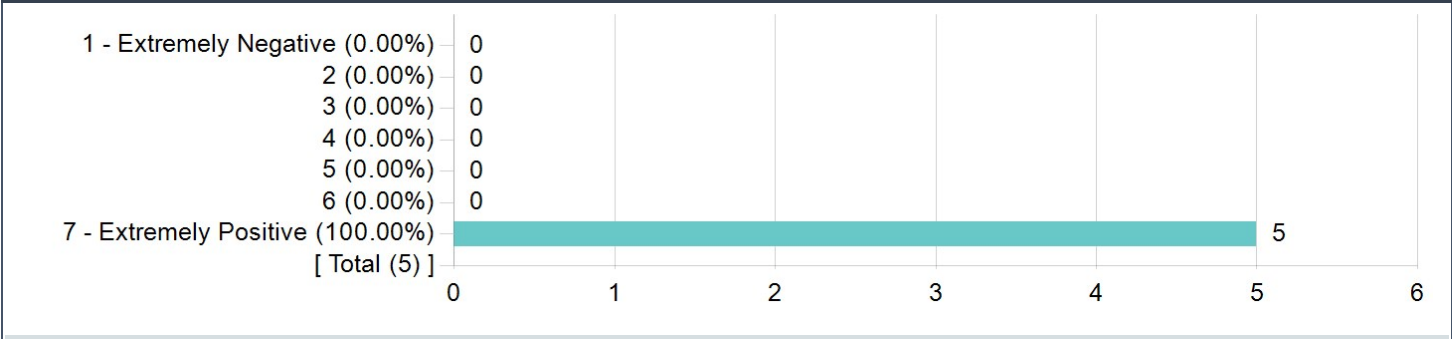
Please elaborate if you felt the course did not match the course catalog description.

Comments

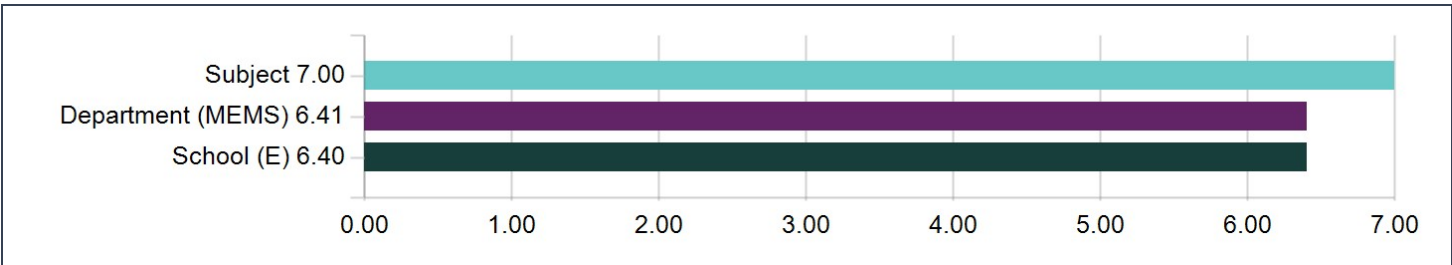
Because of remote learning, we went slightly slower than the professor usually goes during in person lectures, and therefore were not able to cover all of the material in as much depth as we would normally have been able to with in person classes.

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

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



Statistics	Value
Response Count	5
Mean	7.00
Median	7.00
Standard Deviation	0.00

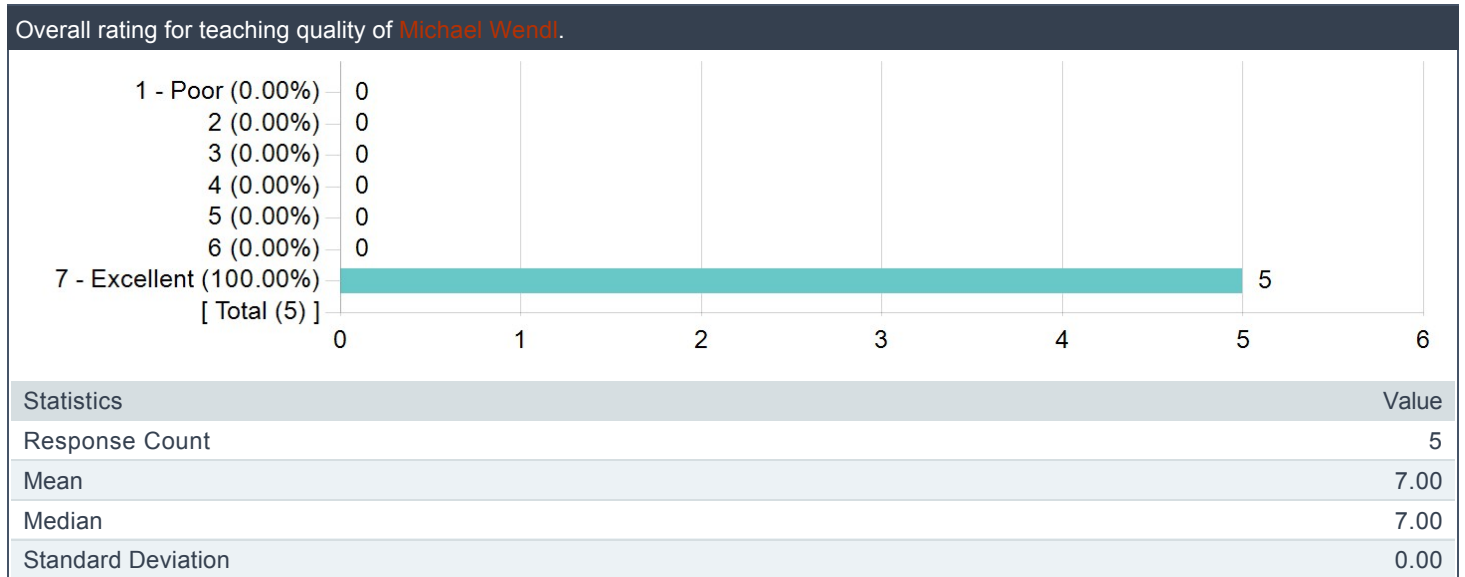


Where relevant, please give specific examples to explain your answer above.

Comments
 He created a fantastic learning environment and classroom.

