

Northwestern

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

Project Title: **Course and Teacher Evaluations CTEC
Winter 2019**

Courses Audience: **27**
Responses Received: **26**
Response Ratio: **96.3%**

Report Comments

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Creation Date: **Wednesday, March 27, 2019**



Northwestern University

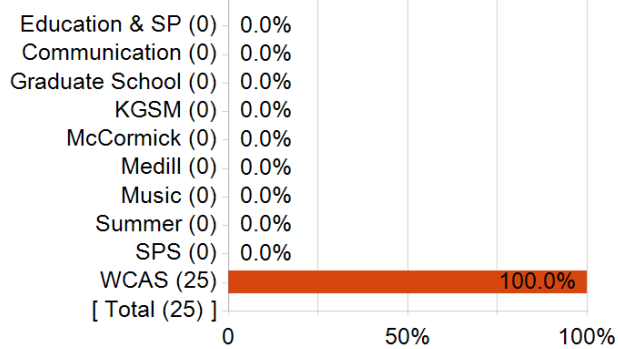
Course Evaluations

Instructor	Course
Rachael Norton	MATH_290-2_41: MENU Linear Alg/Multivar Calc

DEMOGRAPHICS

Your School

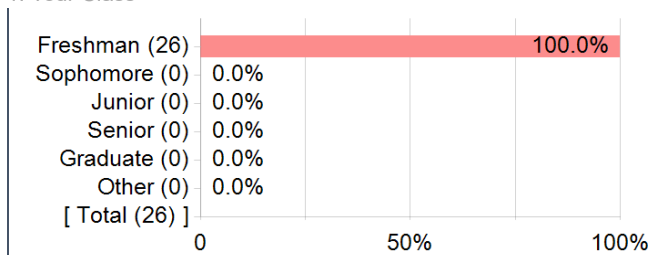
1. Your School



Options	Count	Percentage
Education & SP	0	0.0%
Communication	0	0.0%
Graduate School	0	0.0%
KGSM	0	0.0%
McCormick	0	0.0%
Medill	0	0.0%
Music	0	0.0%
Summer	0	0.0%
SPS	0	0.0%
WCAS	25	100.0%

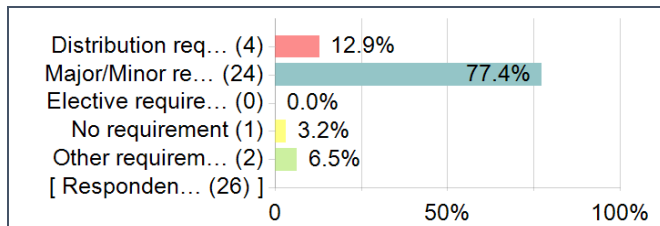
Your Class

1. Your Class



Options	Count	Percentage
Freshman	26	100.0%
Sophomore	0	0.0%
Junior	0	0.0%
Senior	0	0.0%
Graduate	0	0.0%
Other	0	0.0%

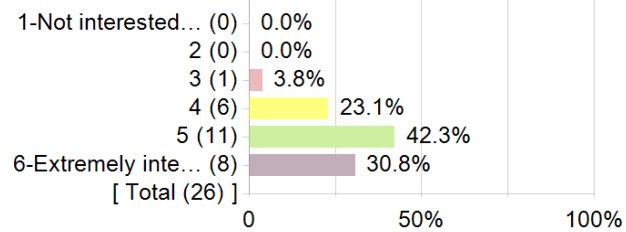
What is your reason for taking the course? (mark all that apply)



Options	Count	Percentage
Distribution requirement	4	12.9%
Major/Minor requirement	24	77.4%
Elective requirement	0	0.0%
No requirement	1	3.2%
Other requirement	2	6.5%
Respondent(s)	26	

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

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

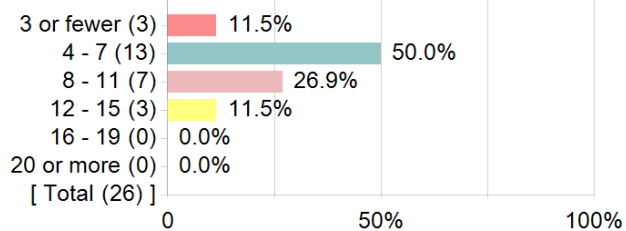


Options	Count	Percentage
1-Not interested at all	0	0.0%
2	0	0.0%
3	1	3.8%
4	6	23.1%
5	11	42.3%
6-Extremely interested	8	30.8%

