Northwestern

Individual Report for MATH_290-2_41: MENU Linear Alg/Multivar Calc (Apurva Nakade)

Project Title: **Course and Teacher Evaluations CTEC Winter 2022**

Courses Audience: **18**
Responses Received: **15**
Response Ratio: **83.3%**

Report Comments

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Creation Date: **Tuesday, March 22, 2022**

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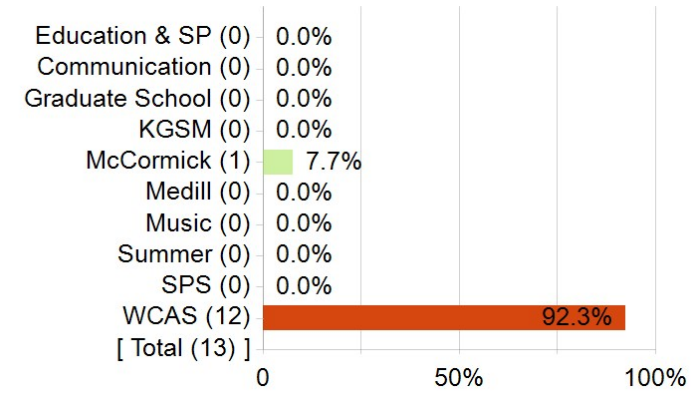
Course Evaluations

Instructor	Course
Apurva Nakade	**MATH_290-2_41: MENU Linear Alg/Multivar Calc**

DEMOGRAPHICS

Your School

Your School



Options	Count	Percentage
Education & SP	0	0.0%
Communication	0	0.0%
Graduate School	0	0.0%
KGSM	0	0.0%
McCormick	1	7.7%
Medill	0	0.0%
Music	0	0.0%
Summer	0	0.0%
SPS	0	0.0%
WCAS	12	92.3%

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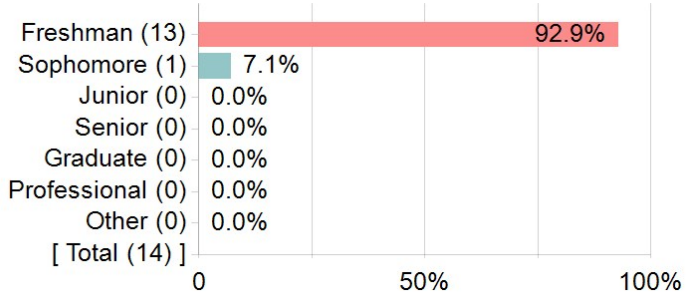
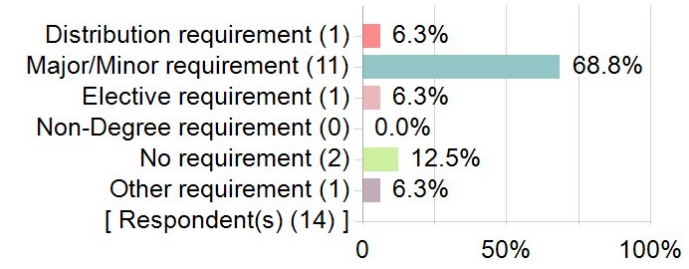
Your Class

Your Class



Options	Count	Percentage
Freshman	13	92.9%
Sophomore	1	7.1%
Junior	0	0.0%
Senior	0	0.0%
Graduate	0	0.0%
Professional	0	0.0%
Other	0	0.0%

What is your reason for taking the course? (mark all that apply)



Options	Count	Percentage
Distribution requirement	1	6.3%
Major/Minor requirement	11	68.8%
Elective requirement	1	6.3%
Non-Degree requirement	0	0.0%
No requirement	2	12.5%
Other requirement	1	6.3%
Respondent(s)	14	

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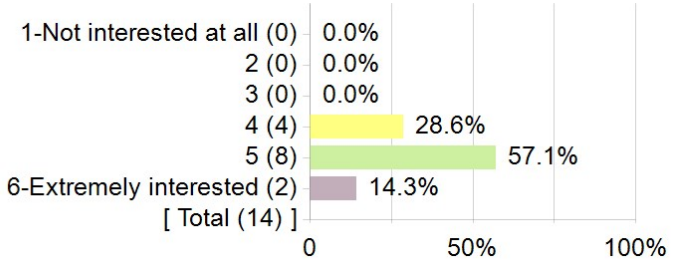
What was your Interest in this subject before taking the course?

