Stanford University
Fall 2024 Section Feedback

Course: F24-CHEMENG-340-01: MOLECULAR THERMODYNAMICS

Instructor: Kelly Liu,Aditya Shah *

Response Rate: 31/35 (88.57 %)

1 - In what way did you interact with this instructor most?

Aditya Shah

Response Option	Weight	Frequency	Percent	Percent Responses	Means
In section meetings	(1)	1	3.23%		
In lab	(2)	0	0.00%		
During office hours	(3)	24	77.42%		
Via a class website	(4)	1	3.23%		
Email	(5)	2	6.45%		
In class	(6)	3	9.68%		
Other	(7)	0	0.00%		

Response Rate
31/35 (88.57%)

2 - During the quarter, about how many hours on average per week did you interact with this instructor in section, class, lab, office hours, and other meetings?

Aditya Shah

Response Option	Weight	Frequency	Percent	Percent Responses
0	(0)	1	3.57%	
1	(1)	11	39.29%	
2	(2)	8	28.57%	
3	(3)	4	14.29%	
4	(4)	1	3.57%	
5	(5)	1	3.57%	
6	(6)	2	7.14%	

Response Rate	Mean	STD	Median
28/35 (80.00%)	2.14	1.53	2.00

3 - How much did you learn from this instructor?

Aditya Shah

Response Option	Weight	Frequency	Percent	Percent Responses	Means
A great deal	(5)	20	71.43%		4.64
A lot	(4)	6	21.43%		
A moderate amount	(3)	2	7.14%		
A little	(2)	0	0.00%		
Nothing	(1)	0	0.00%		

Response Rate	Mean	STD	Median
28/35 (80.00%)	4.64	0.62	5.00

4 - Overall, how effective was the instruction you received from this instructor?

Aditya Shah

Response Option	Weight	Frequency	Percent	Percent Responses	Means
Extremely effective	(5)	19	67.86%		4.61
Very effective	(4)	7	25.00%		
Moderately effective	(3)	2	7.14%		
Slightly effective	(2)	0	0.00%		
Not effective at all	(1)	0	0.00%		

Response Rate	Mean	STD	Median
28/35 (80.00%)	4.61	0.63	5.00

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5 - What skills or knowledge did you learn or improve from this instructor?

Aditya Shah

Response Rate	11/35 (31.43%)

• Appreciate the quick responses on GradeScope

• Entropic perspectives and homework help.

• Aditya is a fantastic TA and really helped me understand how to approach a thermo problem and use my understanding of thermo to solve complex problems. I learned how to break down complex problems, apply approximations, and extract useful information from my results.

• Adi was very helpful when I went to him with conceptual problems and had effective ways of explaining them.

• Thermodynamic knowledge

• Statistics and Thermodynamics

• Adi was great at clarifying a lot of concepts for me, using very simple analogies, which I have no idea how he came up with.

• Lots of fundamentals and how to approach problems correctly. Adi is a fantastic TA and clearly dedicated to us learning!

• Adi did an excellent job of explaining the overarching concepts in the course.

• Aditya is an amazing educator! He helped me understand something of every problem set.

• techniques of solving problem

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6 - What aspects of this instructor's teaching were most helpful to you?

Aditya Shah

Response Rate	15/35 (42.86%)

• Responsive, thorough, gives explanations before we had to ask

• Willingness to answer questions honestly

• Super nice, patient, and welcoming. Makes everything very approachable!

• Going over PSET question by question to talk about the high-level concepts addressed.

• Extremely knowledgeable, effective communicator, understanding, able to answer questions and rephrase to make concepts easier to understand

• Very helpful with content and course logistics

• Adi was excited about the course material and created very thought-provoking questions for the sets. He knew a lot about thermo, but was willing to admit when he couldn't help as much rather than lead us down some false path. Adi made sure we were understanding and learning in a way that didn't make the class overly stressful. He really was a fantastic TA and I would love to take any class he would TA (especially if its a topic he's similarly excited about)!