TIME-SURVEY QUESTION

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

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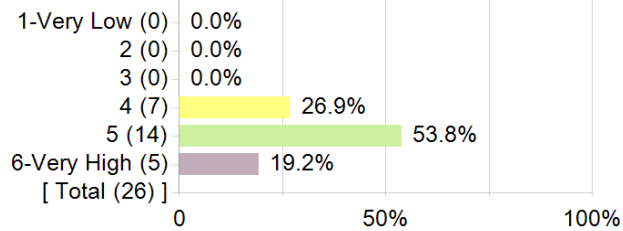


Options	Count	Percentage
3 or fewer	3	11.5%
4 - 7	13	50.0%
8 - 11	7	26.9%
12 - 15	3	11.5%
16 - 19	0	0.0%
20 or more	0	0.0%

COURSE QUESTIONS

Provide an overall rating of the course.

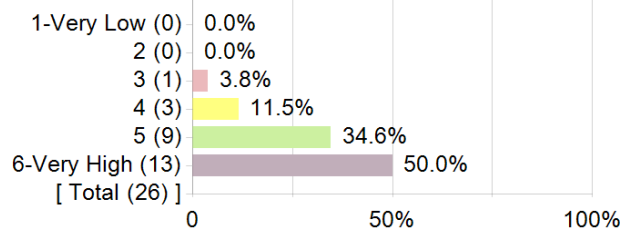
1. Provide an overall rating of the course.



Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	0	0.0%
3	3	0	0.0%
4	4	7	26.9%
5	5	14	53.8%
6-Very High	6	5	19.2%
Statistics			Value
Response Count			26
Mean			4.92
Median			5.00
Standard Deviation			0.69

Estimate how much you learned in the course.

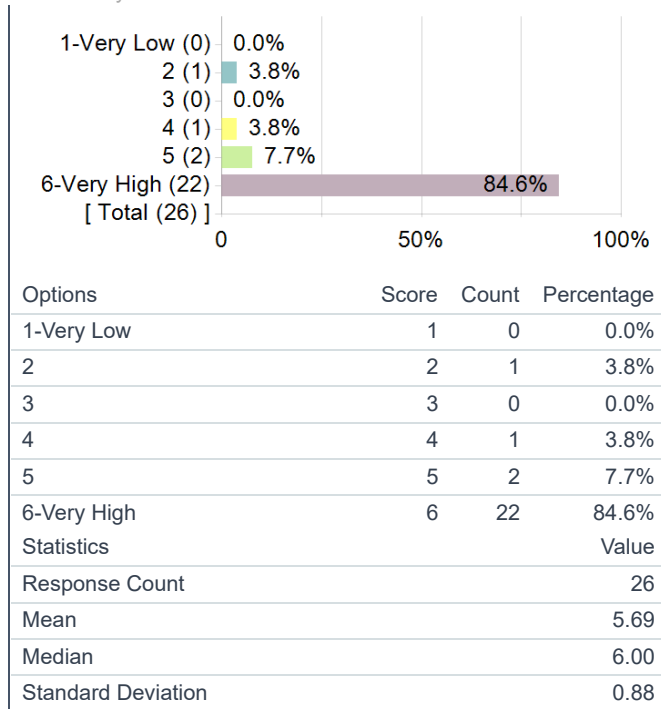
1. Estimate how much you learned in the course.



Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	0	0.0%
3	3	1	3.8%
4	4	3	11.5%
5	5	9	34.6%
6-Very High	6	13	50.0%
Statistics			Value
Response Count			26
Mean			5.31
Median			5.50
Standard Deviation			0.84

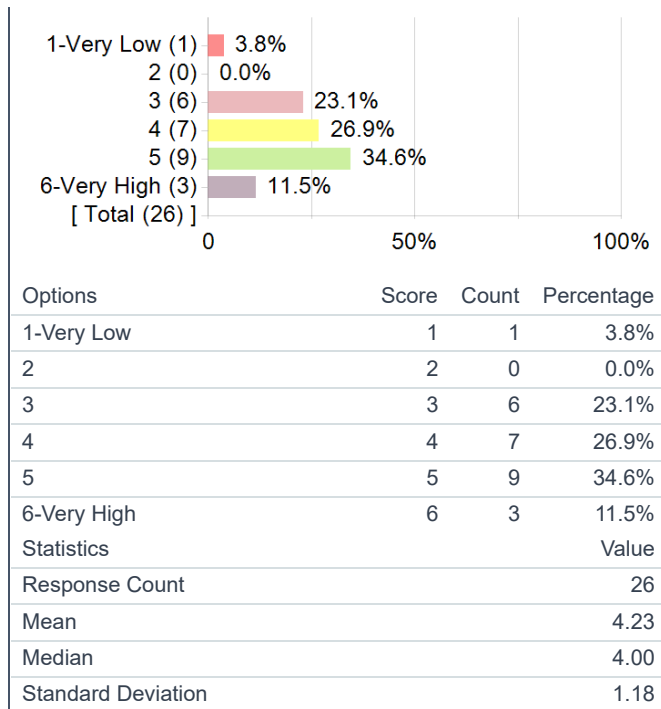
Rate the effectiveness of the course in challenging you intellectually.

