RUTGERS UNIVERSITY

Rutgers University Student Instructional Rating

Spring 2022

Charnley, Matthew - MPC163

Differential Equations For Engineering And Physics - 01:640:244:08, 09, 10

Survey Form: *Standard SIRS

Enrollment: 80

Responses Received: 33

University-wide Instructor Questions

Weight of responses: 1=SD (Strongly Disagree), 2=D (Disagree), 3=N (Neutral), 4=A (Agree), 5=SA (Strongly Agree), Resp=Number of Student Responses
Weighted Means: Section, Course, Level, Department

	SD	D	N	A	SA	Resp	Section	Course	Level	Dept
The instructor Matthew Charnley was prepared for class and presented the material in an organized manner.	0	0	1	5	27	33	**4.79**	4.52	4.35	4.34
The instructor Matthew Charnley responded effectively to student comments and questions.	0	0	1	4	28	33	**4.82**	4.47	4.29	4.31
The instructor Matthew Charnley generated interest in the course material.	0	0	1	8	24	33	**4.70**	4.30	4.14	4.17
The instructor Matthew Charnley had a positive attitude toward assisting all students in understanding course material.	0	0	1	5	27	33	**4.79**	4.54	4.36	4.39
The instructor Matthew Charnley assigned grades fairly.	0	1	1	8	23	33	**4.61**	4.33	4.25	4.26
The instructional methods of Matthew Charnley encouraged student learning.	0	0	1	8	24	33	**4.70**	4.33	4.18	4.19

Teaching Effectiveness

Weight of responses: 1=P (Poor), 2=F (Fair), 3=A (Average), 4=G (Good), 5=E (Excellent), Resp=Number of Student Responses
Weighted Means: Section, Course, Level, Department

	P	F	A	G	E	Resp	Section	Course	Level	Dept
I rate the teaching effectiveness of the instructor Matthew Charnley as:	0	0	1	7	25	33	**4.73**	4.41	4.21	4.21

University-wide Course Questions

Weight of responses: 1=SD (Strongly Disagree), 2=D (Disagree), 3=N (Neutral), 4=A (Agree), 5=SA (Strongly Agree), Resp=Number of Student Responses
Weighted Means: Section, Course, Level, Department

	SD	D	N	A	SA	Resp	Section	Course	Level	Dept
I learned a great deal in this course.	0	0	2	6	24	32	**4.69**	4.36	4.25	4.14
I had a strong prior interest in the subject matter and wanted to take this course.	0	3	6	14	10	33	**3.94**	3.75	3.73	3.48

	SD	D	N	A	SA	Resp	Section	Course	Level	Dept
Given the content and level of the course, the course workload was manageable.	0	1	3	10	19	33	**4.42**	4.44	4.14	4.02
The course site used for this course, whether in Canvas, Sakai, or Blackboard, was well organized.	0	1	1	7	24	33	**4.64**	4.34	4.20	4.20
The instructions given for assignments, exams, quizzes, and other course activities were clear and easy to understand.	0	1	1	11	20	33	**4.52**	4.38	4.21	4.13

Course Quality

Weight of responses: 1=P (Poor), 2=F (Fair), 3=A (Average), 4=G (Good), 5=E (Excellent), Resp=Number of Student Responses
Weighted Means: Section, Course, Level, Department

	P	F	A	G	E	Resp	Section	Course	Level	Dept
I rate the overall quality of the course as:	0	1	2	7	23	33	**4.58**	4.29	4.08	3.94

What do you like best about this course?

These comments are intended for all instructors.

Comments
I liked the grading scheme, it is what encouraged me to actually learn what is going on. Also the practice problems and preclass videos made me take notes.
The way that the material was presented was great, especially with how dense it was.
Both the lecture and recitation professors were absolutely incredible. They taught well and were very kind and accommodating for the students. They are truly amazing.
professor and TA actually care. They take the time to lay out the material in a way that is clear and effective.
I was skeptical about the grading system at first, but i actually ended up really liking the way it worked for this course
I liked the grading system. I felt it was fair that we get multiple attempts to meet an understanding of a topic.
I liked how we have multiple chances at getting topics correct.
I enjoyed the hybrid approach: having to watch videos and read the textbook on my own time then recapping what we learned in class proved very helpful in my understanding. I learn best when I'm able to see the entire process, or derivation, of a certain approach or strategy we use. I was able to pause the video and rewind when I didn't understand the littlest thing. I wouldn't raise my hand to stop the flow of the class, knowing I missed only, say, a sign error along the way, so I felt engaged when I was able to work out solution on my own with the videos rather than feeling pressured to raise my hand and curb other students' learning.
I really liked the unique grading system for this course. It makes exams less stressful and encouraged me to work harder on the topics I was less familiar with
The lack of curve, I feel curving a class is just the lazy way of teaching and a clear indicator that the teacher has failed the students.
I liked the organzation
The organization of the notes and the fact that this was an active learning class.
The grading system
Mutiple chances to get questions correct.
I liked learning about resonance and beats.
I liked how we were given multiple opportunities to get problems right that we got wrong on the test or quiz.
The structure of this course where we got to see the material before hand and form our questions and then relearn it from him in class with examples. It really stuck the topics into my brain.