• Clearly answered questions approachable knowledgable

• Aditya was an incredible TA that performed on a level that all other TAs should aspire to. More than that, he is an incredibly caring and empathetic person, who was sensitive to the stressors of being a grad student or just being a person dealing with hard times. I am so grateful to have had him as my TA!

• Curiosity Honesty Understanding nature

• Explained the reasoning behind a problem and its approach very well.

• Aspect 1: Patient with students Aspect 2: Excellent at explaining difficult concepts at a perfect pace Aspect 3: Passionate for the subject matter

• Approachability Relatability Compassion

• He explains from the ground up! He doesn't assume you know the basics and goes to them if needed. He has a serene tone that facilitates understanding.

• ways of solving problem clear thoughts summary of knowledge

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7 - How can this instructor's teaching be improved?

Aditya Shah

Response Rate	7/35 (20%)

• N/A

• Record and/or post office hours notes and discussions.

• N/A

• They both did a great job

• You were great queen.

• I think he's great.

• Everything is good
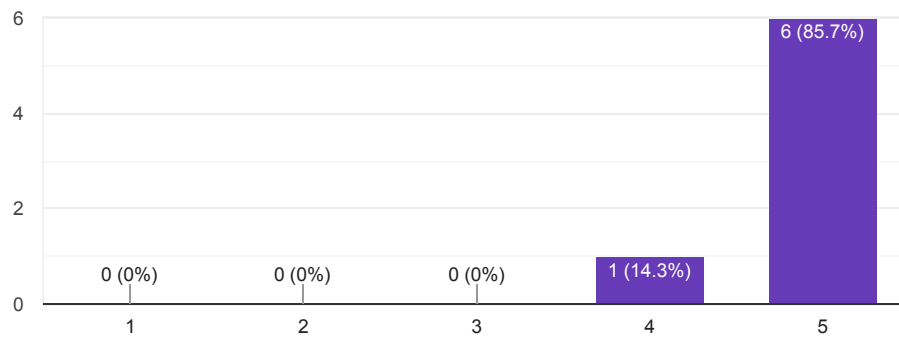
[CHEMENG 340] Feedback on Aditya's Teaching/Questions

7 responses

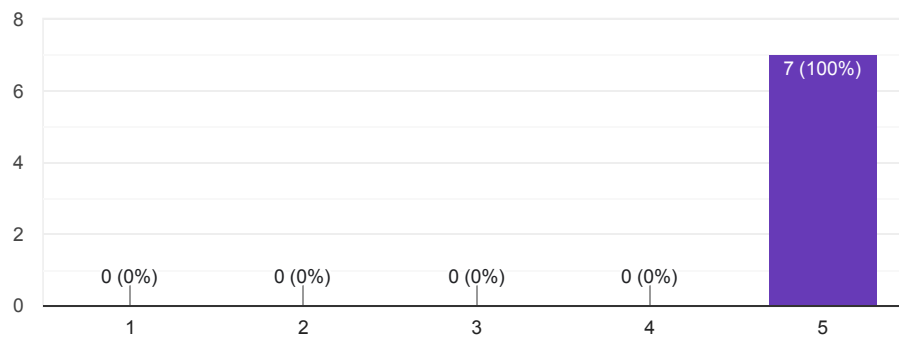## How effective was Aditya in leading office hours?

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7 responses

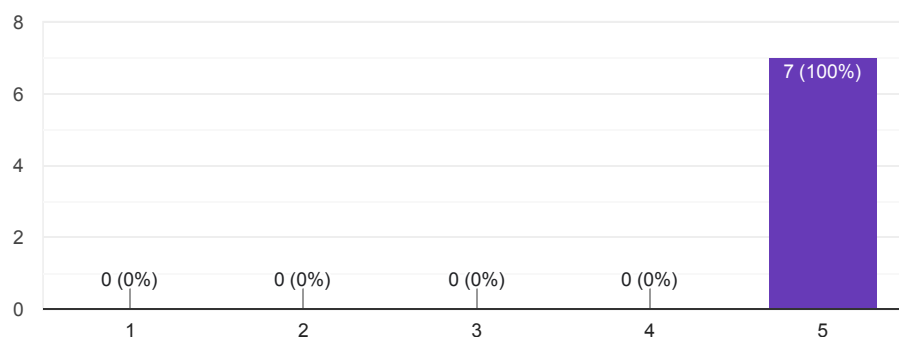## How effective was Aditya in creating a supportive environment for learning?

