Northwestern

Individual Report for for MATH_220-0_61: Differential Calc One-Variable (Rachael Norton)

Project Title: Course and Teacher Evaluations CTEC Winter 2019

Courses Audience: **42**
Responses Received: **33**
Response Ratio: **78.6%**

Report Comments

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

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Course Evaluations

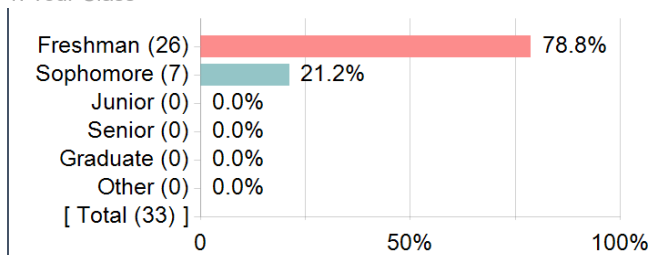| Instructor	Course
Rachael Norton	**MATH_220-0_61: Differential Calc One-Variable**

DEMOGRAPHICS

Your School

1. Your School

Education & SP (1)   3.1%
Communication (3)   9.4%
Graduate School (0)   0.0%
KGSM (0)   0.0%
McCormick (2)   6.3%
Medill (3)   9.4%
Music (0)   0.0%
Summer (0)   0.0%
SPS (0)   0.0%
WCAS (23)   71.9%
[Total (32)]
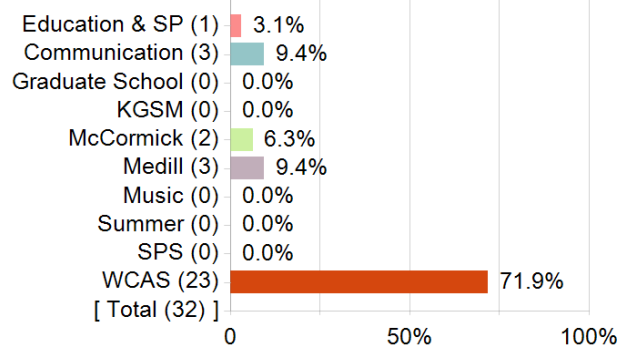
Options	Count	Percentage
Education & SP	1	3.1%
Communication	3	9.4%
Graduate School	0	0.0%
KGSM	0	0.0%
McCormick	2	6.3%
Medill	3	9.4%
Music	0	0.0%
Summer	0	0.0%
SPS	0	0.0%
WCAS	23	71.9%

Your Class

1. Your Class

Freshman (26) — 78.8%
Sophomore (7) — 21.2%
Junior (0) — 0.0%
Senior (0) — 0.0%
Graduate (0) — 0.0%
Other (0) — 0.0%
[Total (33)]

Options	Count	Percentage
Freshman	26	78.8%
Sophomore	7	21.2%
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)

Distribution req… (7) — 17.9%
Major/Minor re… (30) — 76.9%
Elective require… (0) — 0.0%
No requirement (1) — 2.6%
Other requirem… (1) — 2.6%
[Responden… (33)]
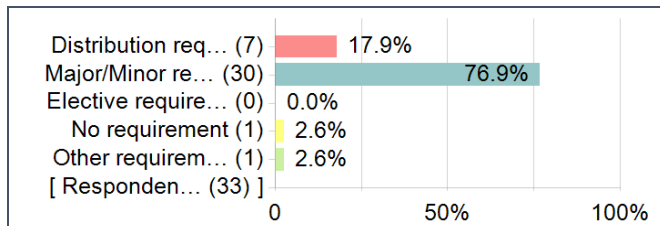
Options	Count	Percentage
Distribution requirement	7	17.9%
Major/Minor requirement	30	76.9%
Elective requirement	0	0.0%
No requirement	1	2.6%
Other requirement	1	2.6%
Respondent(s)	33	

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	5	15.2%
2	7	21.2%
3	5	15.2%
4	9	27.3%
5	6	18.2%
6-Extremely interested	1	3.0%
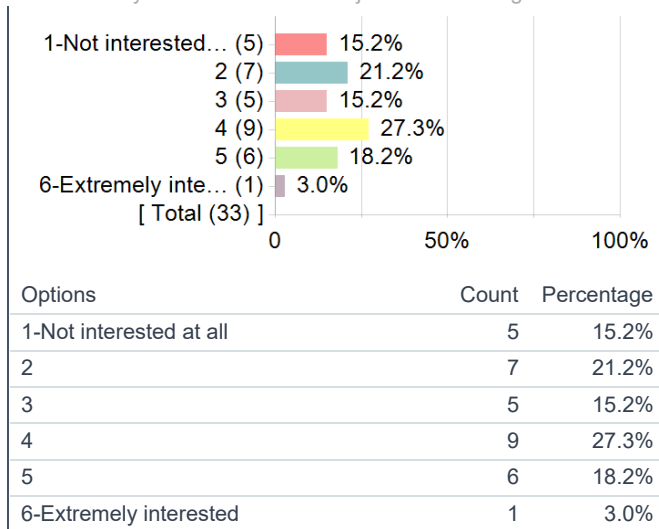
TIME-SURVEY QUESTION