1. Rate the effectiveness of the course in challenging you intellectually.



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

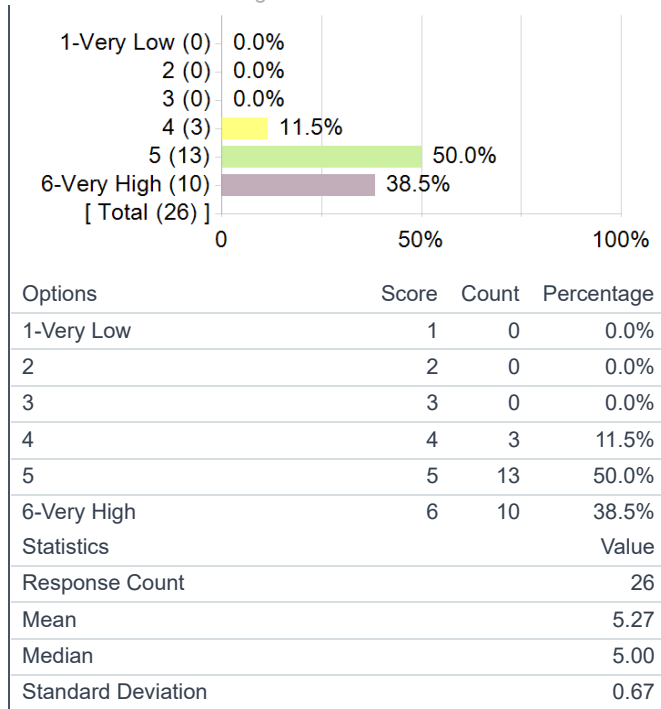
1. Rate the instructional materials (texts, audiovisual materials, etc.) used in this course.



INSTRUCTOR QUESTIONS

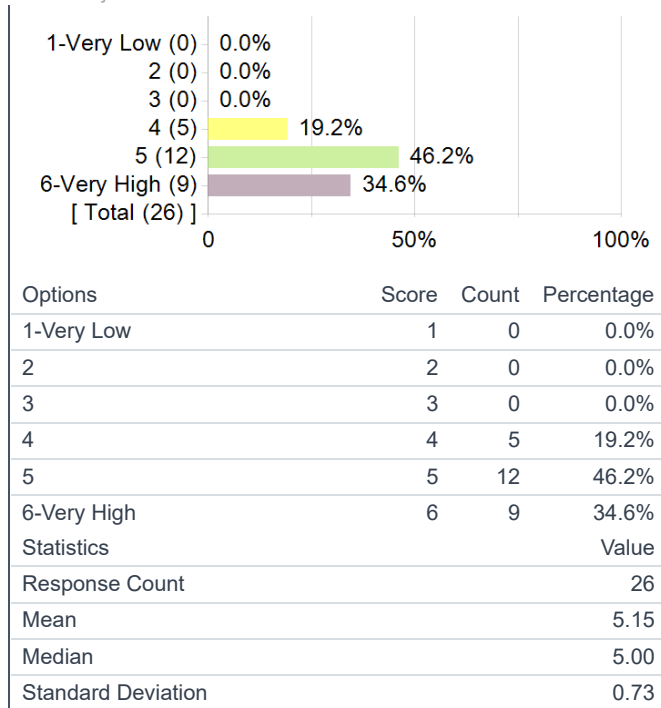
Provide an overall rating of the instruction.