Copy

7 responses

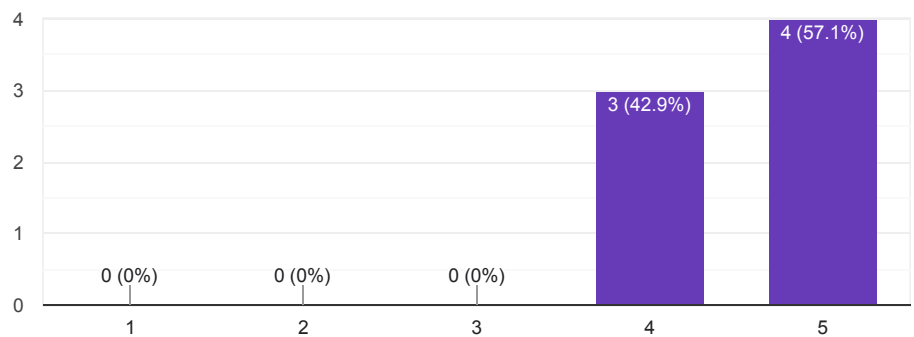## How effective was Aditya in providing guidance on assignments?

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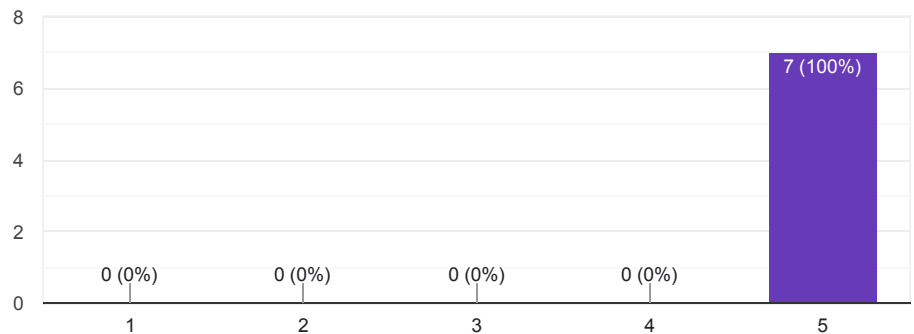7 responses

How clearly did Aditya answer questions?

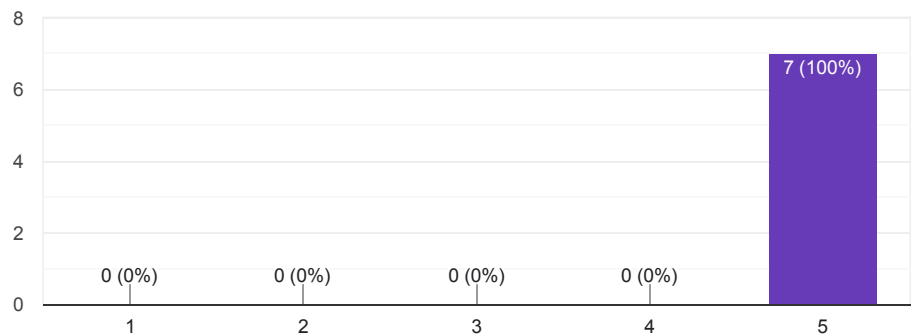7 responses

How well did Aditya encourage questions?
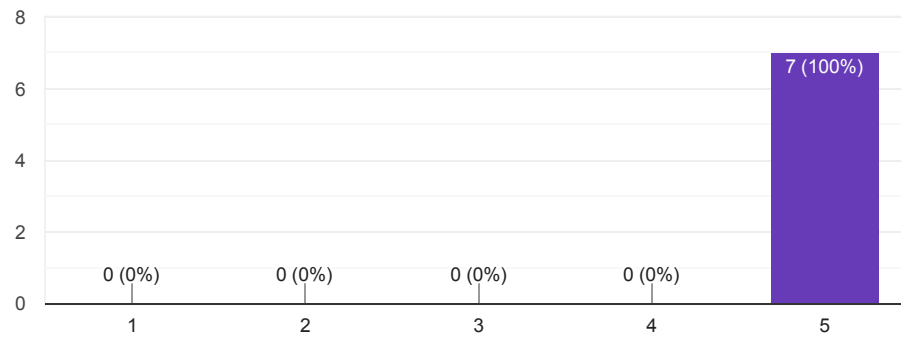
7 responses

How approachable was Aditya for you?