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

1. Estimate the average number of hours per week you spent on this course outside of class and lab time.
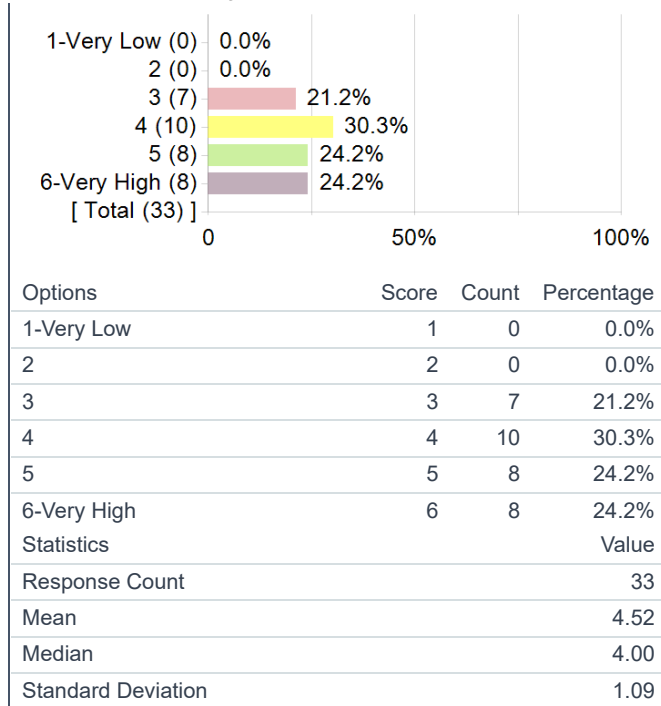
Options	Count	Percentage
3 or fewer	4	12.1%
4 - 7	17	51.5%
8 - 11	9	27.3%
12 - 15	3	9.1%
16 - 19	0	0.0%
20 or more	0	0.0%
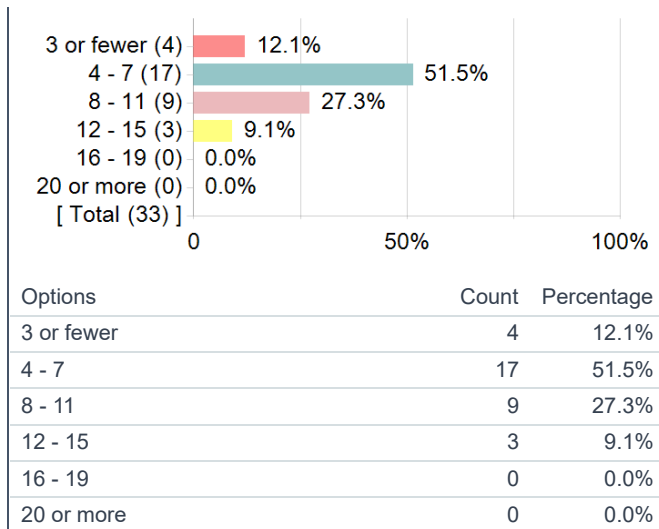
COURSE QUESTIONS

Provide an overall rating of the course.

1. Provide an overall rating of the course.

1-Very Low (0)	0.0%
2 (6)	18.2%
3 (5)	15.2%
4 (10)	30.3%
5 (4)	12.1%
6-Very High (8)	24.2%
[Total (33)]	

Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	6	18.2%
3	3	5	15.2%
4	4	10	30.3%
5	5	4	12.1%
6-Very High	6	8	24.2%
Statistics			Value
Response Count			33
Mean			4.09
Median			4.00
Standard Deviation			1.42
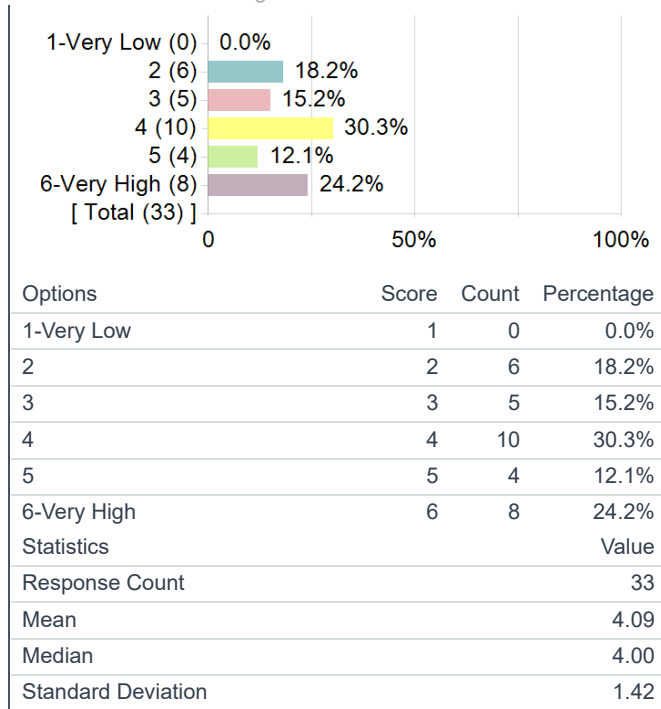
Estimate how much you learned in the course.

1. Estimate how much you learned in the course.

1-Very Low (0)	0.0%
2 (0)	0.0%
3 (7)	21.2%
4 (10)	30.3%
5 (8)	24.2%
6-Very High (8)	24.2%
[Total (33)]	

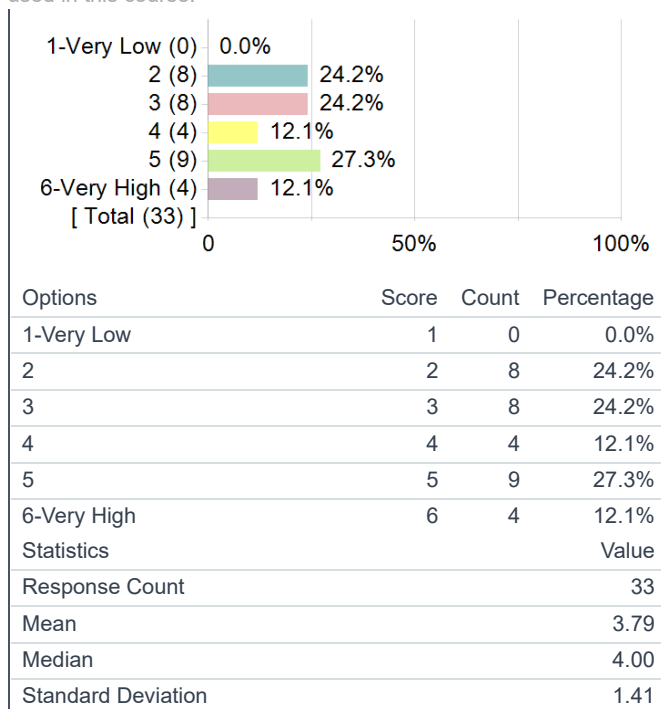| Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	0	0.0%
3	3	7	21.2%
4	4	10	30.3%
5	5	8	24.2%
6-Very High	6	8	24.2%
Statistics			Value
Response Count			33
Mean			4.52
Median			4.00
Standard Deviation			1.09

Rate the effectiveness of the course in challenging you intellectually.

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

1-Very Low (0)	0.0%		
2 (0)	0.0%		
3 (1)	3.0%		
4 (10)	30.3%		
5 (12)	36.4%		
6-Very High (10)	30.3%		
[Total (33)]			
	0	50%	100%

Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	0	0.0%
3	3	1	3.0%
4	4	10	30.3%
5	5	12	36.4%
6-Very High	6	10	30.3%
Statistics			Value
Response Count			33
Mean			4.94
Median			5.00
Standard Deviation			0.86
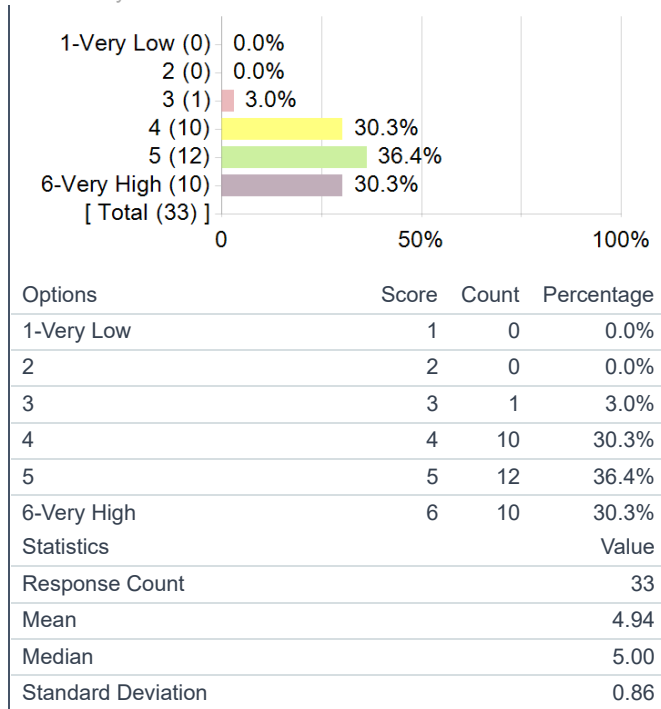
Rate the instructional materials (texts, audiovisual materials, etc.) used in this course.