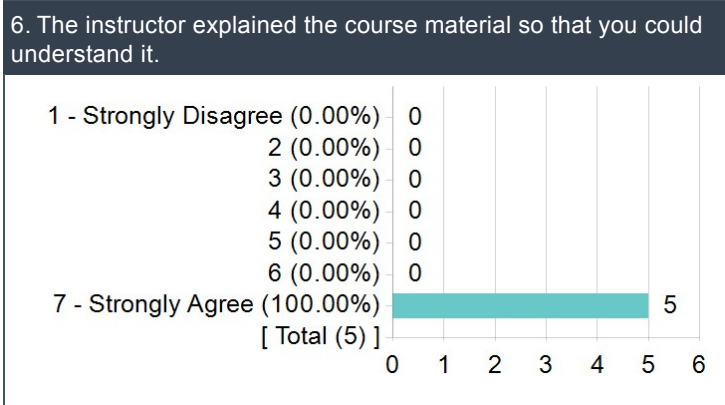
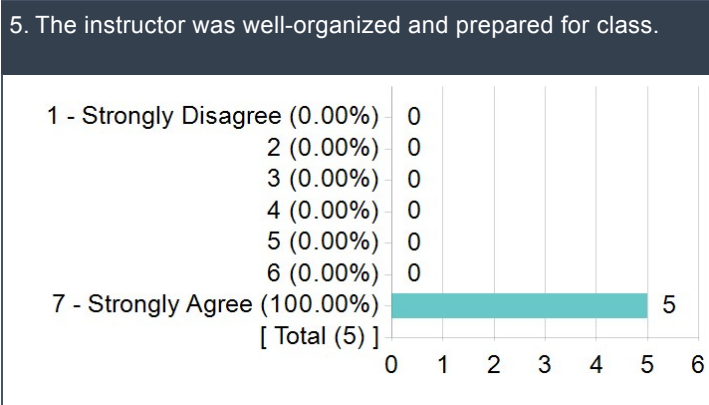
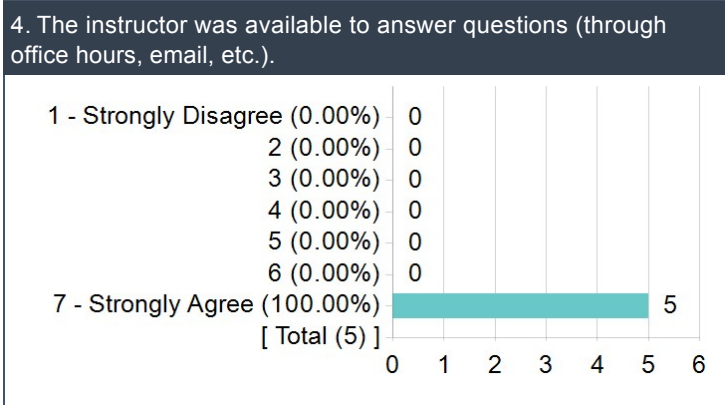
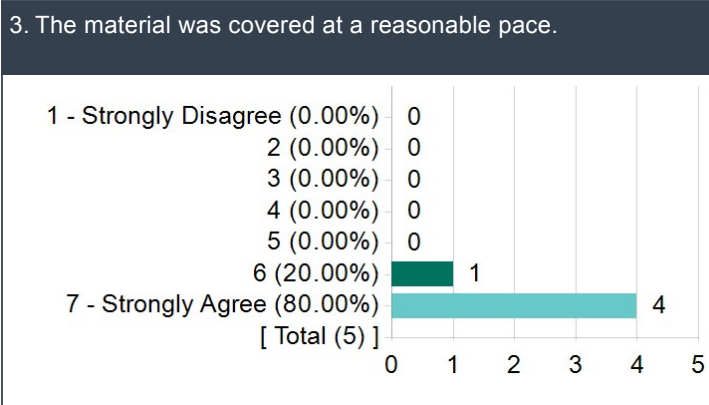
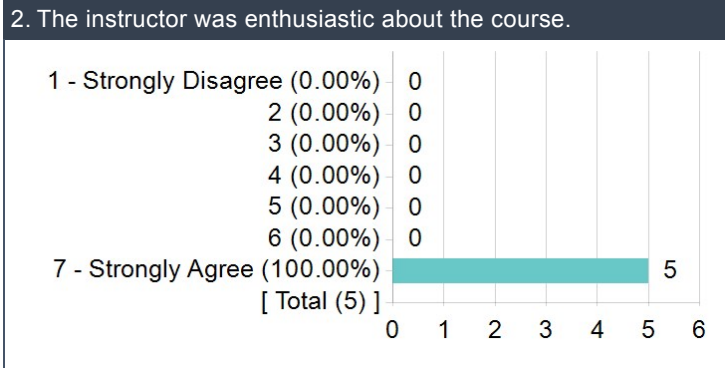
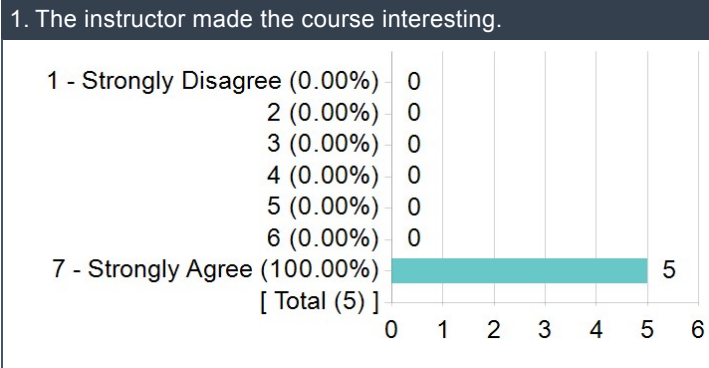
Instructor Evaluation

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

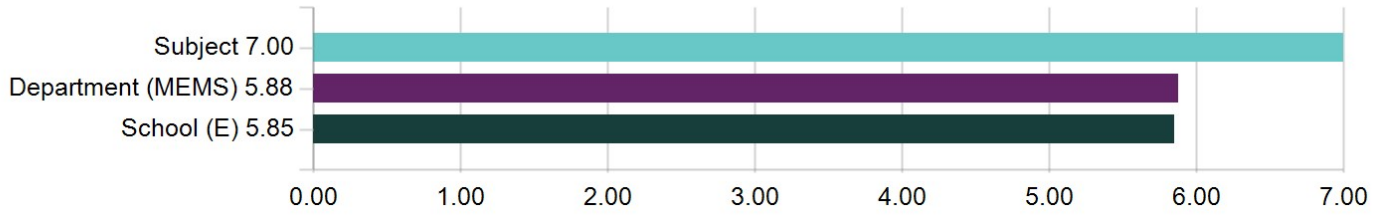


Rating Scale Responses for **Michael Wendl**

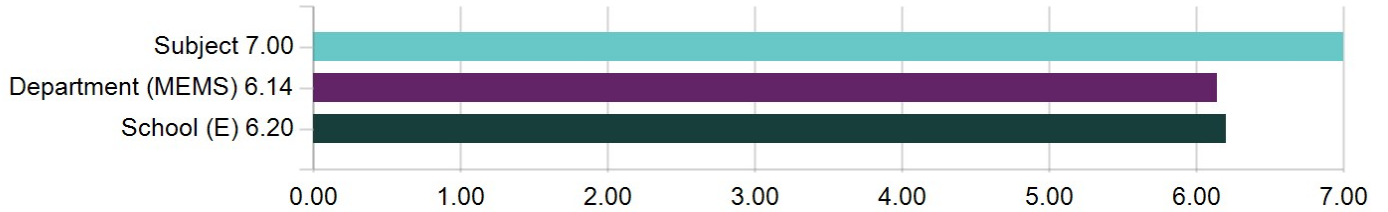
Question	Response Count	Subject		
		Mean	Standard Deviation	Median
The instructor made the course interesting.	5	7.00	0.00	7.00
The instructor was enthusiastic about the course.	5	7.00	0.00	7.00
The material was covered at a reasonable pace.	5	6.80	0.45	7.00
The instructor was available to answer questions (through office hours, email, etc.).	5	7.00	0.00	7.00
The instructor was well-organized and prepared for class.	5	7.00	0.00	7.00
The instructor explained the course material so that you could understand it.	5	7.00	0.00	7.00



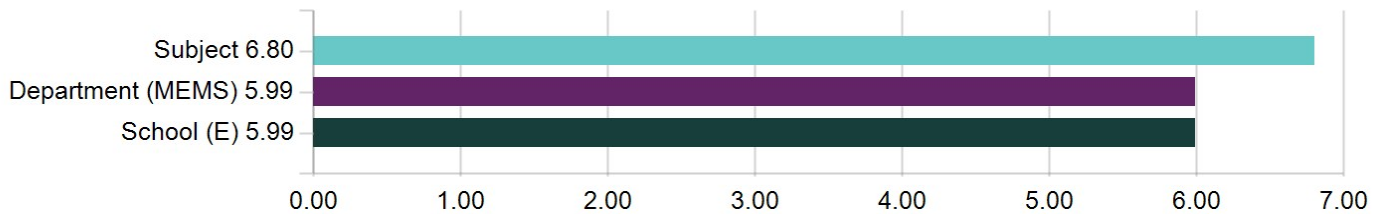
1. The instructor made the course interesting.



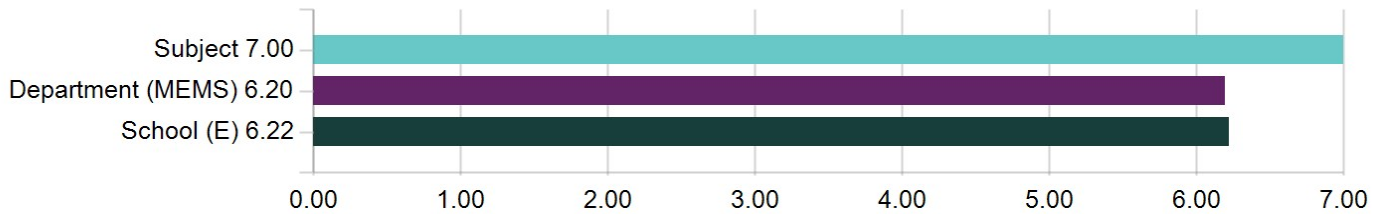
2. The instructor was enthusiastic about the course.



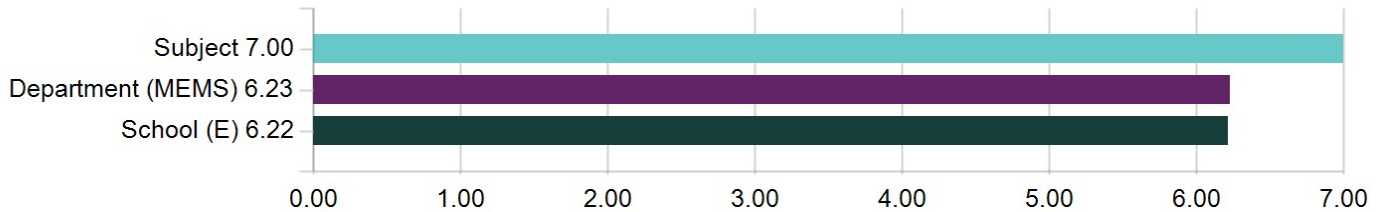
3. The material was covered at a reasonable pace.