What was your interest in this subject before taking the course?

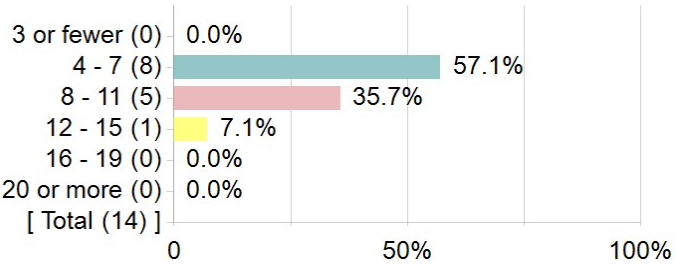


Options	Count	Percentage
1-Not interested at all	0	0.0%
2	0	0.0%
3	0	0.0%
4	4	28.6%
5	8	57.1%
6-Extremely interested	2	14.3%

TIME-SURVEY QUESTION

Estimate the average number of hours per week you spent on this course outside of class and lab time.

Estimate the average number of hours per week you spent on this course outside of class and lab time.



Options	Count	Percentage
3 or fewer	0	0.0%
4 - 7	8	57.1%
8 - 11	5	35.7%
12 - 15	1	7.1%
16 - 19	0	0.0%
20 or more	0	0.0%

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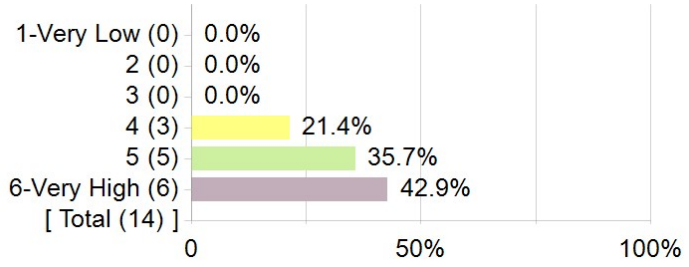
COURSE QUESTIONS

Provide an overall rating of the course.

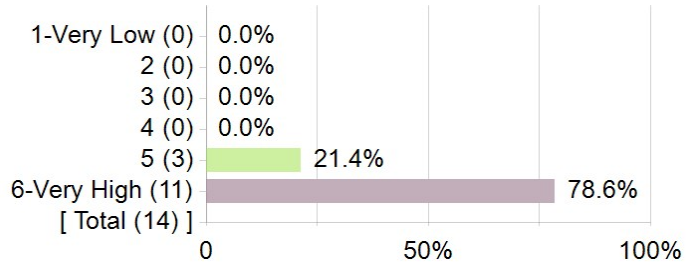
Provide an overall rating of the course.



Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	0	0.0%
3	3	0	0.0%
4	4	3	21.4%
5	5	5	35.7%
6-Very High	6	6	42.9%
Statistics			Value
Response Count			14
Mean			5.21
Median			5.00
Standard Deviation			0.80

Estimate how much you learned in the course.

Estimate how much you learned in the course.



Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	0	0.0%
3	3	0	0.0%
4	4	0	0.0%
5	5	3	21.4%
6-Very High	6	11	78.6%
Statistics			Value
Response Count			14
Mean			5.79
Median			6.00
Standard Deviation			0.43

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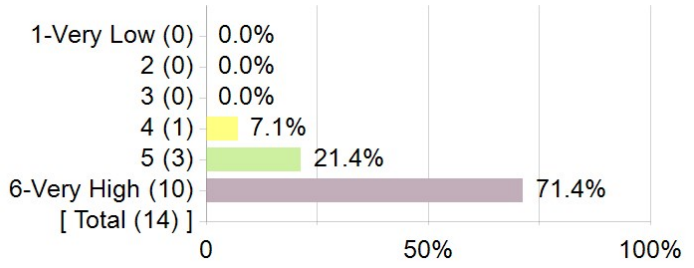
Rate the effectiveness of the course in challenging you intellectually.