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

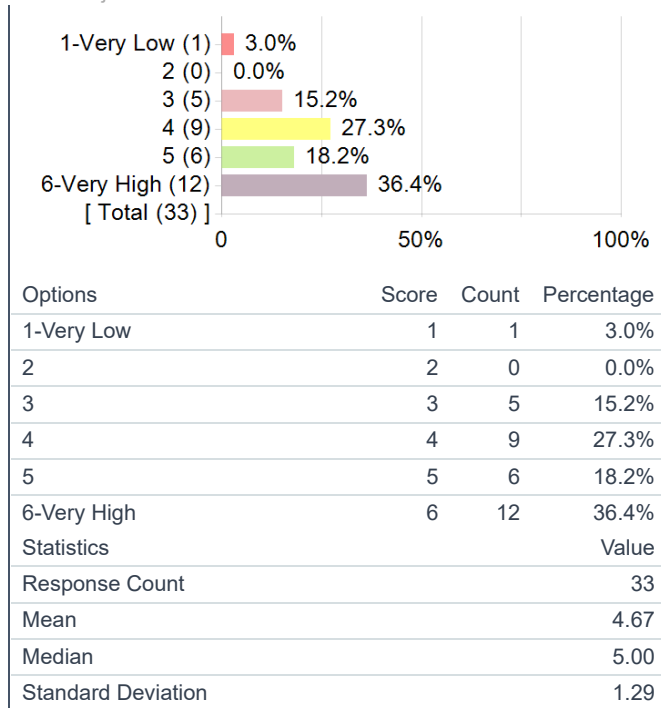|			
1-Very Low (0)	0.0%		
2 (8)	24.2%		
3 (8)	24.2%		
4 (4)	12.1%		
5 (9)	27.3%		
6-Very High (4)	12.1%		
[Total (33)]			
	0	50%	100%

Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	8	24.2%
3	3	8	24.2%
4	4	4	12.1%
5	5	9	27.3%
6-Very High	6	4	12.1%
Statistics			Value
Response Count			33
Mean			3.79
Median			4.00
Standard Deviation			1.41

INSTRUCTOR QUESTIONS

Provide an overall rating of the instruction.