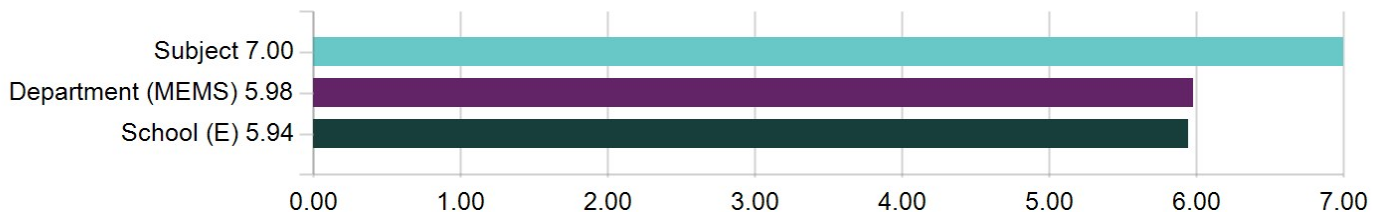
4. The instructor was available to answer questions (through office hours, email, etc.).



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



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

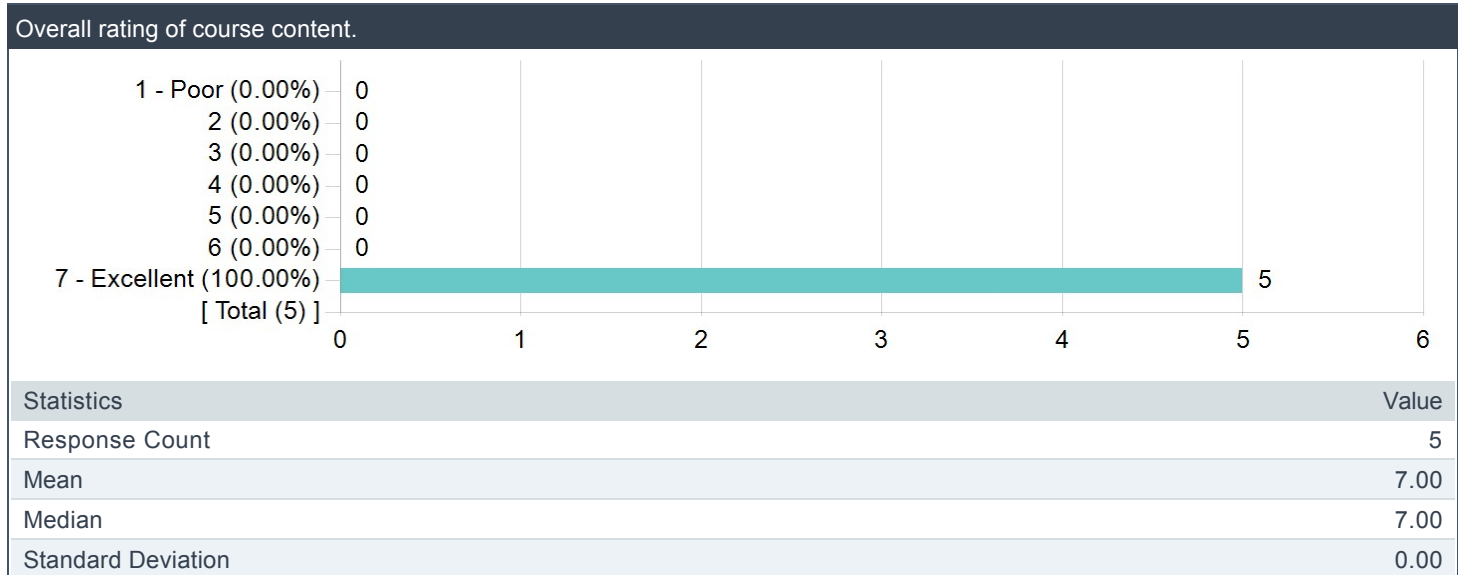


Please elaborate if you felt the material was not covered at a reasonable pace.

Comments
I personally thought some of the material was covered a bit too slowly, however Professor Wendl did an excellent job taking time and caution to explain everything so it was fully understood.

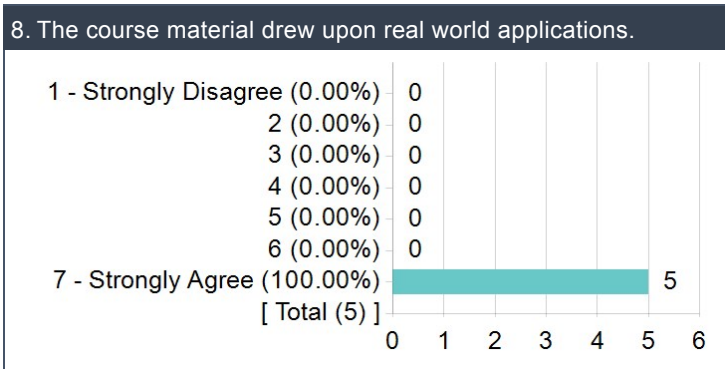
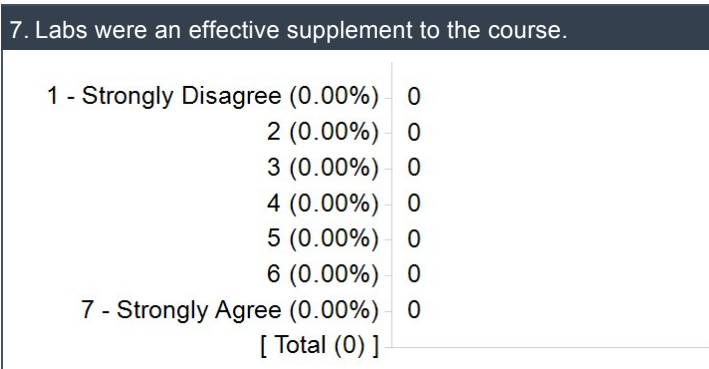
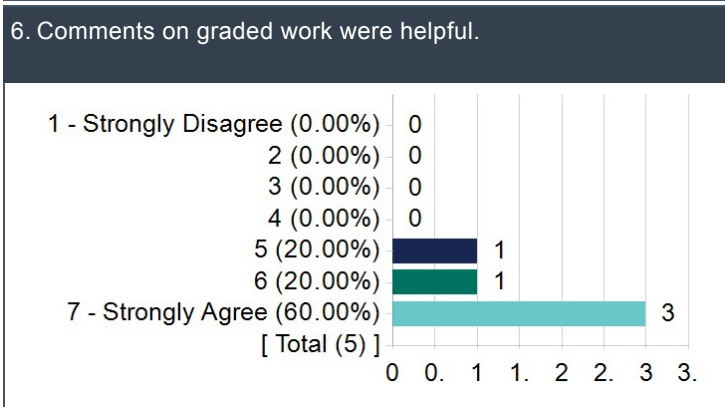
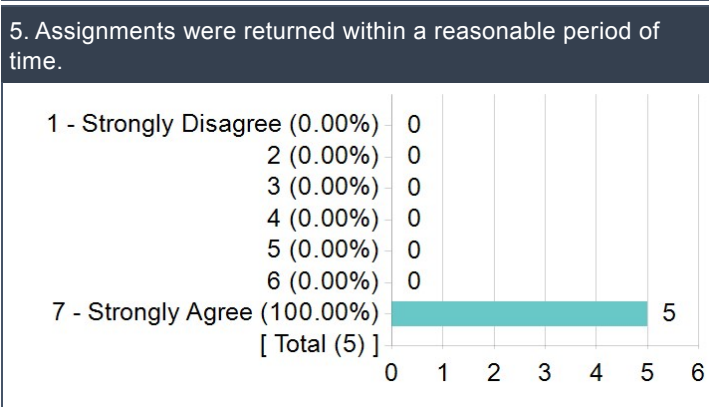
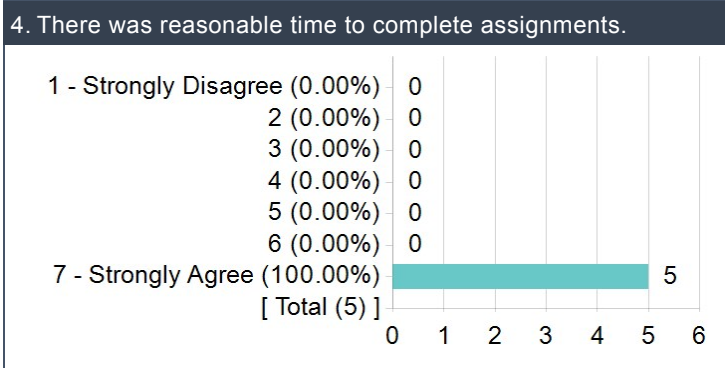
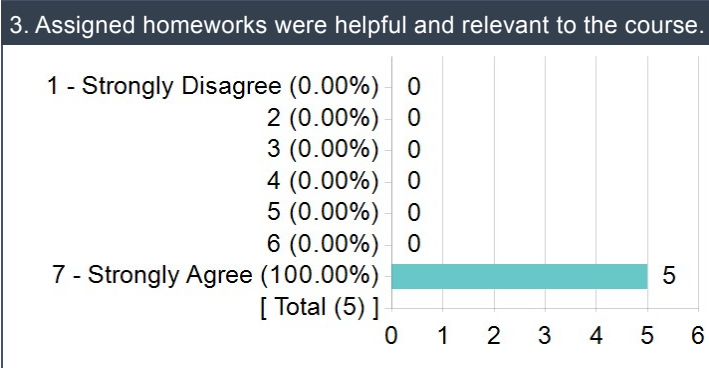
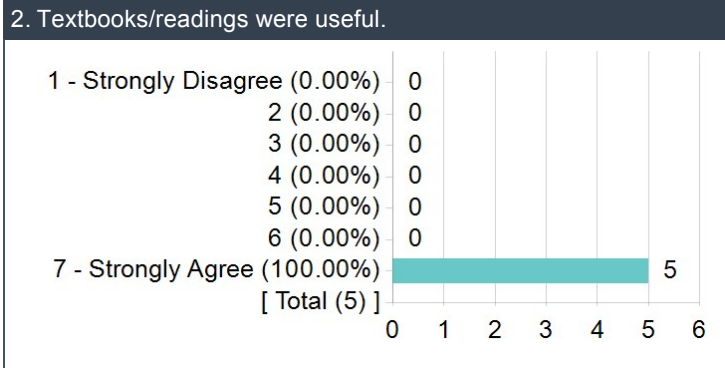
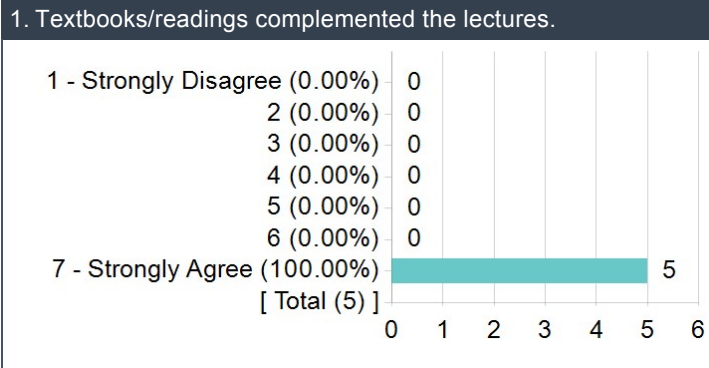
Course Materials and Assignments