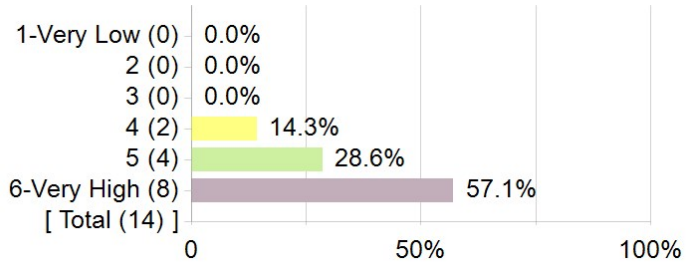
Rate the effectiveness of the course in challenging you intellectually.



Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	0	0.0%
3	3	0	0.0%
4	4	1	7.1%
5	5	3	21.4%
6-Very High	6	10	71.4%
Statistics			Value
Response Count			14
Mean			5.64
Median			6.00
Standard Deviation			0.63

Rate the instructional materials (texts, audiovisual materials, etc.) used in this course.

Rate the instructional materials (texts, audiovisual materials, etc.) used in this course.



Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	0	0.0%
3	3	0	0.0%
4	4	2	14.3%
5	5	4	28.6%
6-Very High	6	8	57.1%
Statistics			Value
Response Count			14
Mean			5.43
Median			6.00
Standard Deviation			0.76

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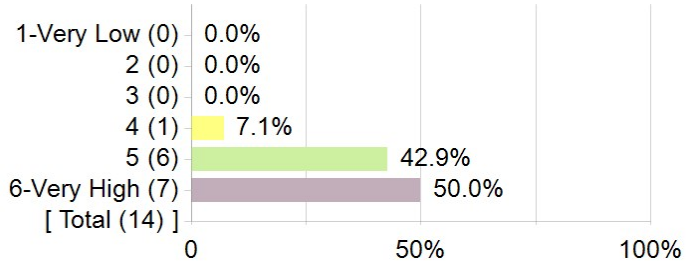
INSTRUCTOR QUESTIONS

Provide an overall rating of the instruction.

Provide an overall rating of the instruction.



Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	0	0.0%
3	3	0	0.0%
4	4	1	7.1%
5	5	6	42.9%
6-Very High	6	7	50.0%

Statistics	Value
Response Count	14
Mean	5.43
Median	5.50
Standard Deviation	0.65

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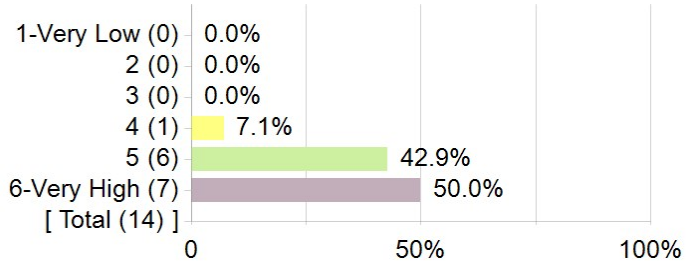
Rate the effectiveness of the instructor in stimulating your interest in the subject.

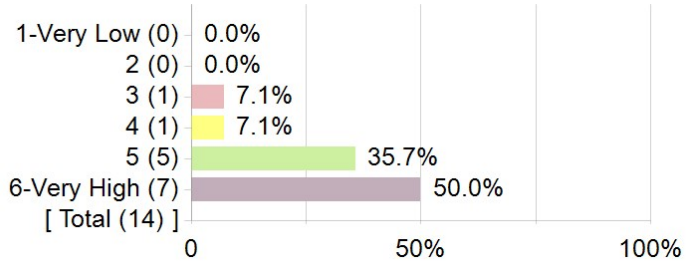
Rate the effectiveness of the instructor in stimulating your interest in the subject.



Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	0	0.0%
3	3	0	0.0%
4	4	1	7.1%
5	5	6	42.9%
6-Very High	6	7	50.0%
Statistics			Value
Response Count			14
Mean			5.43
Median			5.50
Standard Deviation			0.65

Rate how well prepared the instructor was for the class.

Rate how well prepared the instructor was for the class.



Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	0	0.0%
3	3	1	7.1%
4	4	1	7.1%
5	5	5	35.7%
6-Very High	6	7	50.0%
Statistics			Value
Response Count			14
Mean			5.29
Median			5.50
Standard Deviation			0.91

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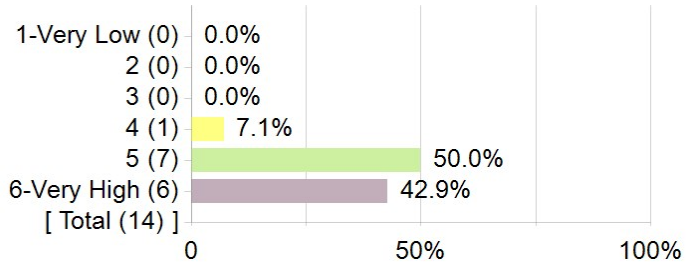
Rate the effectiveness with which the instructor communicated course content and ideas.

Rate the effectiveness with which the instructor communicated course content and ideas.

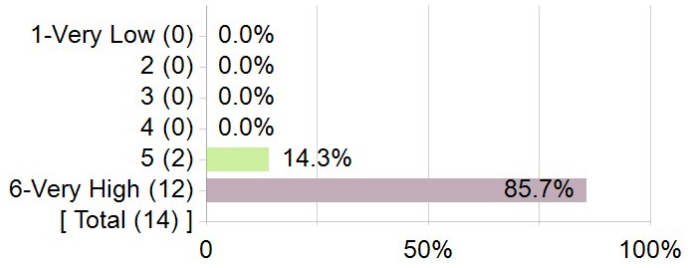


Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	0	0.0%
3	3	0	0.0%
4	4	1	7.1%
5	5	7	50.0%
6-Very High	6	6	42.9%

Statistics	Value
Response Count	14
Mean	5.36
Median	5.00
Standard Deviation	0.63

Rate the instructor's enthusiasm in teaching this class.

Rate the instructor's enthusiasm in teaching this class.



Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	0	0.0%
3	3	0	0.0%
4	4	0	0.0%
5	5	2	14.3%
6-Very High	6	12	85.7%

Statistics	Value
Response Count	14
Mean	5.86
Median	6.00
Standard Deviation	0.36

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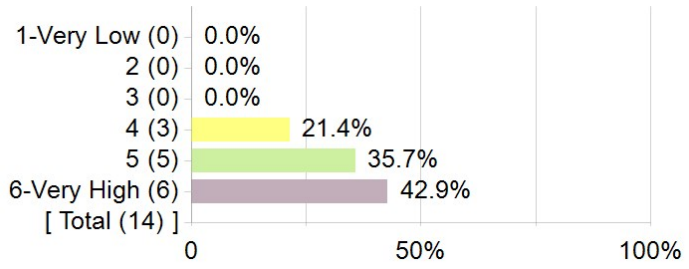
Rate the usefulness of discussion sections.

Rate the usefulness of discussion sections.

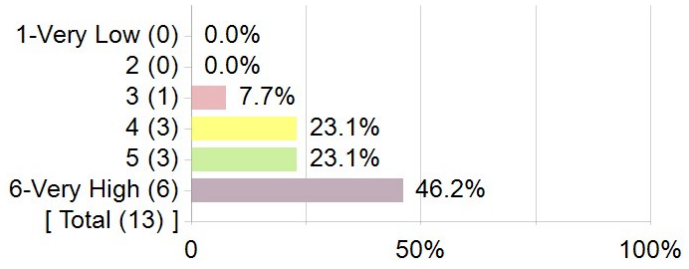


Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	0	0.0%
3	3	0	0.0%
4	4	3	21.4%
5	5	5	35.7%
6-Very High	6	6	42.9%

Statistics	Value
Response Count	14
Mean	5.21
Median	5.00
Standard Deviation	0.80

Rate the usefulness of office hours.