If you were teaching this course, what would you do differently?

These comments are intended for all instructors.

Comments
I would change nothing, all of the classes should work like this.
I can't think of anything (the grading scheme was initially confusing, but after I bit I understood it more — and it reinforces actually learning the topics presented)
Possibly some assigned and mandatory homework. I know there were optional worksheets but honestly if it not actually assigned it is very difficult to find the time to do the extra practice.
I would provide solutions to the MatLab assignments.
I would give more partial credit because a lot of students rely on that and it makes it difficult to get everything right on the exams.
I would spend a little less time reviewing the videos in class time. I always felt we worked right up to the bell, which is not bad, but I would've appreciated maybe 5 more minutes of reviewing the new material. However, I understand that other students need the time to review, since in–person works better for them. But this is very, very minor. I loved the hybrid approach to the course and would highly recommend using it in the future.
Change grading scheme
It’s close to a perfect class and the only class I actually really enjoy maybe another exam before the final would be nice but I understand why there is not one.
The grading system I did not like
Almost everything is perfect, but if I had to change something I would maybe put some incentive on redoing exam or quiz problems that were fully wrong.
Nothing
Maybe a little more leniency on the resubmission conditions.
Contradicting myself here but as much as I loved the ability to redo problems it was a little irritating at times getting the grades back. I feel like there should be some form of partial credit in the problems to completely avoid getting an N. Sometimes a small mistake should still garner points but it didn't
Partial credit & a regular grading scheme would've done me wonders in here. A third midterm (could be an optional or weekend midterm) would have been nice as well.
Nothing

In what ways, if any, has this course or the instructor Matthew Charnley encouraged your intellectual growth and progress?

These comments are unique to the instructor Matthew Charnley.

Comments
With a whole new way to approach grading and learning, Matthew Charnley has successfully developed a way for people to actually retain knowledge. The way he has added practice problems and guided videos and examples and poll questions, all of it comes together flawlessly. I genuinely feel like I have learned something compared to all of my other courses feeling like just a class I have to pass. I am extremely thankful and hope other students get to experience this.
Relating things to real world scenarios as opposed to strictly keeping to mathematical definitions helped me remember things much more than I would've otherwise. Beyond that, pre class videos to cover some dense material allowed us to not rush in the in person lectures, and prepare us for what's going to be covered that day.
While I was initially confused on the altered grading scheme, I felt comfortable with it when Professor Charnley explained it. 'No grades' seemed out of place, and at first I was concerned I wouldn't be able to monitor my progress. However, after getting the results of the first midterm, and receiving a helpful email explaining where I was in the course, I grew accustomed and quite fond of the approach. I feel more involved in the grading process, and rather than focusing on the letter grade, I knew exactly where I needed to improve if I wanted to succeed. I would highly recommend this grading approach going forward :)
A fantastic teacher, I would have preferred the material on exams be focused on the ability to do the question rather than the ability to do an excessively long version of the question such as solving a 5x5 matrix when we were just being tested on solving matrixes. The time it takes to do that is not necessary when our abilities can be proven solving a smaller matrix. Other than that however, a very refreshing and innovative style of teaching and I absolutely love that the class does not rely on a curve. Most of my classes I am just trying to do better than average but in this class it has actually encouraged me to learn the material.
Professor's new style of teaching is very effective.
I liked that each lesson was clear
He is my favorite professor I have had so far. Every tiny detail of this class is purposely made so that it benefits students learning as much as possible. You can tell that he cares and wants to teach in the most effective manner possible. Also he has a passion for the subject that seeps through his teaching which makes it awesome to be in his class.
Professor Charnley was the best professor I have had at Rutgers. He was so enthusiastic about teaching that it made me really pay attention in class everyday. He really wanted his students to succeed and does everything he can to make sure they do!
He made hard topics easy to understand.
After some pretty rough experiences with calc 2 and calc 3, I felt like I didn't have what it took to become a successful engineer. But the organization and thorough teaching methods of Professor Charnley changed that. Now I feel prepared for my future. engineering courses.
Professor Charnley definitely formed new ways to make us think about problems and understanding how they connect to material we've covered in class.
Best math professor I've had thus far. I hope to learn from him again.
Charnley's enthusiasm for math and more specifically differential eqs. makes it so much easier to understand what is going on in the course. He also was extremely helpful when you needed to contact him for any reason. He has encouraged me to look into getting a math minor. He shows real world examples (especially in the engineering fields) which is extremely helpful to understanding why we need to know this.