Overall rating of course content.

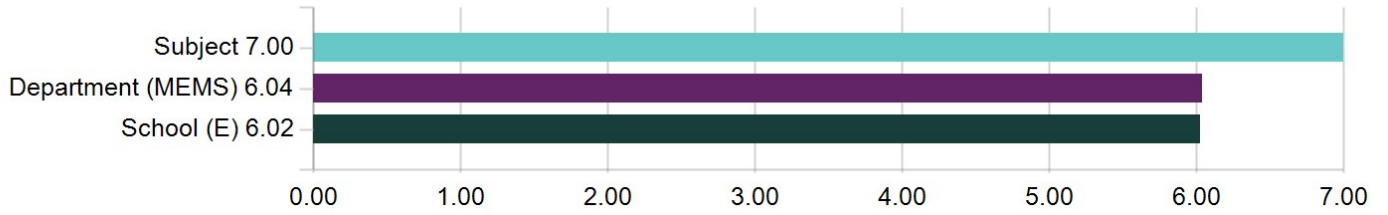


Rating Scale Responses

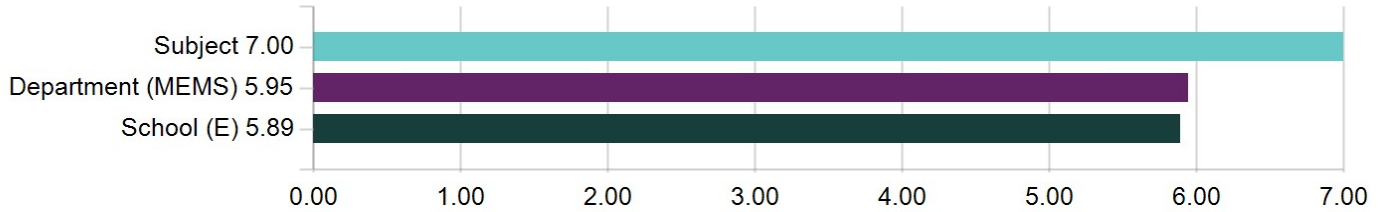
Question	Response Count	Subject		
		Mean	Standard Deviation	Median
Textbooks/readings complemented the lectures.	5	7.00	0.00	7.00
Textbooks/readings were useful.	5	7.00	0.00	7.00
Assigned homeworks were helpful and relevant to the course.	5	7.00	0.00	7.00
There was reasonable time to complete assignments.	5	7.00	0.00	7.00
Assignments were returned within a reasonable period of time.	5	7.00	0.00	7.00
Comments on graded work were helpful.	5	6.40	0.89	7.00
Labs were an effective supplement to the course.	0	N/A	N/A	N/A
The course material drew upon real world applications.	5	7.00	0.00	7.00



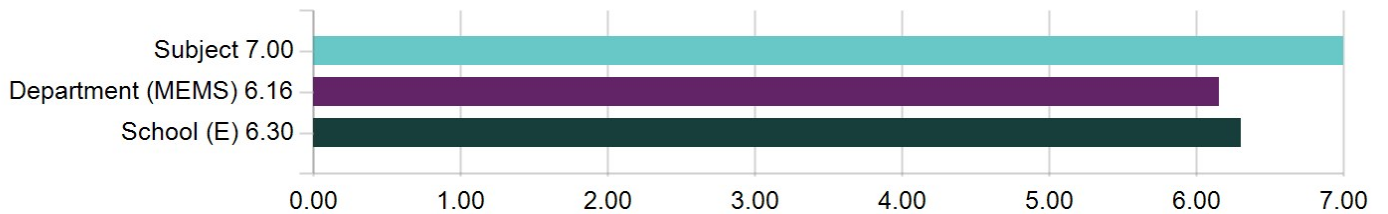
1. Textbooks/readings complemented the lectures.



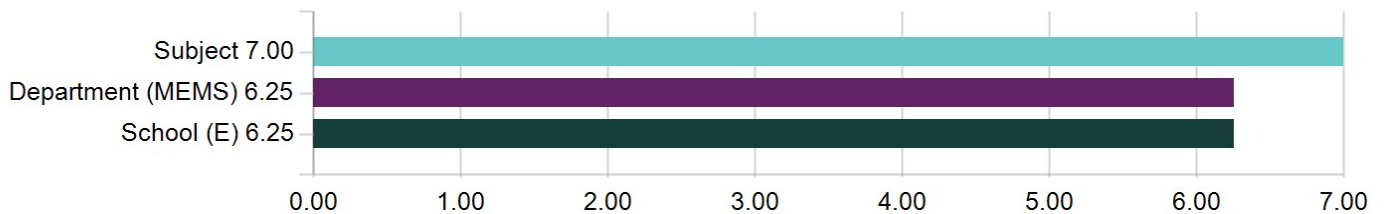
2. Textbooks/readings were useful.



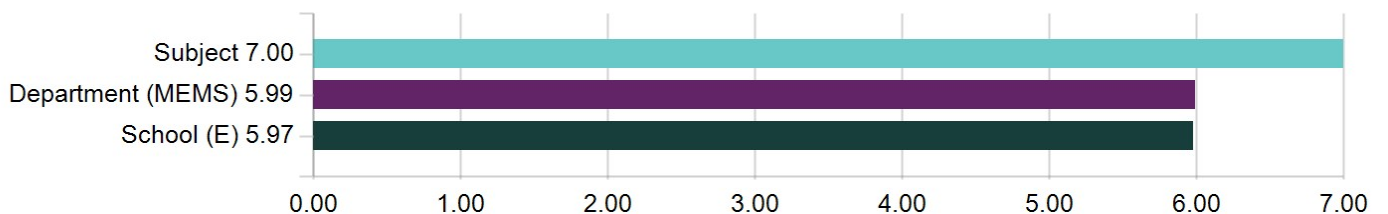
3. Assigned homeworks were helpful and relevant to the course.



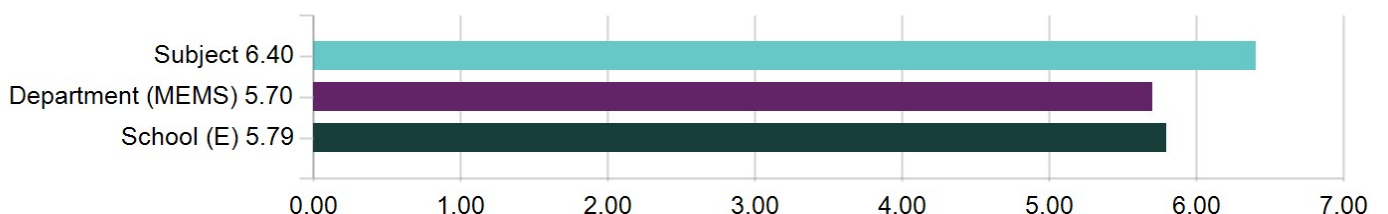
4. There was reasonable time to complete assignments.