Rate the usefulness of office hours.



Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	0	0.0%
3	3	1	7.7%
4	4	3	23.1%
5	5	3	23.1%
6-Very High	6	6	46.2%

Statistics	Value
Response Count	13
Mean	5.08
Median	5.00
Standard Deviation	1.04

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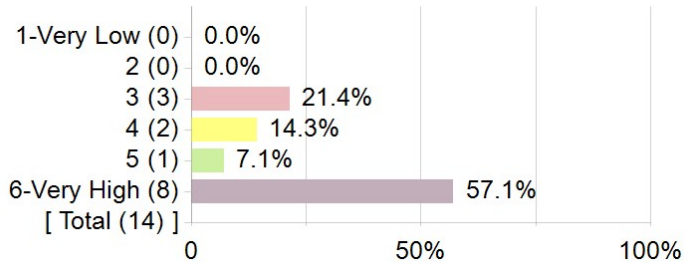
Rate the usefulness of OneNote.

Rate the usefulness of OneNote.



Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	0	0.0%
3	3	3	21.4%
4	4	2	14.3%
5	5	1	7.1%
6-Very High	6	8	57.1%
Statistics			Value
Response Count			14
Mean			5.00
Median			6.00
Standard Deviation			1.30

OPEN-ENDED QUESTIONS

Did the course help you learn? Why or why not?

Comments
Yes. Lectures were clear and relevant
I definitely learned a lot of linear algebra and multi variable calc in this class and it's kind of insane to think about how much we learned this quarter.
This class is great. Lots of material, a little fast–paced and overwhelming at times, but nothing insane (especially since I took the first part of the sequence last quarter and was already sort of in the hang of it).
I felt like I learned a lot in this class. There was a lot of material I was not familiar with before, and my instructor was clear and effective with his lessons.
Yes, through lectures, homework, salons, and exams.
The book questions definitely demanded critical thinking, which meant that I began to approach the kinds of questions I have to answer much more creatively

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Please summarize your reaction to this course focusing on the aspects that were most important to you.

Comments
In general, a well organized course
Lectures were very clear and Apurva was a entertaining and helpful.
Be ready to start where the 1st quarter ended, because not being ready can catch up to you later on in the first midterm since the first midterm is still linear algebra heavy–ish. I personally think mutlvariable calc makes more sense and if you can get past the first midterm you will be fine.
Was a little nervous going into this course after a long break from calculus, but caught back on quickly and did not end up having problems throughout the quarter. Was very nice to have Apurva as my professor and a similar group of classmates for continuity reasons.
From the past CTECs, people have said that this quarter is harder than 290–1, but I disagree. I think that if you're coming from a good calculus background, you will see many parallels. The content is essentially taking what you've learned in calc1/2/AB/BC and applying it to two and more variables (hence, the course name). Therefore, if you're comfortable with single variable, there is a good overlap of the content. The things that trip me up are always thinking of counter examples and ASN questions with "sometimes," especially on time–crunched exams. Other than that, expect a lot more calculations than last quarter as linear algebra is more theory than calculus (from my experience so far). Note: the first two weeks and half or so is spent finishing up linear algebra topics (i.e. orthonormal bases, symmetric matrices, and quadratic forms), which at first I did not look forward to as I did not perform well in 290–1, but this class shows a lot of interesting applications of linear algebra in multivariable calculus (e.g. determining the quadric surface with mixed terms in its equation using symmetric matrices). Overall, I would say that this class is very great as you begin to merge linear algebra into a more familiar subject and really see why MENU is structured the way it is (LA, and then MV calculus).
There was a lot more linear algebra than I expected. Overall, easier than 290–1.
This class is pretty much the same difficulty as 290–1, but I personally found the material less cohesive than last quarter, which made it harder to conceptualize material on exams. I'd recommend it if you got a B or above last quarter, but I probably wouldn't recommend it if you really struggled last quarter, because this quarter will definitely not be any easier for you. Multi is hard, especially if you've never taken it before. But you'll prob do within the same range as you did last quarter — I got a B+ both last quarter and this quarter. Apurva is awesome!! Really funny and easily approachable/very available guy. He always stayed after class to answer questions for anyone who needed it.
Math 290–2 is definitely a challenging class, but if you put in the work, you'll be able to make it through. The instructors have been extremely helpful with explaining content, and I really enjoyed the salons that were included in the discussion sections. You will have to put in work to succeed in this class, but I generally think it was easier than Math 290–1.
This course was difficult but worth it. Definitely find yourself a study group to work through the homework with and study for exams together. Both professors are great with answering questions and if you put in the work you should be okay.
Apurva explains concepts much more clearly in one–on–one discussions after class or during office hours than during lectures. The slides from class (which are posted after) are very helpful. Since not many people talked during class, the class seemed very disinterested unless you were the one actively asking questions.

