

Fall 2021 Individual Report APPHY 195A - PHYSICS 195A(FAS-PHYSICS 195A-Introduction to Solid State Physics 001,FAS-APPHY 195A-Introduction to Solid State Physics 001) Andrew Saydjari

Project Title: 2021 Fall Harvard FAS Course Evaluation

Course Audience: 27 Responses Received: 25 Response Ratio: 93%

#### **Report Comments**

Note:

The order that the questions appear on this report is not the same as the way the questions were displayed to students. The order has been changed to make the report more readable.

Creation Date: Tuesday, January 4, 2022

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# **General Course Questions**

# **Course General Questions**

Evaluate the course overall.	Count 25	Excellent 96%	Very Good 4%	Good 0%	Fair	Unsatisfactory 0%	Course Mean 4.96	Dept Mean N/A	Division Mean N/A
Course materials (readings, audio-visual materials, textbooks, lab manuals, website, etc.)	25	80%	16%	4%	0%	0%	4.76	N/A	N/A
Assignments (exams, essays, problem sets, language homework, etc.)	25	88%	12%	0%	0%	0%	4.88	N/A	N/A
Feedback you received on work you produced in this course	25	80%	20%	0%	0%	0%	4.80	N/A	N/A
Section component of the course	25	92%	8%	0%	0%	0%	4.92	N/A	N/A

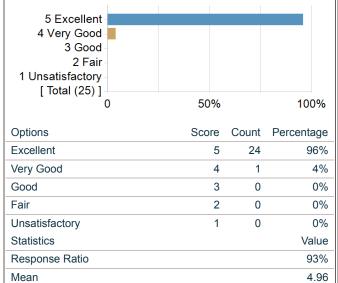
#### Course

Median

Standard Deviation

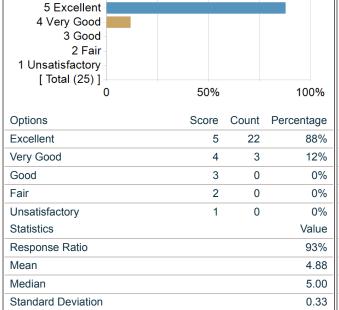
1. Evaluate the course overall.

2. Course materials (readings, audio-visual materials, textbooks, lab manuals, website, etc.)



5 Excellent 4 Very Good 3 Good 2 Fair 1 Unsatisfactory [ Total (25) ]	50%		100%
Options	Score	Count	Percentage
Excellent	5	20	80%
Very Good	4	4	16%
Good	3	1	4%
Fair	2	0	0%
Unsatisfactory	1	0	0%
Statistics			Value
Response Ratio			93%
Mean			4.76
Median			5.00
Standard Deviation			0.52

- 3. Assignments (exams, essays, problem sets, language homework, etc.)
- $\ensuremath{\mathsf{4}}.$  Feedback you received on work you produced in this course



5 Excellent			
4 Very Good			
3 Good			
2 Fair⊣			
1 Unsatisfactory			
[ Total (25) ]			
0	50%		100%
Options	Score	Count	Percentage
Excellent	5	20	80%
Very Good	4	5	20%
Good	3	0	0%
Fair	2	0	0%
Unsatisfactory	1	0	0%
Statistics			Value
Response Ratio			93%
Mean			4.80
Median			5.00
Standard Deviation			0.41

5.00

0.20

5. Section component of the course

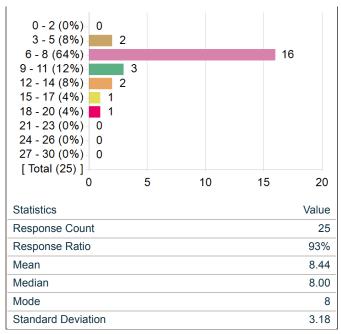
5 Excellent 4 Very Good 3 Good 2 Fair 1 Unsatisfactory [ Total (25) ]	50%		100%
Options	Score	Count	Percentage
Excellent	5	23	92%
Very Good	4	2	8%
Good	3	0	0%
Fair	2	0	0%
Unsatisfactory	1	0	0%
Statistics			Value
Response Ratio			93%
Mean			4.92
Median			5.00
Standard Deviation			0.28

# Requirements - What did this course require of you?

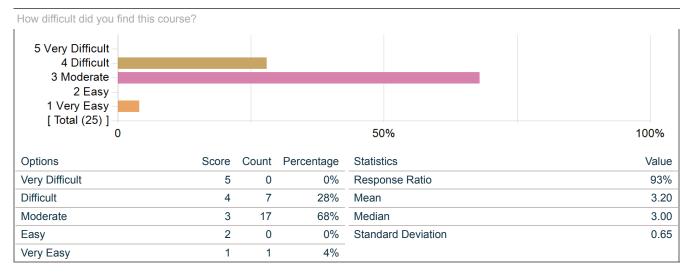
On average, how many hours per week did you spend on coursework outside of class? Enter a whole number between 0 and 168.