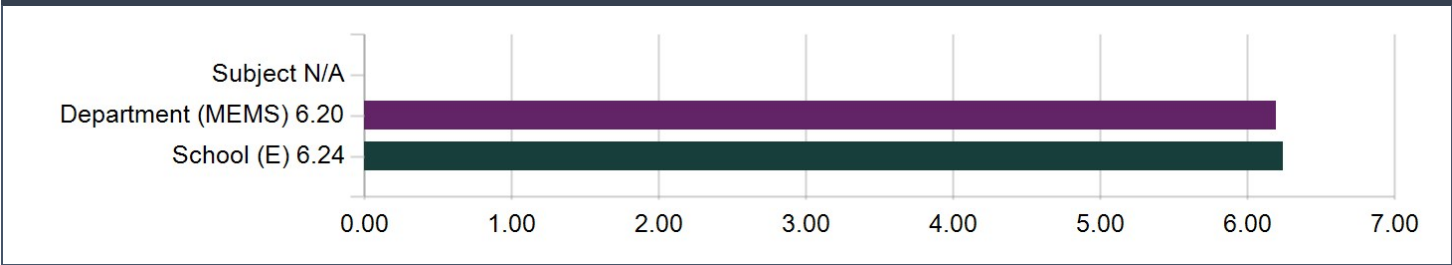
5. Assignments were returned within a reasonable period of time.



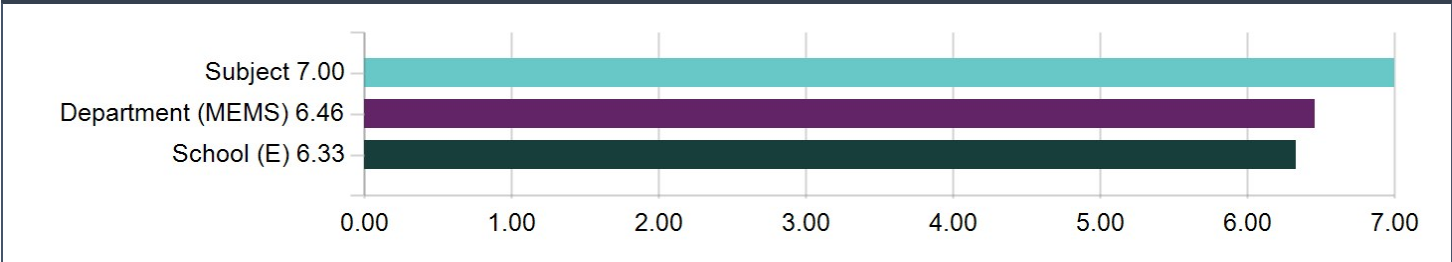
6. Comments on graded work were helpful.



7. Labs were an effective supplement to the course.



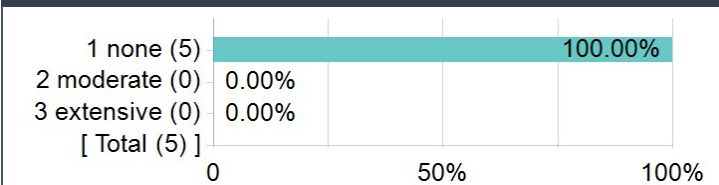
8. The course material drew upon real world applications.



Assistant to the Instructor (AI) and Recitation

My level of interaction with Assistants to the Instructor (AIs) in this course.

My level of interaction with Assistants to the Instructor (AIs) in this course.

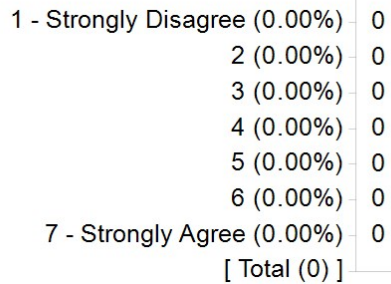


Statistics	Value
Response Count	5
Mean	1.00
Median	1.00
Mode	1
Standard Deviation	0.00
Population Standard Deviation	0.00
Standard Error (base on SD)	0.00
Standard Error (base on PSD)	0.00

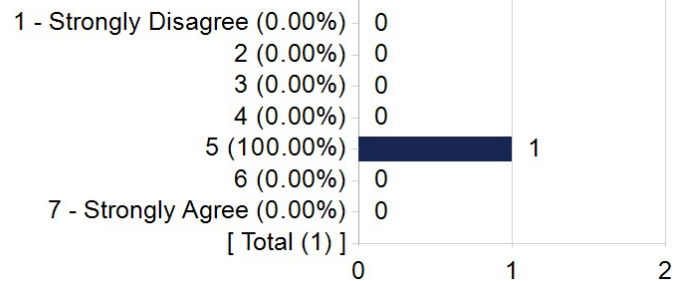
Rating Scale Responses

Question	Subject			
	Response Count	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.	1	5.00	0.00	5.00
Recitation section served to enhance your understanding of the course material.	0	N/A	N/A	N/A

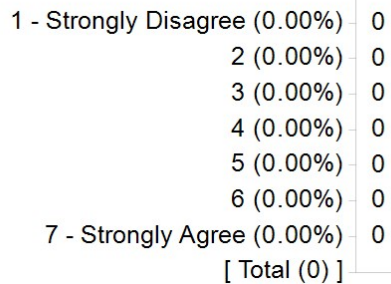
1. The assistant to the instructor was effective.



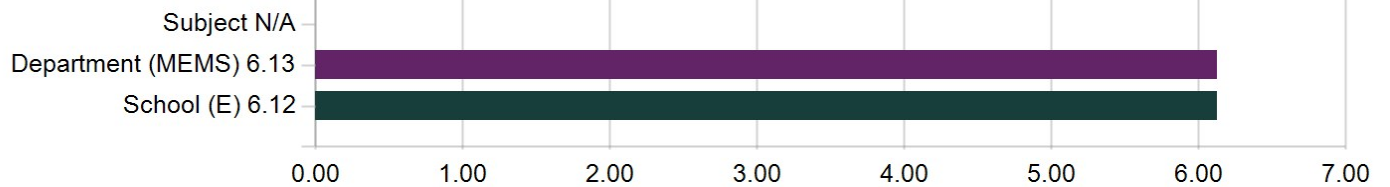
2. The assistant to the instructor was available and responsive to questions.



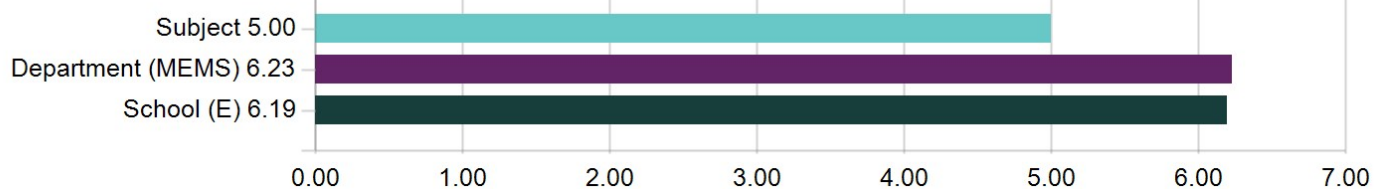
3. Recitation section served to enhance your understanding of the course material.



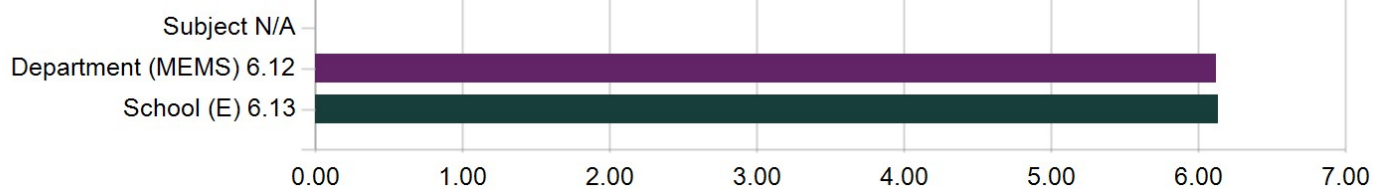
1. The assistant to the instructor was effective.



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 assistant to the instructor (AI).

Comments
I have no interactions with the TA except for receiving grades on assignments.
I did not interact with the AI during this course, but assignments were graded in a pretty timely manner and feedback was good.

Please comment on the effectiveness of the recitation section.