1. Provide an overall rating of the instruction.

```
1-Very Low (0)   0.0%
       2 (1)   3.0%
       3 (2)   6.1%
       4 (5)        15.2%
       5 (8)           24.2%
6-Very High (17)              51.5%
  [ Total (33) ]
                 0        50%        100%
```
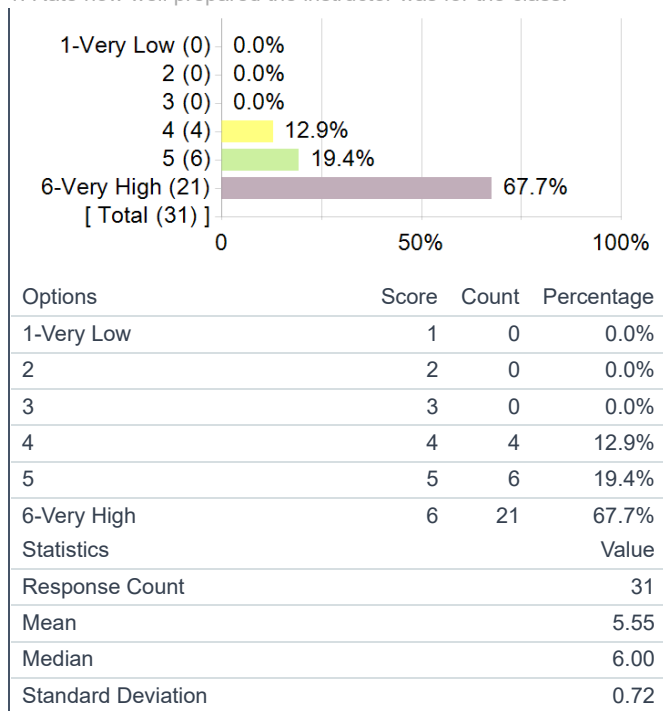
Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	1	3.0%
3	3	2	6.1%
4	4	5	15.2%
5	5	8	24.2%
6-Very High	6	17	51.5%
Statistics			Value
Response Count			33
Mean			5.15
Median			6.00
Standard Deviation			1.09
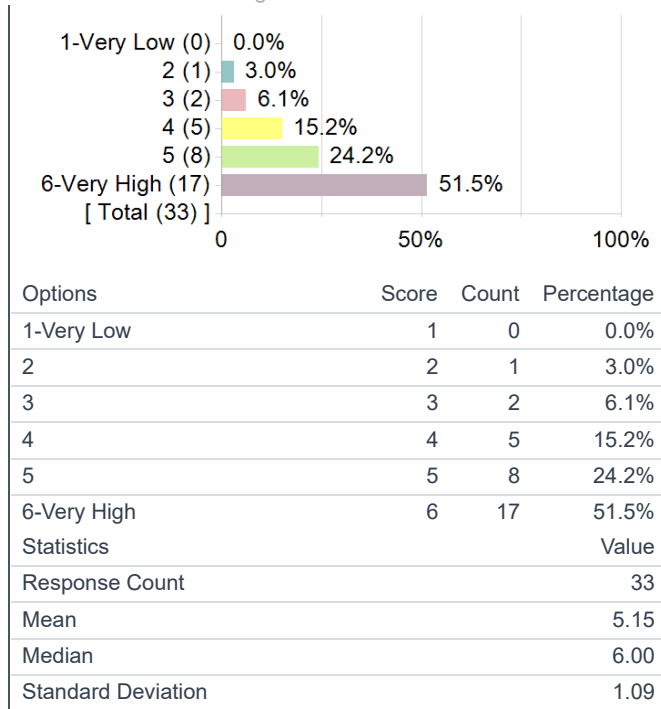
Rate the effectiveness of the instructor in stimulating your interest in the subject.

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

```
1-Very Low (1)   3.0%
       2 (0)   0.0%
       3 (5)        15.2%
       4 (9)              27.3%
       5 (6)           18.2%
6-Very High (12)            36.4%
  [ Total (33) ]
                 0        50%        100%
```

Options	Score	Count	Percentage
1-Very Low	1	1	3.0%
2	2	0	0.0%
3	3	5	15.2%
4	4	9	27.3%
5	5	6	18.2%
6-Very High	6	12	36.4%
Statistics			Value
Response Count			33
Mean			4.67
Median			5.00
Standard Deviation			1.29

Rate how well prepared the instructor was for the class.

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

```
1-Very Low (0)   0.0%
        2 (0)   0.0%
        3 (0)   0.0%
        4 (4)        12.9%
        5 (6)           19.4%
6-Very High (21)                          67.7%
   [ Total (31) ]
                 0          50%          100%
```
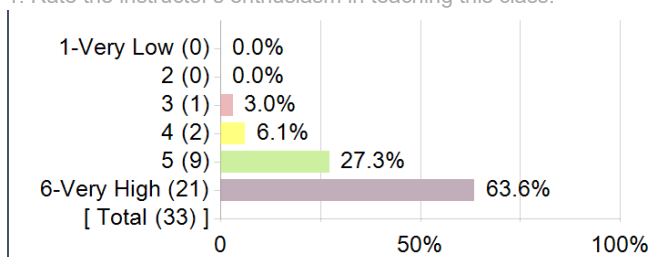
Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	0	0.0%
3	3	0	0.0%
4	4	4	12.9%
5	5	6	19.4%
6-Very High	6	21	67.7%
Statistics			Value
Response Count			31
Mean			5.55
Median			6.00
Standard Deviation			0.72

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.

```
1-Very Low (0)   0.0%
        2 (1)   3.0%
        3 (1)   3.0%
        4 (6)        18.2%
        5 (9)           27.3%
6-Very High (16)               48.5%
   [ Total (33) ]
                 0          50%          100%
```

Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	1	3.0%
3	3	1	3.0%
4	4	6	18.2%
5	5	9	27.3%
6-Very High	6	16	48.5%
Statistics			Value
Response Count			33
Mean			5.15
Median			5.00
Standard Deviation			1.03
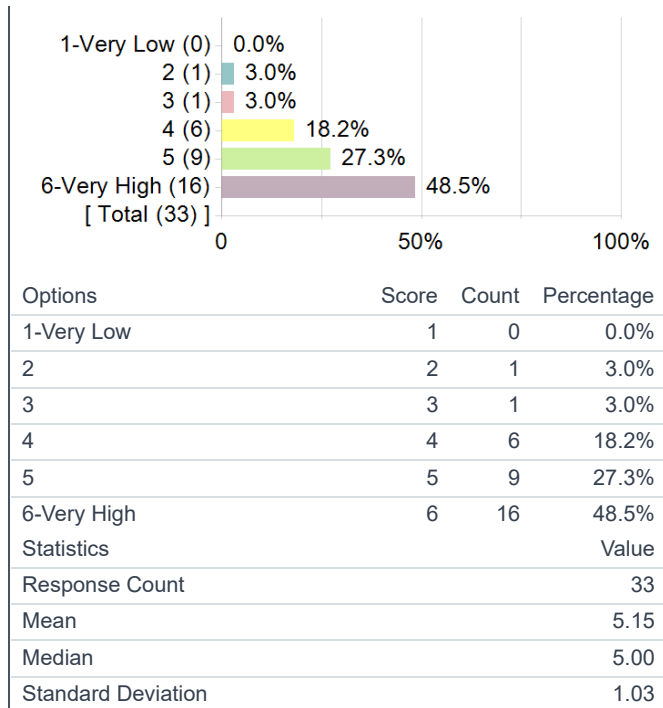
Rate the instructor's enthusiasm in teaching this class.

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

```
1-Very Low (0)   0.0%
       2 (0)   0.0%
       3 (1)   3.0%
       4 (2)   6.1%
       5 (9)            27.3%
6-Very High (21)                       63.6%
   [ Total (33) ]
              0           50%          100%
```

Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	0	0.0%
3	3	1	3.0%
4	4	2	6.1%
5	5	9	27.3%
6-Very High	6	21	63.6%

Statistics	Value
Response Count	33
Mean	5.52
Median	6.00
Standard Deviation	0.76

OPEN-ENDED QUESTIONS

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

Comments
It forces you to learn because of how fast paced it was
Yes, the course did help me learn calculus topics,as there is a lot of homework/written homework assignments to test your knowledge.
yes the course helped me learn because the material was challenging and required a lot of studying
It was VERY fast and didn't leave much time to master the information taught.
Yes! It was very well taught
Yes!!!! All materials were great except for sometimes web assigns being unecessarily hard.
Yes, but the book wasn't as helpful as I would have expected.
Yes. The course covered the highlights of differentiable calc and I feel prepared to go further into integral calc
I felt that the style of teaching was very inefficient and not helpful in getting a good foundation of knowledge required to use on more difficult problems.
This course overall was more of a review of high school calculus for me than a presentation of new mathematical concepts, although I was not familiar with some topics presented in class. I believe this class helped me solidify my understanding of differential calculus.
Yes, the concepts were very difficult but the way Professor Norton taught the class was very effective
Barely, I learned new ways to memorize information. I do not feel like I learned any new concepts...
Yeah. I had to teach myself most of the content, but I learned so much in these 3 months it's kinda crazy
The course helped me learn through out of class practice
The course and teachers were very effective in helping me learn the material.
Norton is an unusually good teacher for northwestern's math department but the material is still strange.
This course helped me learn different math subjects through practice. However, the format of teaching was not always helpful.
The course certainly helped me learn calculus on a much deeper level than in high school. I really learned the material instead of simply memorizing formulas.
I was able to learn effectively due to good instruction.
Given that I took calculus in high school, this course was a good fast–paced review of what I had already learned. I did learn some new things so including L'Hopitals Rule, and some of the examples we did were deeper than I did in high school. My instructor, Rachael Norton, was very good at communicating the concepts clearly.
Yes, the lectures were good, and so were the discussions
This course was very challenging as I had never taken Calculus before.
Already learned most of the stuff earlier.
Yes, it was very fast paced but I learned a lot due to the the lectures/
Yes

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

Comments

This was hard :/ But focus and don't fall back and you will be ok

The course itself is quite challenging if you're not familiar or used to math. However, it doesn't make the course impossible or too hard. If you work through your homework problems and do the practice exams before every exam then the course should be manageable.

I had taken AP Calc AB in high school so I came into this class pretty confident in my abilities but found this class to be much harder than my high school class. Requires hours of outside studying, tutors, etc. to do well. Most of the test material is only brushed upon in the rushed 50 min class lectures.