Frequency chart and mean excludes students who answered 31 or more hours.

On average, how many hours per week did you spend on coursework outside of class? Enter a whole number between 0 and 168.



## How difficult did you find this course?

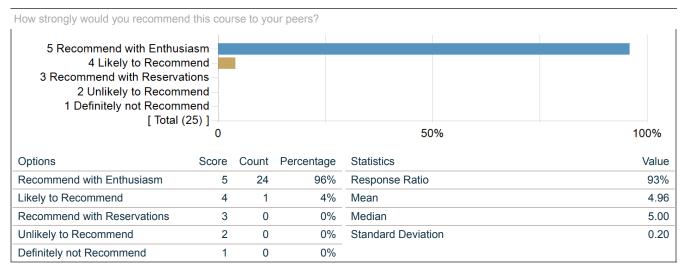


## What was/were your reason(s) for enrolling in this course? (Please check all that apply)

Options	Count
Elective	16
Concentration or Department Requirement	17
Secondary Field or Language Citation Requirement	0
Undergraduate General Education Requirement	0
Expository Writing Requirement	0
Foreign Language Requirement	0
Pre-Med Requirement	0
Divisional Distribution Requirement	0
Quantitative Reasoning with Data Requirement	0

## Recommendations - Would you recommend this course?

## How strongly would you recommend this course to your peers?

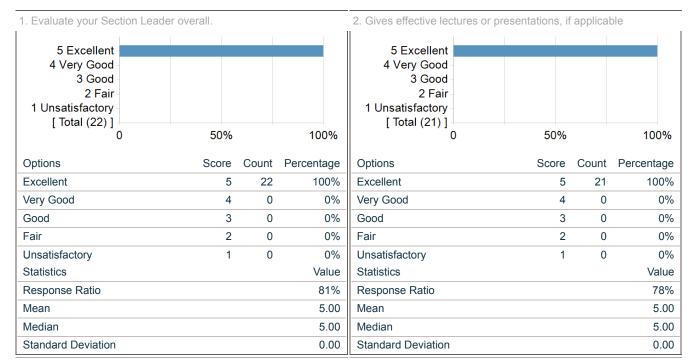


# **Evaluation of Section Leaders**

# **Section Leader Questions**

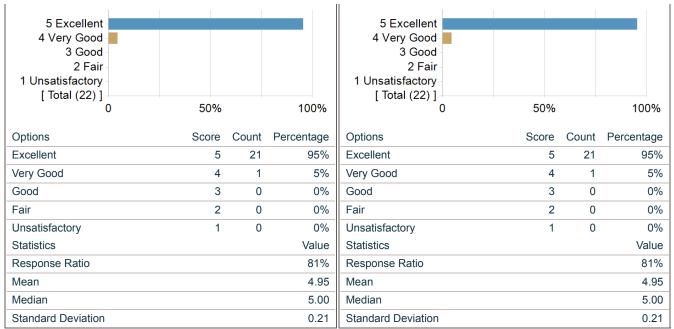
	Count	Excellent	Very Good	Good	Fair	Unsatisfactory	Instructor Mean	Dept Mean	Division Mean
Evaluate your Section Leader overall.	22	100%	0%	0%	0%	0%	5.00	N/A	N/A
Gives effective lectures or presentations, if applicable	21	100%	0%	0%	0%	0%	5.00	N/A	N/A
Facilitates discussion and encourages participation	22	95%	5%	0%	0%	0%	4.95	N/A	N/A
Is accessible outside of class (including after class, office hours, e-mail, etc.)	22	95%	5%	0%	0%	0%	4.95	N/A	N/A
Generates enthusiasm for the subject matter	21	95%	5%	0%	0%	0%	4.95	N/A	N/A
Gives useful feedback on assignments	20	95%	5%	0%	0%	0%	4.95	N/A	N/A
Returns assignments in a timely fashion	21	95%	5%	0%	0%	0%	4.95	N/A	N/A