Comments
There was none

Exams and Grade

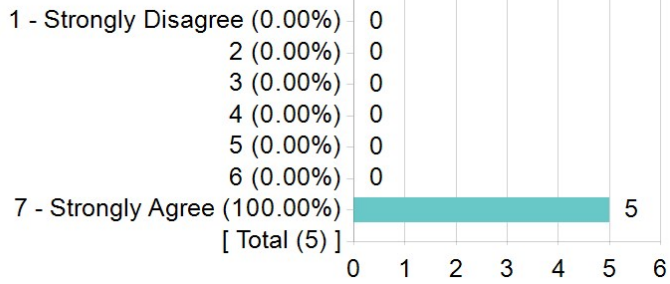
Expected grade for this course.

Expected grade for this course.		
Options	Count	Percentage
A	5	100.00%
B	0	0.00%
C	0	0.00%
D	0	0.00%
F	0	0.00%
P	0	0.00%

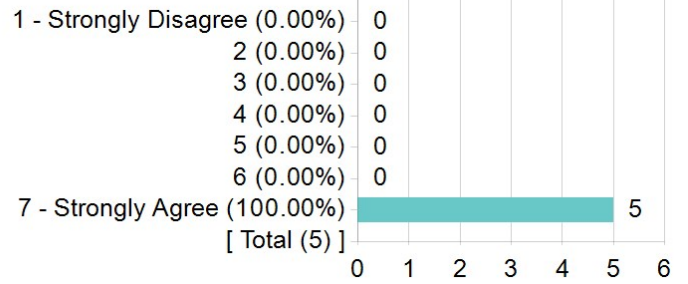
Rating Scale Responses

Question	Subject			
	Response Count	Mean	Standard Deviation	Median
Exams reflected material taught.	5	7.00	0.00	7.00
Adequate time was given to complete exams.	5	7.00	0.00	7.00
Your grades to this point accurately reflect your understanding of the material.	5	7.00	0.00	7.00
The grading system was consistent and equitable.	5	7.00	0.00	7.00

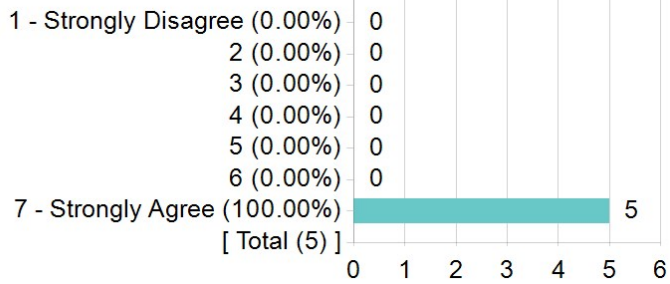
1. Exams reflected material taught.



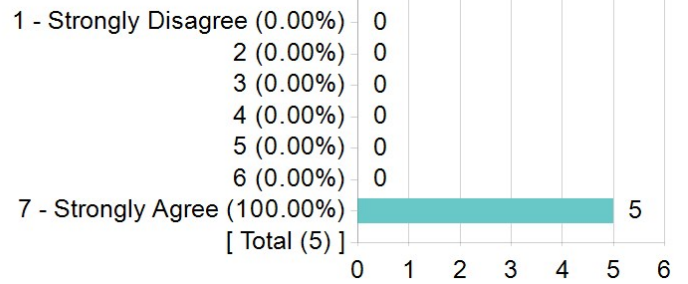
2. Adequate time was given to complete exams.



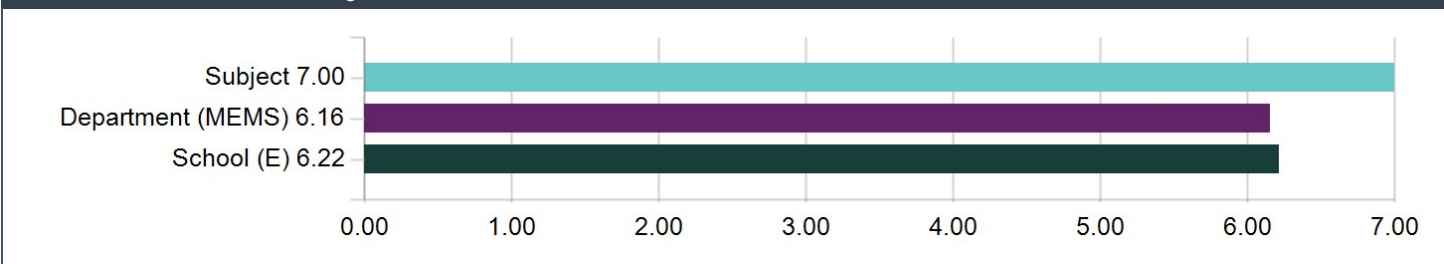
3. Your grades to this point accurately reflect your understanding of the material.



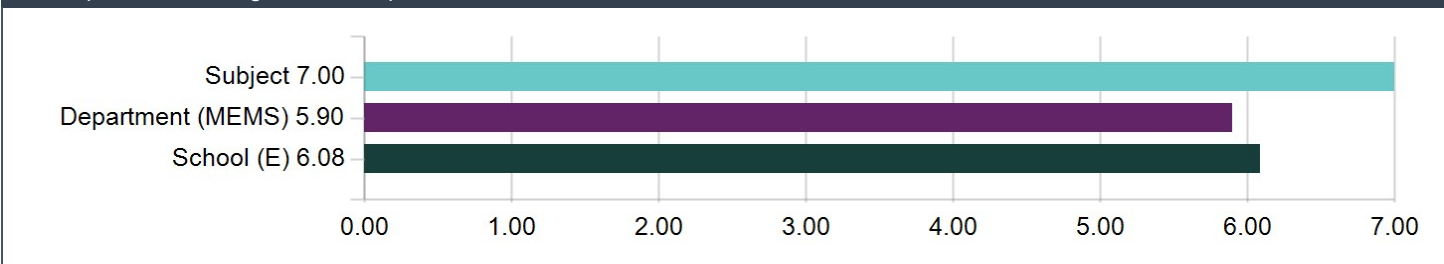
4. The grading system was consistent and equitable.



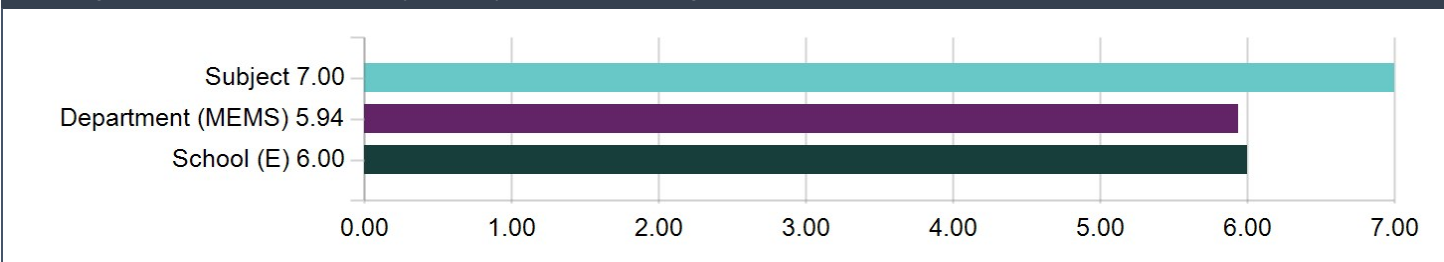
1. Exams reflected material taught.



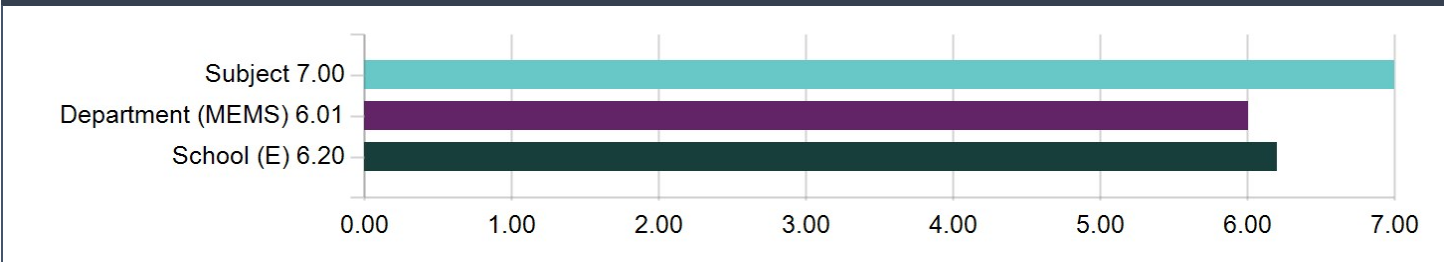
2. Adequate time was given to complete exams.



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



4. The grading system was consistent and equitable.



Participation

If a hybrid course, what percentage of lectures that you had the opportunity to attend in person did you indeed attend in person?

If a hybrid course, what percentage of lectures that you had the opportunity to attend in person did you indeed attend in person?