1. Provide an overall rating of the instruction.



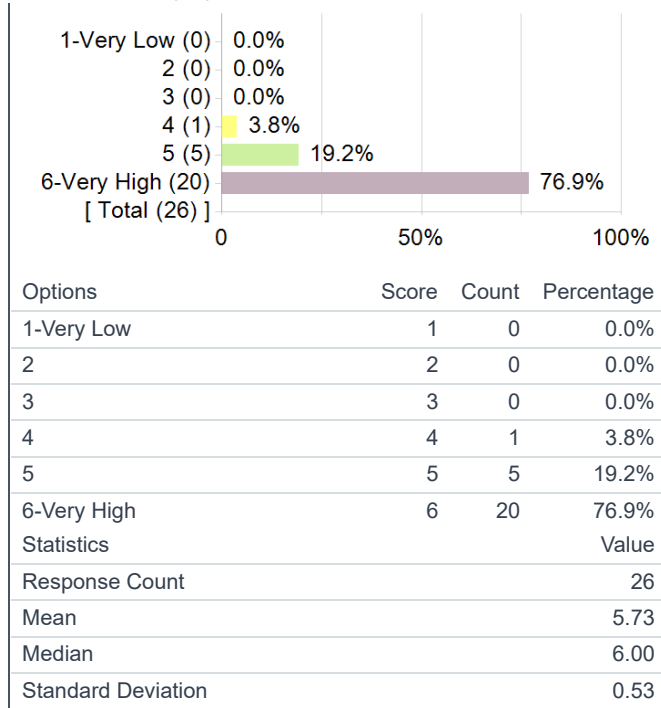
Rate the effectiveness of the instructor in stimulating your interest in the subject.

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



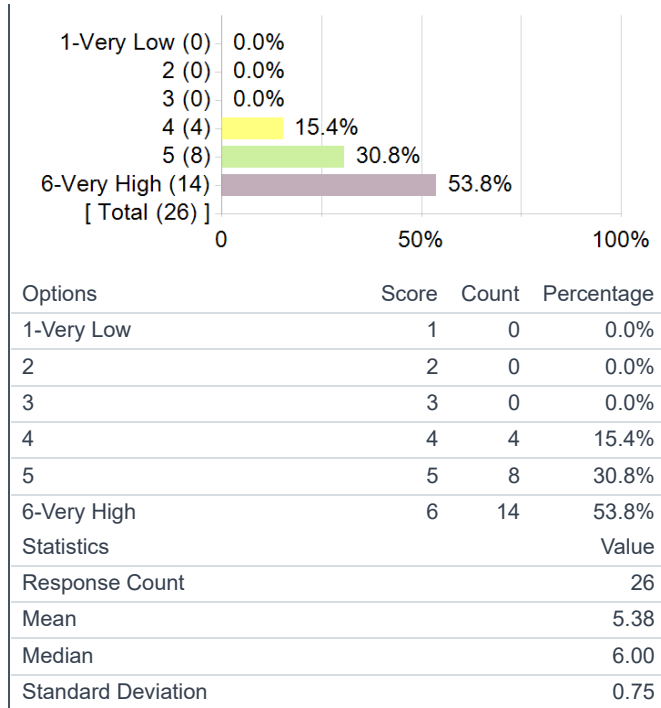
Rate how well prepared the instructor was for the class.

1. Rate how well prepared the instructor was for the class.



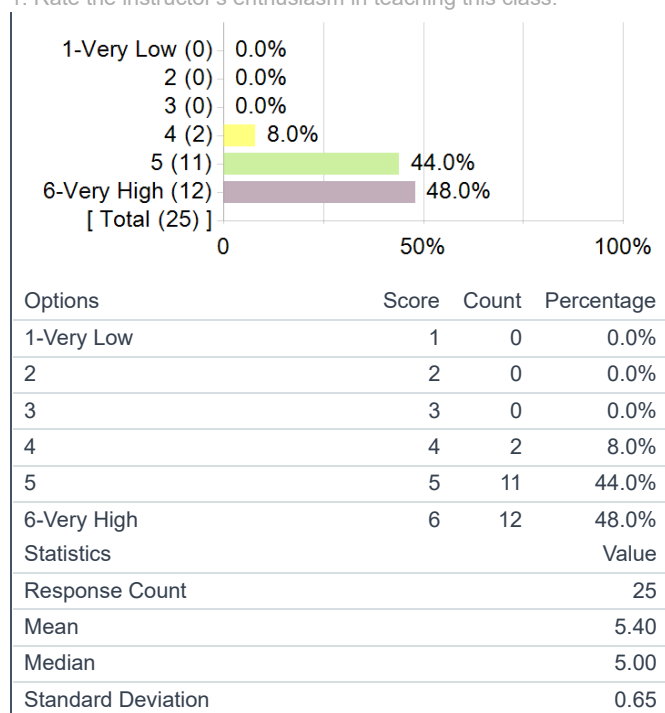
Rate the effectiveness with which the instructor communicated course content and ideas.