7 responses

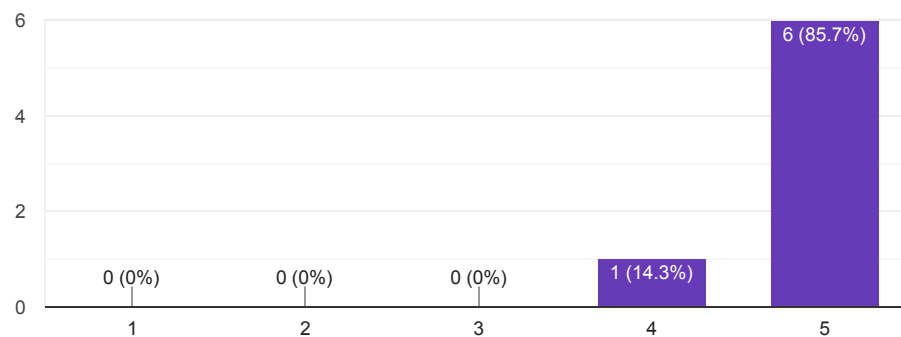## How effective was Aditya in creating a supportive environment for learning?

7 responses

Value	Count
1	0 (0%)
2	0 (0%)
3	0 (0%)
4	0 (0%)
5	7 (100%)

Aditya's grading and question writing was fair and thoughtful

7 responses

Value	Count
1	0 (0%)
2	0 (0%)
3	0 (0%)
4	1 (14.3%)
5	6 (85.7%)

Aditya was caring and prioritized students' well-being

7 responses

Value	Count
1	0 (0%)
2	0 (0%)
3	0 (0%)
4	0 (0%)
5	7 (100%)
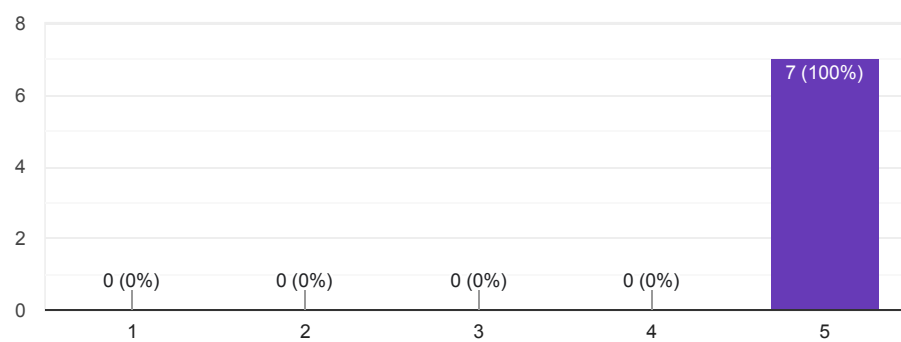
Any other thoughts/feedback on my teaching style?

4 responses

Adi was one of my favorite TAs of all time. He focused on the conceptual understanding of the topics, rather than forcing us to muddle through algebra. Personally, I lose sight of what I'm supposed to be learning if I get stuck on extremely tedious math errors and Adi helped me avoid that. Adi also created problems on the sets that were aligned with the material presented in class, but with slight twists. He had us applying the material to topics that were not what you'd typically expected to be thermodynamical, helping us recognize that the course applied further than we would normally have thought. His questions were a little confusing at first, but I had such clarity after figuring them out. Adi also kept it real and reminded us that we are all human and its okay to not be perfect all the time. I really, really enjoyed Adi as a TA and I wish I could take more courses with him. Thank you for being so helpful this quarter!