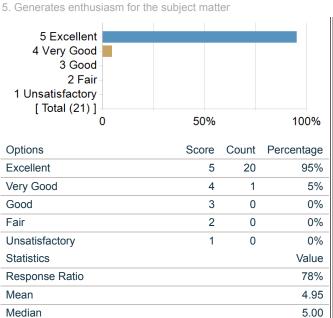
#### **Section Leader**



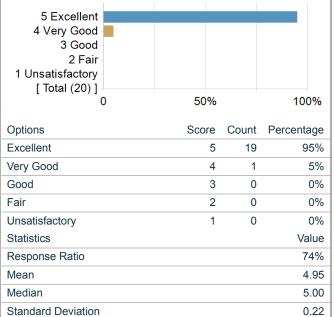
<sup>3.</sup> Facilitates discussion and encourages participation

4. Is accessible outside of class (including after class, office hours, e-mail, etc.)





6. Gives useful feedback on assignments



7. Returns assignments in a timely fashion

Standard Deviation

5 Excellent 4 Very Good 3 Good 2 Fair 1 Unsatisfactory [ Total (21) ]	50%		100%
Options	Score	Count	Percentage
Excellent	5	20	95%
Very Good	4	1	5%
Good	3	0	0%
Fair	2	0	0%
Unsatisfactory	1	0	0%
Statistics			Value
Response Ratio			78%
Mean			4.95
Median			5.00
Standard Deviation			0.22

0.22

**Section Leader Comments** 

### Please comment on your Section Leader's teaching.

#### Comments

Andrew possesses infinite knowledge on everything solid state physics and he used this expertise to make the sections/office hours of this course very enriching. Additionally, he is very supportive and is committed to ensuring that everyone's questions are answered before he leaves office hours.

Excellent excellent excellent teacher. I think he knows everything. And he was good-natured about explaining things over and over.

Andrew's command of solid–state physics and his ability to explain complex topics in an approachable manner is second to none! He was very generous with his time, and always happy to spend extra time beyond his office hours and section to explain any confusions students have as well as answer questions on more complex topics. This course's content and psets went very smoothly thanks to Andrew's presence, and he was the best TF ever!

Andrew is an absolute gem of a TF. Seriously. He is so helpful, so accessible to his students, so patient, so well–versed in the course material, and so enthusiastic. He is very resourceful and attentive as well. He is also capable of cleverly drawing connections between course concepts and other ideas in physics, which definitely helps us understand things better. Again, he has a great sense of humor and has made sections a blast to go to! I think he has great potential to be an amazing professor and if that's what he's aiming for, I'm looking forward to seeing him excel as one.

Andrew was an absolutely stellar teacher! He stayed late at office hours when he saw that people were clearly still confused and very stressed. He answered every question I had even if I had asked it many times before and still didn't understand. Andrew explained things very clearly and simply. Section was very clear because he outlined what steps we were going to follow in the problem before we did it. He will be a great teaching addition to whatever physics department he joins as faculty! Andrew also needs a raise and other TAs should attend some of his sections

Andrew was one of the best section leader's I've had at Harvard, and went above and beyond with his instruction and support. No matter the hour, he was available by email, and he worked with all of us in office hours late into the night, making sure that everyone had the help they needed. I was so lucky to have him teaching our sections!

Andrew was very helpful throughout the course. He focused on helping everyone understand not only the course material but also the applications in the general scientific community. His office hours were very helpful and a great way to talk about the problem sets with him or with other classmates. He also answered questions about everything within and even outside the scope of the class. A very excellent teacher.

Andrew is one of the best TAs I have ever had. He is great and very knowledgeable. He is also great at explaining things and breaking them down in a manner you can actually understand. Not only is he incredibly smart he is also able to communicate/ impart the knowledge clearly and effectively.

Easily the best TF I've ever met. The OH and Sections were outstanding, he shows great understanding of the physical AND chemical intuitions behind different concepts providing advanced knowledge for students eager to learn more. In addition to the abundance of knowledge he can offer, he is EXTREMELY hardworking and patient, so yoy don't have yo worry about falling behind and needs more time to catch on. Finally, just like the instructor, he is so open to small talks when you can discuss the field and what to learn next, or just more generally about life.

I would to have just a quarter of the knowledge Andrew has. Andrew is such a great TF.

I feel that Andrew's sections really helped me apply the material learned in class. I also found his office hours very helpful; he has a way of clearly explaining complex topics

Andrew is lovely. He was so good at explaining difficult concepts and answering questions, and also just a sidenote but great sense of humor too.

Andrew was possibly the best TF I've had in a Harvard course. His feedback on psets was fast and thorough. His section was well constructed and genuinely helpful. He was constantly making himself available to answer course questions for students. All other TFs should be more like Andrew.