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



Rate the instructor's enthusiasm in teaching this class.

1. Rate the instructor's enthusiasm in teaching this class.



OPEN-ENDED QUESTIONS

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

Comments
No, I had already taken multivariable calculus and this class made me more confused
The course was very challenging and definitely stimulated me intellectually.
Yes, this course was extremely intellectually challenging. I learned a lot by having to push myself to keep up with the pace of the class and the levels that the other students were at.
Yes, because it presented the material in a challenging but understandable way
Definitely! Rachael is a great instructor. I definitely enjoyed her class
Yes, it did a good job explaining concepts that I had never interacted with before.
Yes. This class is good for learning new concepts in calculus.
Yes, this math class is very conceptual-based, so you really have to understand complete ideas and theorems and be able to apply them to general scenarios, not a stereotypical math class where people learn how to solve a specific problem without understanding why.
A good introduction to linear algebra and multivariable differentiation.
the course is well organized and the ideas build off one another really well
The class effectively taught me multi and helped me understand how to integrate linear algebra into multi. The class was challenging but the instructor was successful at teaching the material
This course was alright. I definitely learned a lot of the basics of MVC, but it was held back by the simplicity of the subject matter, especially compared to 290-1
The course helped me learn a lot, the material is very challenging but we made our way through a lot.
yeah it was really challenging and i learned a lot
yes, but the textbook succccs
The course did help me learn. We built on concepts learned last quarter and tied in linear algebra to multivariable calculus very fluently!

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

Comments
The topics covered are not particularly challenging, but there are a lot of them and you need to know them really well.
Really hard, but Professor Norton is a great teacher and super helpful in office hours.
Second quarter is more difficult than first. Rachael does a very good job explaining most concepts and is available for office hours often enough. I highly recommend going over homework questions with classmates before submitting as this is one of the easiest components of your grade you can control.
This course was harder than the first quarter, which was expected, and I definitely needed to study the content on my own time in addition to lectures because the material was very difficult.
This course is extremely challenging and you should only take it if it is necessary for some reason. If you just need to take math, probably take the normal sequences unless you're really really good at math because this class is much harder than the normal sequence less the curve can be worse because everyone in the class is so smart. But I've heard that the MENU teachers tend to be better at explaining concepts than other teachers. It is also kind of a fun challenge, so whatever you're up for as long as you are willing to work really hard to do well.
This course was the second one in a three quarter sequence. I would say that this quarter was more challenging than the previous quarter after the transition to multivariable calculus. However, I felt that the instructor, Rachael, was very accessible and presented the material in a very understandable way. The homework did take a lot of time each week, and sometimes, I felt that it was unnecessarily hard. I felt the same way about the midterms and final, but there were many resources available to help prepare. Overall, I would recommend this course to students who are interested in the subject and are willing to put in time for this class.
MENU is not easy but the class is def enjoyable with Rachael's instruction.
Professor Norton did a fantastic job instructing this course. The homework was difficult but manageable. The textbook for the vector calculus portion of this course was unreadable.
This course is a good course for learning. However, the evaluations are difficult. Students should definitely try to overstudy for midterms and finals.
Very similar to the previous quarter, obviously if you did well in 290-1 you'll be more than fine in 290-2. Problem sets are long but doing them with friends is better, and each exam requires a lot of studying, but that's it. Not sure why MENU classes have such a stigma for being hard; it is a lot of work, but the class is curved to a B+, so most people get really good grades.
Rachel is a great professor that really explain math concepts nicely and cares about the students. Learned a lot but put a lot of time and efforts into it.
This class, especially the multivariable part, was easier for me than the first quarter. Although a lot of material is taught, it is done in a good way such that the ideas build off one another chronologically. While it might not be obvious, learning linear algebra and then multivariable calculus is the correct order
take this course if you enjoying 290-1 and love math! definitely challenging but worth it if you enjoy it
Great class, I definitely learned a lot of the basics of MVC, but it was held back by the simplicity of the subject matter, especially compared to 290-1. Not nearly as hard as people make it out to be. Prof. Norton was also a pretty good instructor. Personally, I preferred Prof. Newstead, but this is subjective. No major complaints here, besides the dumb week 9 midterm.
This course was mostly a continuation of the first part, the material was still very challenging but also interesting.
You know what you're getting into by now
I think that this class was very challenging. If you have taken the first quarter of MENU then you understand this. However, I feel that this was slightly harder than linear algebra because it was often hard to visualize vector calculus. As with first quarter, the second midterm was significantly harder.
This is a good, interesting class, and Rachael is great, but it's hard. not looking forward to next quarter
Rachel is an AMAZING professor. This class is difficult, especially the beginning which focuses on linear algebra, but she prepared us well for the tests and the homework. If you are prepared to put significant effort into the weekly homeworks and studying the previous exams before the midterms, you can succeed. You'll have the best chance of doing well if you take this with Rachel, though.
MENU is not an easy course. It is certainly a challenge to keep up your grades. However, the teachers are fantastic and the material is really interesting if you put the work in. This is a rewarding class!