You were a fantastic TA! My only feedback would be that sometimes OH felt a little slow moving, and there were times where I was confused about problems that you had not yet attempted, which made it difficult to get help from you. As a third-year, this is very understandable and I'm sure you were VERY busy lol. You're explanations on Ed were also very helpful. In general, I appreciated the dedication you have to teaching and helping us, in contrast with many professors/TAs I've had who are only teaching because they have to. I think you'll make a wonderful professor one day!

I think statistical mechanics concepts can be very difficult to explain to a bunch of clueless grad students, but you did a really good job!

Aditya is one of the most helpful, knowledgeable, and thoughtful teaching assistants I have ever had. The office hours were always so helpful and I looked forward to them each week. I really liked the approach to office hours and found the way Aditya explained and walked through the problems was very helpful. Even better would be when Aditya would give us the ball park for the answers to the homework even without giving//showing/or explaining the solution/method. This really took the pressure off when I was struggling on the homework since I would know right away if my answer was reasonable or completely wrong. When I wasn't able to attend office hours due to scheduling conflicts, Aditya was still very available, approachable, and made time to help.

Feedback on specific questions

On a scale of 1-10, how would you rate this question?   Copy
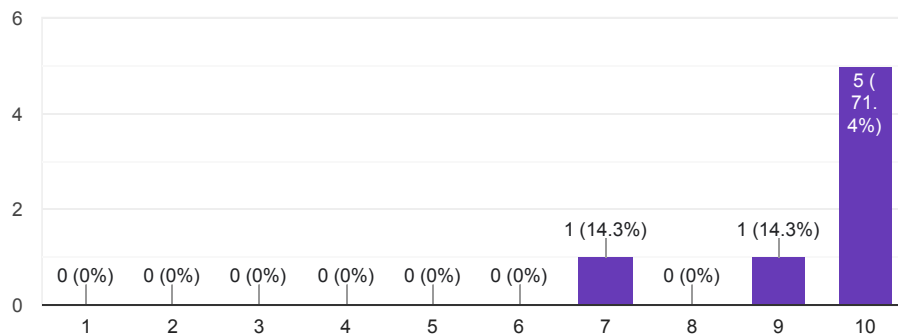
7 responses

Any other thoughts/feedback on this question?

5 responses

I liked this question a lot! It effectively introduced an interesting effect in modern research topics (high entropy electrolytes/alloys/etc) that I could quickly digest.

I've covered this topic three times (in 3 classes) and this was my favorite question on it. Good stuff.

I think the wording for problems 4f and 4g was a bit confusing. I remember not being sure what this question was asking. From this wording alone, I did not get that 4f was asking about entropy in the perspective of the scientist (who thinks entropy is the same) and not the perspective of the actual solution. I understand the point of 4g, but I think the answer key could've been a bit more clear about what the other forms of entropy are, especially because I don't think we talked about this as much in class.
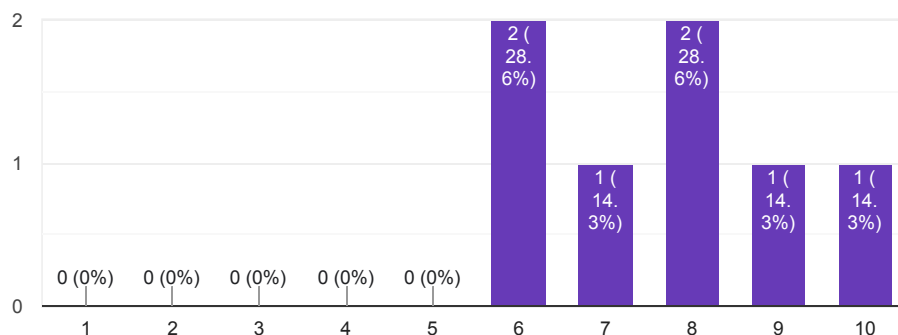
Very thought-provoking!!

Loved this question! It was challenging but fun to work on, taught me a lot, and helped really test my thermo intuition.

On a scale of 1-10, how would you rate this question?

Copy

7 responses

Any other thoughts/feedback on this question?