Andrew is incredible. He's so smart and so patient. Andrew works extraordinarily hard and made so much time for us beyond his office hours. he explained everything really clearly and has that unique combination of being extremely talented and knowledgeable, and being able to explain what he knows in ten different ways until it makes sense to whoever he's working with.

Just perfect in any sense. Great teaching, great notes & handwriting, timely feedback, helpful at OH, accessible.

Comments

Andrew is the best, most dedicated, and most helpful Teaching Fellow I have ever met at Harvard. I strongly support and endorse him as a Derek Bok Teaching Award candidate (which is given only to 5 grad students per semester). Andrew absolutely deserves the award. I would like to elaborate on very few among numerous amazing experiences I could have thanks to Andrew:

- 1. Andrew is available whenever students would like to meet and discuss physics. Regarding the Problem Sets, he stayed way over than the time that was set for the Office Hours (usually from 7:30 pm to 11:30 pm for Wednesday). This is twice as long as the usual office hours. Furthermore, he always answered with great detail whenever I have physics questions, not necessarily related to Problem Sets. For example, when I asked him how to understand the equivalence between periodic boundary condition and wavefunction vanishing boundary condition, he provided me with a detailed note that describes how to understand this phenomenon considering the one-point compactification. This was extremely satisfying point.
- 2. Andrew often posed me with a great question that I can contemplate of by myself. For example, Andrew once questioned me how the atomic nuclei behave when the initial photon is scattered to the final photon through the X-Ray scattering. This is very related to the lecture material, but I could not pose this important and critical question by myself. Also, after suggesting me this question, Andrew allowed me to try out different hypothesis by myself and endured different incorrect scenarios with kind counterargument how my hypothesis cannot work. Through this process, I could enhance my ability to think more critically.
- 3. When I interacted with Andrew about the final project, Andrew suggested me a lot of different "paths" I can consider in preparing the useful talk. He exactly knows my interest in theoretical aspect of solid-state physics, and he advised me different topics in a huge area of superconductor that can fit the purpose of the talk. Even after I delivered the talk, Andrew posed me an interesting and important question that I missed while I prepare for the talk and suggested me that we can discuss after I return for the Spring semester. I was very surprised and deeply impressed by the dedication of Andrew for the teaching as he would still want to meet the students even after the semester would be ended.
- 4. Andrew encouraged and supported students regarding long-term concerns as well. For example, I discussed Andrew a lot on which courses I should take in the future on condensed matter physics that would fit my interest and background, which practice would make to ask better questions, or which attitude should be something that one should embrace as a prepared graduate student (or a researcher in general). Although these questions can be very abstract and do not have specific answer unlike course-related physics questions, Andrew always provided his advice openly and in detail so that I could have much much better visions on these concerns. Especially, he understands me so well that he could provide not only the general advice that would work for all people but also the specific advice suitable for my interest and style. If Andrew allows, I personally would like to keep meeting Andrew once or twice over the future semesters to discuss on these life-long questions as a future researcher and ask for his amazing advice.
- 5. Andrew has very diverse knowledge and experience which helps amazingly in this course setting. Although Andrew is now an astrophysics student who worked previously in condensed matter experiment area, he has a diverse knowledge in chemistry, in condensed matter theory, and also in high energy physics. I am currently taking the course related to the high energy physics, and I often asked Andrew how the specific concepts I learned in high energy physics class can be related to the concepts we learn in the class. For example, I once asked how the Majorana particle in high energy physics can be manifested in form of quasi-particle in solid-state physics when we discussed the quasi-particle in the lecture. Andrew replied me with a great detail of his own previous presentation and relevant articles that I could read about the "non-abelian world" in solid-state physics. This was an amazing learning experience for me. Actually, Andrew changed my goal in college life. I initially wanted to study physics very in-depth and I believed that would prepare me to be a good graduate student. However, Andrew showed me the power of intellectual diversity which led me to declare my concentration not in physics but in chemistry & physics and mathematics and to decide to take Chemistry 20 - 30 - 40 sequence from next semester. Without Andrew, I must not have been able to appreciate the power of intellectual diversity.

Meeting Andrew as a Teaching Fellow this semester is one of the luckiest events in my life. If I can, I wish to be a great mentor and teaching fellow for the future undergraduate students when I become a graduate student. This is not a single opinion of myself, and I heard from a lot of my classmates that Andrew is the most dedicated and supportive TF they have ever met in college.