The course moved VERY fast and it was really difficult for me to keep up. Professor Norton is a good professor who cares about her student's success. It's just the requirements of the course make it so that there will be more information to learn than she can teach in a day. There were times when she didn't have time to answer questions because of how much there was to do.

This class is difficult by nature but Norton is the best professor I've had here and she really was an amazing teacher and cares a ton.

RACHEL NORTON IS THE BEST MATH TEACHER I HAVE HAD IN MY 19 YEARS OF LIFE. She is so smart, she makes everything so comprehendible, she understands when people are having a tough time, and I just feel like she wants people to do well. I hated calculus in high school, but this class moved by quickly every day. I did poorly on my first exam but ended up getting an A on my final because I grew more confident in the material and Rachel's style is so easy to adapt to and learn from. HIGHLY recommend taking this course with Rachel Norton.

Good class– helpful if you've taken calc before because most topics really only get 1 day. If you're confused go to office hours sooner rather than later. Going to discussion is super helpful because we do the written homework assignments there. Going to discussion will save you time from having to work on those assignments by yourself/ during times when you could be doing something else. They provide practice exams to study from which is very helpful. Rachael Norton is a GREAT professor so if you can, take it with her.

I felt that the class was very bipolar in the sense that there was a huge discrepancy in difficulty. The work and examples done in class were much easier than the web assign homework, the written homework was inconsistent in difficulty, and the exams were miles harder than anything else.

This course was essentially a review of high school calculus. Professor Norton got to know students on a personal level and answered any questions in class, and her class involves group work and interaction rather than just being a 50 minute lecture. For the most part, the content made sense during class, but WebAssigns, homeworks, and exams were way harder than the practice problems done during class.

Professor Norton was a great professor for this course. Her teaching method was very helpful for the level of difficultly of the course.

Forced me to constantly be working on it, which was effective in making me learn and engage with the material.

Decent class overall. You really have to make an effort outside of class in order to learn enough to do well on the exam

I thought that the course did have challenging exams yet the teachers and TA's are more than willing to help if you are struggling. The teacher is very thorough in explaining class material and will go out of her way to help.

Taking it winter quarter is clearly easier than fall.

This course was fast–paced and could be difficult to keep up with at times, especially around midterms because it is hard to focus on new information being taught while trying to solidify old information. The way this course is taught doesn't give much time for students to practice problems themselves in the class setting so it can be hard to make sure you have a good grasp on content. The homework problems sometimes seem unhelpful because certain aspects overcomplicate the problems or make them unsolvable without a calculator, which doesn't mirror the test questions.

Take this class with Norton! As I'm sure you've seen by other CTECs, she has some of the best reviews I've seen from any STEM professor at Northwestern. It's an easy choice. Take this class with Norton.

The course was a pretty standard math course. It was a little fast paced at times but not overwhelming.

Math 220 is a fast paced review of high school calculus. It start off pretty easy, but as the concepts build on each other, the problems become somewhat complex and nuanced. Rachael Norton is a great professor who teaches the concepts clearly and efficiently, and who shows a genuine interest in ensuring everyone understands the material. In class she is very receptive to questions and answers them well. In addition, as she teaches she looks around the room to make sure everyone understands and is on the same page, which is really helpful because when she notices people are unsure, she will repeat or explain in a different way. Even if you have taken high school calculus, you will still need to do the work and study to do well in this class.

I think the course was good, somewhat of a repetition if math was studied a lot before

I found this course to be highly challenging. I attended a study group to help but it always seemed as if everyone in my class was much more knowledgeable about the material than I was since they had taken Calculus in high school.

Honestly, the math sequence at Northwestern (220–234) is flawed because they make it move so fast and make it pretty hard. You can do very well in class, but they make the exams so hard that it is easy to fail them even with hours put in studying. The averages of midterms were 72% and 66%, and it seems that the averages in this class have always been this low. Northwestern, take note because every single section, every time it is taught has ctecs that note this. With that said, Rachel is a very good professor and tries very hard to make sure we all understand the material. She makes the class very interactive and provides us with a lot of materials to help understand the content. If you have to take it, definitely take it with Rachel.

Unnecessarily hard for a 220 math class.

Rachael is an amazing professor. She truly cares about whether or not students are learning and is completely approachable and easy to talk to. One of the best teachers I've had here by far.

What are the primary teaching strengths of the instructor?