4 responses

This question did not have a ton of structure, so I only knew what you were asking us to do after going to your office hours and having you rephrase it. I think you might want to instead ask a series of questions that lead us to the answer.

Similarly to problem 4f above, I was not sure what this question was asking. It was very helpful when you explained it in office hours though! I think a problem like this works better as an in class discussion/thought experiment rather than a homework problem that I tried by myself at first. I benefitted a lot from the discussion we had about this as a group in office hours for this problem.

The wording of the question sort of gives the answer away, which might have been your intention in the first place (i.e., to give us a hint so we're not super lost)?
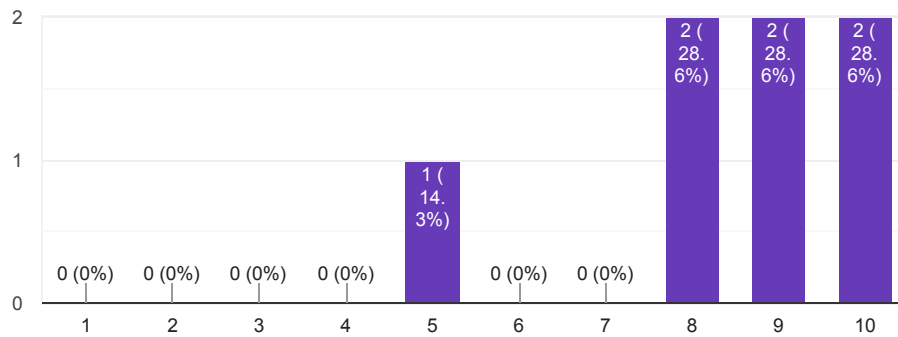
I thought this question was very confusing until I went to office hours. I think the way it is written was just to general but the concept being tested was helpful to work on.

On a scale of 1-10, how would you rate this question?

7 responses

Any other thoughts/feedback on this question?

5 responses

Yeah this one was a little difficult to understand and I didn't get much from it. I would reconsider how you worded it and what the big takeaways should be for this.

I loved this question. I still don't really understand the answer to 4.e though.

This problem helped a lot with my conceptual understanding. I don't think part a) was particularly necessary. I got a bit confused with the brackets around energy that represented the average and how they were not present in the derivative. It was good to have b and c come before part d. Doing those two parts first helped me tackle part d.

This was a cool question because it shows how statistical mechanics is applicable to many different fields that we might not even be considering (for instance, I come from a battery background and I had no idea you could look at astrophysics like this)!

This question was so difficult at first but it was helpful after working on it with others.

On a scale of 1-10, how would you rate this question?
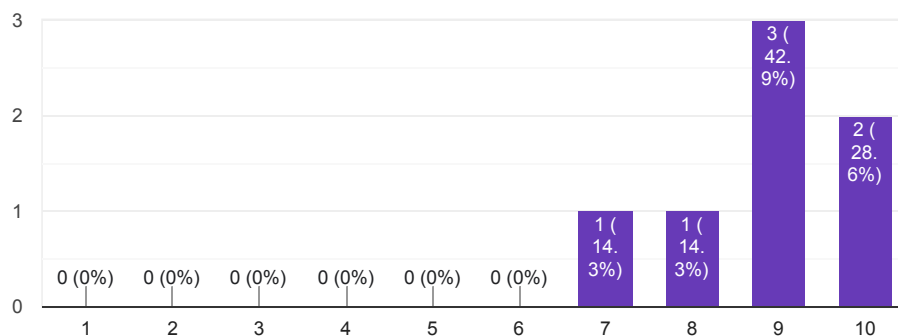
7 responses

Any other thoughts/feedback on this question?

3 responses

good. builds intuition.

I think it was good to have us do a slightly different version of the derivation from class. It's easy to get a bit ~lost in the sauce~ when professors do longer derivations in class. Doing it myself helped with my understanding. I could not have done 2d without office hours because I don't think this was something Jian emphasized.

I really liked this question, being asked to derive the 2D version of the 3D partition function helped greatly with my understanding of this subject!

Any other thoughts/feedback on anything?

2 responses

Great job, and I hope you have a great holiday break!

Thank you!!

Google Forms