What are the primary teaching strengths of the instructor?

Comments
Professor Norton made sure we were engaged in class by calling on us and making us work together on examples. I also really enjoyed the way class was structured and that we proved some theorems and didn't just write them down and start using them.
Professor Norton communicates a lot of difficult material in a clear way that makes it easy to grasp the concepts.
Professor Norton really tried to explain things clearly and asked students if they understood something before moving on, which I think is important.
She's very nice, friendly, and open to questions and answering them until a student understands
Presented the material in a very understandable way and was very willing to meet with students
Very organized, clear instruction
She is a fantastic lecturer and is patient with students struggling with concepts.
Rachael is a great professor. She really knows what she's talking about, and can clearly communicate with students (even if they approach problems from different perspectives).
Very good at relaying the information in a way that the students can easily understand and provides plenty of examples to also further understanding.
Rachel is careful and attentive in class
she's enthusiastic, cares about the students and is great about answering questions
The instructor has created an environment where students are not afraid to ask for clarification if confused and helps them grow
Very clear explanations of all of the material. I did not even feel the need to take notes at times.
Rachael is very precise, and communicates things super clearly which helps when the material is complex. She is also super enthusiastic about math.
she was well organized and nice and committed to students
good at explaining things and very helpful
Prof. Norton is clearly enthusiastic about the subject and it makes all of the material more interesting. There was a great balance of examples, proofs, and explanation in the lectures. She is also fantastic in office hours, where she is always willing to explain things in different ways until you understand.
Rachael is so passionate about her teaching and it comes across in class. She is excited by the topics, which creates a really good tone for learning. She is brilliant and a really fantastic teacher!

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

Comments
The examples gone over in class are frequently a lot less in depth than the problems on the homework and exams, and it can be a large leap to go from the in class examples to the other problems.
Toward the end of the quarter, the instruction felt a bit rushed because there was a significant amount of material that needed to be covered, and the material became very difficult very quickly, so it felt that the instruction became less thorough at times, which made it more necessary to study extra outside of class.
Sometimes, she did not cover everything in class that was intended to be covered.
None
Speaks a little bit fast
Cannot think of any in particular
If copying notes and picking up patterns from examples is not the way you learn as a student, then you might struggle to learn under professor Norton's teaching style.
The class content is a bit too easy. What is taught in class is much easier than what appears in the midterms and finals.
there are times when it seems that she doesn't fully understand the material that were doing and she's just going off her notes but these are very rare times
Class is too big and office hours were not at great time
The basic format of "example in case A,B,C,...,n" for each topic was understandable given the subject matter, but I personally would have prefer more abstract analyses.
I felt that sometimes she did not explain abstract concepts very clearly
Nothing.
Sometimes a question or two will trip her up, but this might just be due to the creative questions people ask in class.

Can you offer suggestions for improvement?

Comments

For 3D graphs, I would have liked it if computer images were used more often. Especially when we were going over the different quadratic forms like hyperboloid of two sheets, ellipsoid, etc. Also, after writing down definitions and theorems I would have liked a few more seconds to think about what was being written down before discussing the implication of those theorems.

We mostly learn things through definitions and theories and a couple examples. It may be helpful to stray a bit from textbook-like teaching sometimes.

Spend a little less time with proofs and more time with examples

Include more examples in class

I cannot

Nope, she's pretty cool

I suggest we can more challenging practice questions both in class and outside of class.

Smaller class size. Hard class to teach with 30 students because students are nervous to answer and ask questions

See primary weaknesses question

i think that she should post lecture notes somewhere

work together more in class

Nope

Get off notes a bit more. I enjoy when Rachael makes the learning like a conversation, so I'd just work on putting the notebook down a bit and discussing the impact of the theorems at hand.