Options	Count	Percentage
none	2	100.00%
1/3	0	0.00%
1/2	0	0.00%
2/3	0	0.00%
all	0	0.00%

For sessions with the opportunity for you to attend synchronously online (versus later asynchronous viewing), what percentage did you indeed attend synchronously?

For sessions with the opportunity for you to attend synchronously online (versus later asynchronous viewing), what percentage did you indeed attend synchronously?

Options	Count	Percentage
none	0	0.00%
1/3	0	0.00%
1/2	0	0.00%
2/3	1	20.00%
all	4	80.00%

Overall

Please rate the workload for this course.

Please rate the workload for this course.

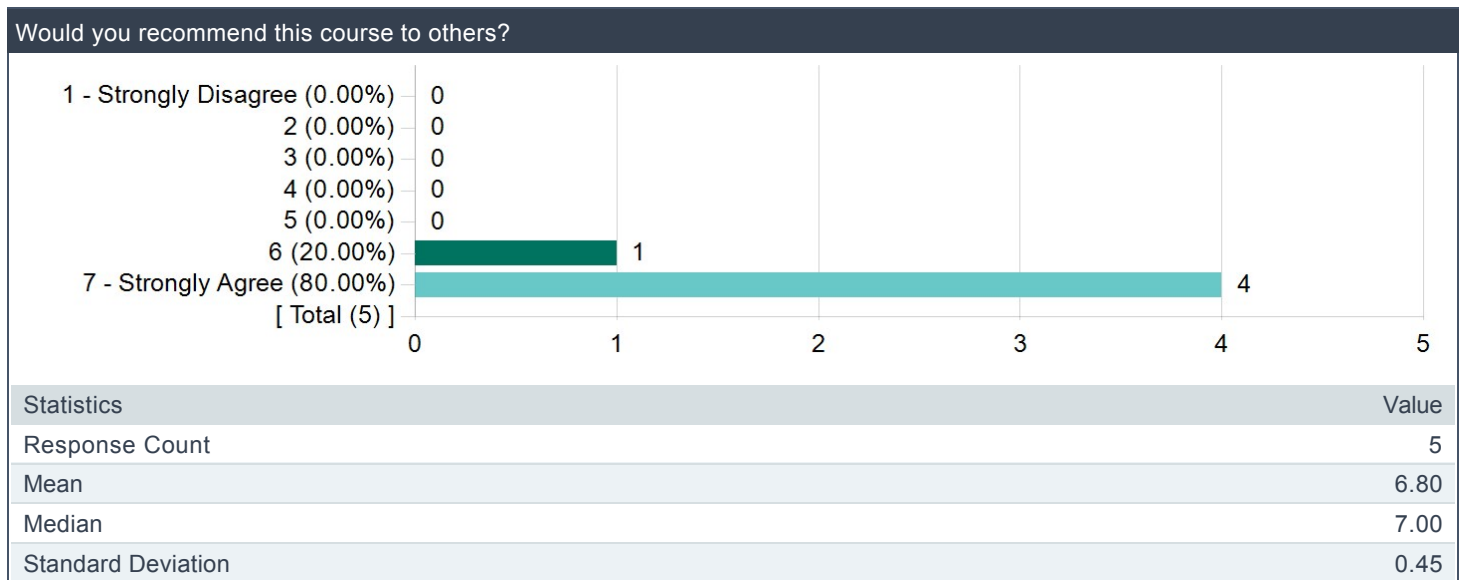
Options	Count	Percentage
1 - far too little	0	0.00%
2	0	0.00%
3	1	20.00%
4	1	20.00%
5	3	60.00%
6	0	0.00%
7 - far too much	0	0.00%

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

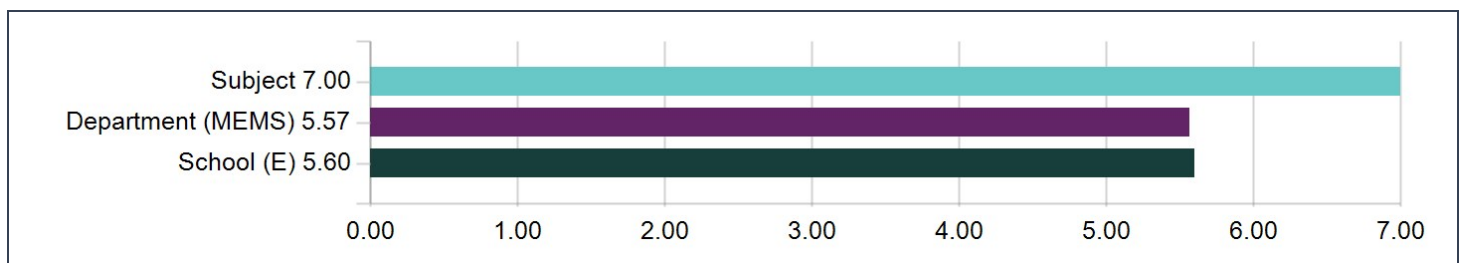
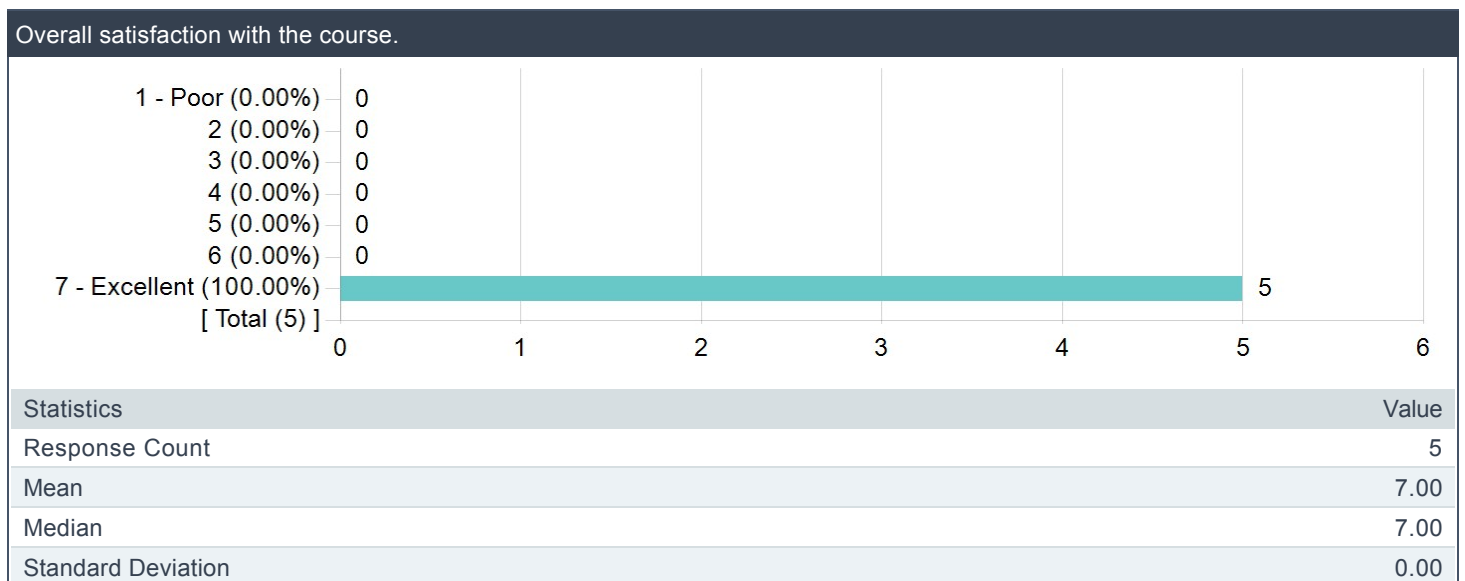
About how many hours per week did you spend on this course outside of class?

Options	Count	Percentage
0	0	0.00%
1-3	2	40.00%
4-6	2	40.00%
7-9	1	20.00%
10-12	0	0.00%
13-15	0	0.00%
Over 15	0	0.00%

Would you recommend this course to others?



Overall satisfaction with the course.



Comments

What did you like most about this course?

Comments
I am personally very interested in the material, and in addition to that Professor Wendl did an excellent job teaching the subject and making even some of the most complex math I have seen at WashU very clear and make sense. I genuinely enjoyed going to class each time, and would have happily stayed 30 minutes late each night if I could to learn more material.
This course was extremely well taught! Every class, I walked away with a deeper understanding about heat transfer. The homework was challenging but helped me work through some examples on my own.
I think that the course material is very interesting and was presented in a very approachable way.
I liked the professor's enthusiasm as well as the difficult problems tested.

How could this course improve?

Comments
None
I think if the course moved a bit faster it would be a bit smoother.

What did you like the most about Instructor **Michael Wendl**?