Comments
If you have to take 220, take Norton. She was great, she put a lot of effort into instructing and it shows in her lecture. The work sheets she gives are great!
Professor Norton does her best to communicate important points throughout her lecture and does her best to answer any questions that students ask.
She is good at listening for and answering questions
She knows when we are lost, she is clearly very well versed in math, and she takes time out of her day to work with you if you ask.
She explains concepts extremely well and really cares about the students. She learned all of our names within the first week, which is something I have never experienced at Northwestern. I can't say enough great things.
Everything. she is helpful and succinct and did not over complicate anything!
Making us think about the material instead of preparing us to just regurgitate formulas and theorems.
Great instructor! Clearly explains things using examples, makes jokes so class isn't boring, and is super helpful in office hours when you have questions.
Her strengths were handouts, when she printed enough.
Professor Norton got to know most students on a personal level and took time to address specific questions in class. She is extremely approachable and excited to help. She explains fundamental concepts very clearly for students newer to calculus.
Professor Norton's method of teaching was very effective and she always made herself open to questions.
Her communication and ability to actually teach!!! Enthusiasm, motivation to help, dedication to familiarize the concepts, and overall a positive attitude and energy when teaching.
Very engaging and enthusiastic
Professor Norton always came to class prepared and explained concepts thoroughly.
The professor was very patient when answering questions and made sure all students progressed at the pace they needed. She was very open to giving extra help and answering questions after class or during office hours to those who needed it. She was also very energetic which made the class easy to sit through.
it's clear Rachael wants her students to learn, concepts were explained very clearly, very approachable professor
Feels like high school. Rachael is sweet and answers questions. There are lots of examples you participate in in class.
Professor Norton is very enthusiastic about the subject she teaches and keeps you engaged during class. She tries to allow enough time to do a good variety of practice problems to demonstrate concepts.
Answering questions and involving students in lectures. She has active rather than passive lectures. She makes sure the students are actually learning the material.
Rachael did a good job of helping any students who didn't understand a topic and was very flexible with office hours.
Rachael is enthusiastic, fun, passionate, communicates clearly, and is receptive to questions. She is also very organized and always writes her upcoming office hours and upcoming exam dates on the board before each class. The thing I like most about her teaching style is that as she teaches she looks around the room to make sure everyone understands and is on the same page, and if not she repeats or explains in a different way.
Enthusiasm, knowledge, interested in teaching students, ways of communicating concepts
She teaches the course very well. She always has the lecture planned out with examples. Her best strength is her ability to answer questions. I have noticed that she is able to understand students' questions much better than most professors and gives answers that make a lot of sense.
Knowledgeable, great at answering questions.
Explained the content very well and used lots of examples.

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

Comments
Class size. A bit too big
n/a
Too specific, doesn't teach topics broadly enough to prepare us to face more challenging forms of the questions on tests or written homework.
She has to teach so fast that she can't adequatelty prepare us.
none
NONE
Professor Norton's weaknesses included inundated relaying of information – she would explain concepts in a very confusing way and also would explain concepts and theorems in multiple ways that made the information seem much more confusing than it should be.
Professor Norton had some habits during lecture that bothered me, such as making her voice go higher when looking for class confirmation, but that's more of a personal thing than an actual weakness in instruction.
Her weakness could be that she sometimes didn't know how to clarify some concepts
None.
Sometimes ideas were unclear, didn't always feel like we covered everything in class, felt very unprepared for some homework
None
I do not think the instructor did anything poorly at all.
None really
Sometimes Professor Norton would make assumptions about the class' knowledge of topics which would cause confusion or skip explanations of certain parts of problems that were helpful for understanding.
None that I can think of
none
No weaknesses
Examples were not very applicable in learning topics.
She was very flustered by questions and had difficulty clearing up concepts when kids didn't understand them.

Can you offer suggestions for improvement?

Comments
I like the group work!
n/a
To teach for what we will be graded upon and to provide the general mindset and framework from which we can approach more difficult problems with.
Try to find a different room. Often you would be blocking the chalk board and any information that you wrote down was out of my sight.
no
NOPE except for the fact that web assigns are outlandishly hard sometimes.
I just wish the class was a little more than 50 minutes so that we could have more effectively covered each section.
Some of the definitions maybe could have been abbreviated when writing on the board to save time. Not a big deal at all though.
Not sure if Prof. Norton has control over this, but close the gap in the difficulty of problems among class work, homeworks, and WebAssigns.
Professor Norton could make time for questions planned in her lectures.
None needed.
Not really, was a pretty good teacher
None
Sometimes questions from the class are a little too basic and slow class down
Post worksheets before class, so students can be more prepared walking into lecture.
no rachael is awesome!
Perfect instruction; no improvements
Go over more tips and strategies rather than just random examples.
I didn't think the in–class partner activities were that useful.