What are the primary teaching strengths of the instructor?

Comments
He can explain the logic and inner connection between different concept with great insights
Knowledgeable, clear, helpful
Good at letting us know what to expect regarding the complexity of the material.
N/A
He is really passionate about the subject and explains things well. He is very funny and approachable in class, and he gives a lot of opportunities for students to "check their understanding" by participating in class, working through problems as a class, etc. He also would always stay after class for questions if anyone had any.
Prof. Nakade is such a relatable and sweet instructor. He is easy to approach in class and goes out of the way to answer any questions students have. I also appreciated the way that he explained the material, and I liked how he gave us some tricks beyond the basic course materials to help us on exams.
Personable, answering questions, examples/giving students time to try problems
Apurva understands the concepts he is teaching very well and is able to articulate *why* a particular theorem or approach is the case when asked.

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What are the primary weaknesses, if any, of the instruction?

Comments
Sometimes skips over small details but also feel like it’s hard not to do that with the fast and intense nature of the course.
N/A
His notes were a little disorganized, and sometimes he'd leave out entire theorems/definitions that I'd need for the homework.
Sometimes if we were working through an example, we would get stuck and it would take a second for Prof. Nakade to figure out what was not going right. However, he always answered our questions, and if we couldn't figure things out in class, he would send the solutions to us after class.
sometimes mistakes in the lectures that are later fixed but nothing major
When working on questions as a class, work on–screen would sometimes have mistakes unless corrected by a student

Can you offer suggestions for improvement?

Comments
Not really.
Maybe use another software to take notes during class. OneNote is kind of hard to follow sometimes.
NA

Suggest improvements to discussion sections.

Comments
Keep the discussion worksheets.
LOVEEE the Salon format. I would definitely recommend continuing the Salon format indefinitely. But maybe instead of random groups, letting people pick their own might be nice, as students tend to know whose working style they are compatible with in the class.
I really appreciated the collaborative format of this quarter's discussion sections. I think they fostered cooperation, and they were less stressful than the normal quiz format. The one note I would have is that the classrooms we used for discussions were not well–suited for a discussion section. Because seats were in rows and on different levels in Lunt 107, it was challenging to move around and work with peers.
NA–– continue with salons.
If the salon is kept, questions have to be of similar difficulty for each group. Otherwise there is an inherent time disadvantage when all the groups meet up to discuss.

Suggest improvements to office hours.

Comments
N/A –– didn't make it this quarter
Office hours were very helpful, and Apurva was very effective at creating a relaxed, friendly environment.
NA

Suggest improvements to lecture format.

Comments
Don’t really have any, although sometimes there’d be notation and format differences between both professors notes that could make a difference when doing the homework.
Potentially try using another format other than OneNote for notetaking.
I think the lecture format was very effective. My only comment is that the OneNote documents were sometimes difficult to access after class which made it difficult to look back at Apurva's notes from class.
NA

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