Comments
He clearly is extremely well versed in the material and does an excellent job teaching. All of his lectures are given in a very clear manner, and his notes on the board are clearly written and easy to follow.
Dr. Wendl was always super enthusiastic and extremely knowledgeable about the course.
Professor Wendl is insanely knowledgeable and passionate about the course material, and it feels as though he is really invested in our success in the classroom. His enthusiasm is infectious and it creates a fantastic environment to learn about this complicated content. He teaches the material with a very down-to-Earth and approachable attitude, acknowledging the difficulty of the content while still actually teaching not just telling.
I really enjoyed the pacing of the course as well as the flexible homework submission date.

How could Instructor **Michael Wendl** improve?

Comments
Occasionally there were some simpler mathematics bits we spent time on that I already had learned, and would have preferred getting further in the material than discussing certain bits of math.
I think that the course moved a little slow compared to the pace that I wanted it to go. I think that a lot of that had to do with the virtual format.
I don't really know. I was overall satisfied with how this course was taught. A potential problem was the fact that the class was remote which is completely out of the control of any of us. I think this is a course that just works better in person.

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

Comments
I would say exactly what was told to me by my friends who have long since graduated: This is one of the best elective/graduate courses the department has to offer. Regardless of if you are interested in the topic, the professor makes it clear, if you really pay attention and take good notes, the course is not extremely difficult, however you still learn a tremendous amount about the subject.
This is a great course to take if you're comfortable with math and derivations. I would absolutely recommend this course.
The content feels very complicated on the top level but the professor does a very good job making it approachable and understandable. If you show up to each class and are engaged, it will all make sense.

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

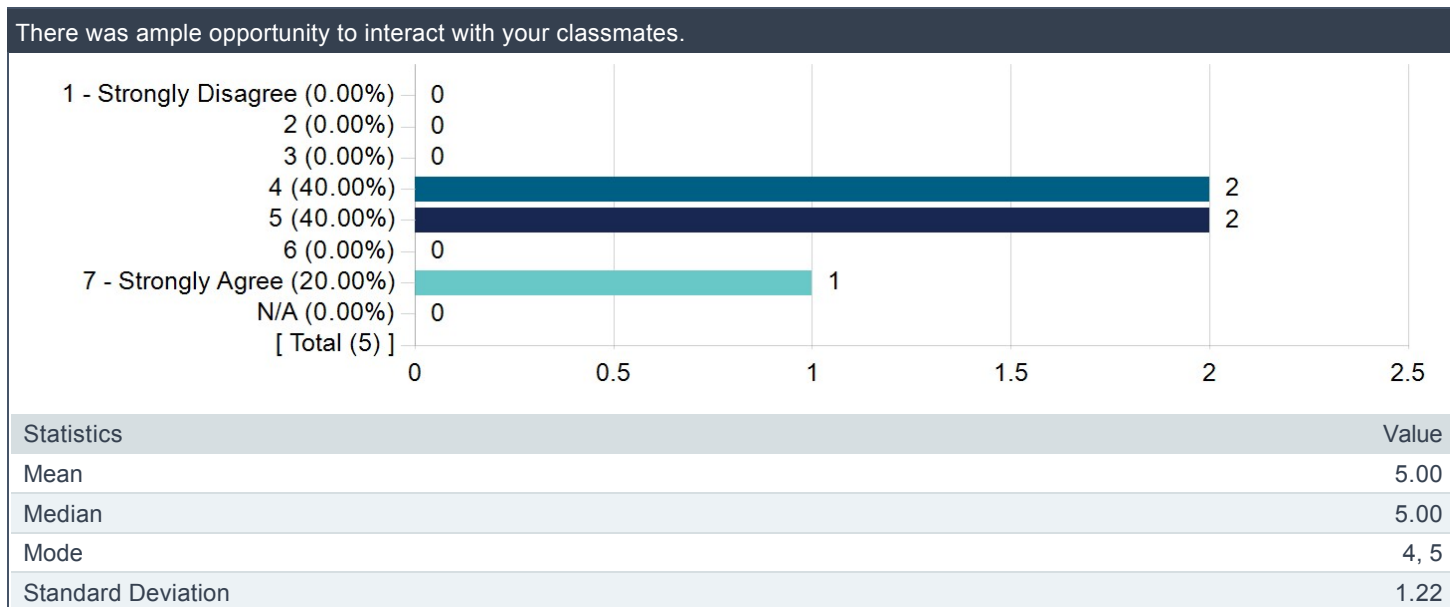
Comments
no
No

Any additional comments?

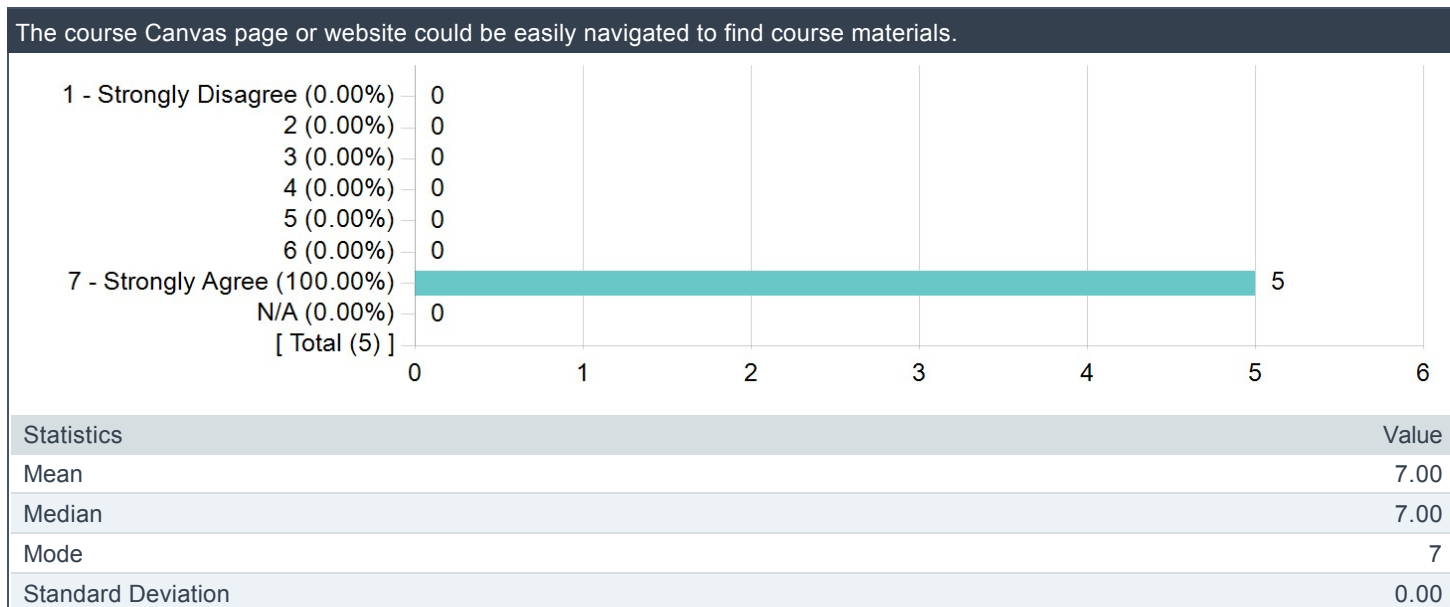
Comments
I recently exchanged texts with one other student in the course right now, and we both agreed that this this is one of the best taught courses, and best courses, we have taken at WashU. I would have loved to take this in person, and hope Professor Wendl will have the opportunity to teach radiation more often (or other elective courses)
Thanks for a great semester!

Hybrid/Remote Learning

There was ample opportunity to interact with your classmates.



The course Canvas page or website could be easily navigated to find course materials.



Personalized Questions

Please comment on whether you consider this course comparable to, more difficult, or less difficult than other 5000-level courses

Comments
I would consider the material in this course to be very difficult compared to other 5000 level courses, however due to the extremely clear teaching of the material, I actually found it to be extremely reasonable (not too hard) without compromising any understanding of the material.
This was one of my more challenging 500 level MEMS courses, but it was never unreasonably hard. The professor responded quickly to my questions.
I think that this class was on par with other 5xx level courses that I have been enrolled in. I think that the material itself is more complicated but the notes are very very strong.
For me this course was easier than the other 5000 courses simply because it was very well taught and I understand these concepts much more than the major aerospace courses.

Please comment on the most memorable or significant thing you took from this course.

Comments
The thing I think of would be the ability to look at most heat transfer problems and see how I could break it down and analyze it using the methods we discussed. Outside of course content, I will absolutely remember this course as my most favorite course perhaps ever taken, and I will never forget the feeling each lecture left me with of "Oh my goodness I want to learn more"
I think that the entire framework of the course is creating an understanding of heat transfer as it pertains to fundamentals of differential equations and numerical/analytical methods.

The instructor used Zoom effectively in lieu of in-person instruction

The instructor used Zoom effectively in lieu of in-person instruction



Statistics	Value
Response Count	5
Mean	7.00
Median	7.00
Standard Deviation	0.00