Other comments or suggestions:

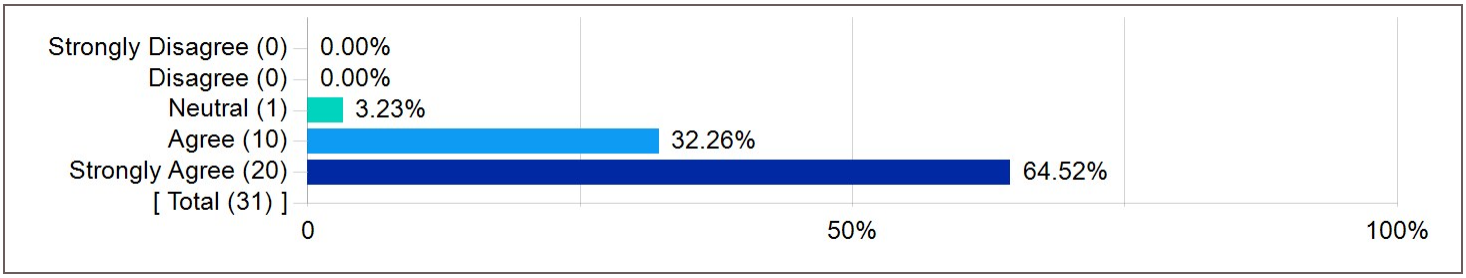
These comments are intended for all instructors.

Comments
This class is phenomenal and the overall quality and effort put in by the professor and TA is immaculate. Of all my classes I have taken, this class has redefined learning and actually gave me a reason of wanting to go forward and take notes in my other classes and put in more effort. This professor has flawlessly executed this grading scheme and class format and should be the way all of rutgers teaches this class.
None
I really took a lot out of this course, and I think it was due to the instructors' motivation to help us through the process and the hands–on approach to grading. I felt involved and engaged all the time, and I will miss this course. Thank you!
I am aware I am most likely going to get a C or a B– in this class it is still one of my favorite classes. I believe that saying this is one of the nicest compliments you can give a class. Thank you Professor Charnley.
I would not use this grading system
Tell all the professors in the MechE department they need to take a class in teaching from Professor Charnley.
I think I did better in the course than I would have with a traditional grading system because it really alleviated stress during exams and I did not give up/ lose hope from seeing a low exam/ quiz score as I do in other classes.
This course got me excited about math again, so thank you for such a well–organized and thought–out experience!
I genuinely enjoyed this course and prior to having Charnley I was absolutely dreading taking differential equations. He is an amazing professor and I will recommend him to everyone.

Questions added for: *Standard SIRS

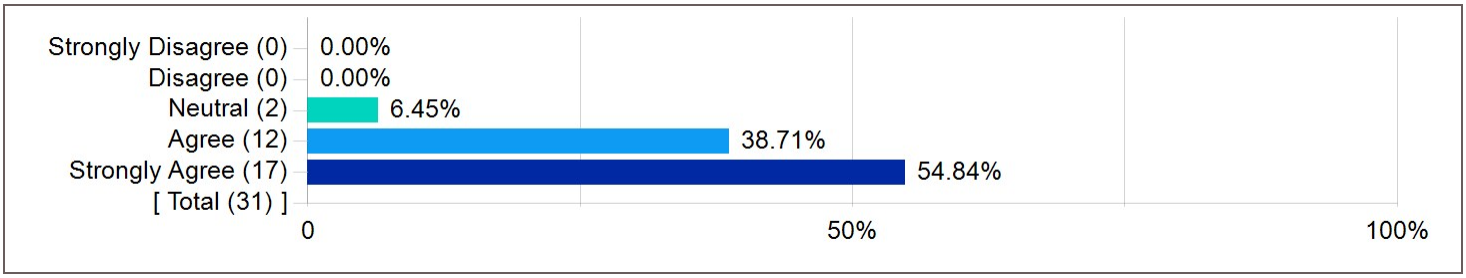
Weighted Means: Section, Course, Level, Department

The lecturer posted content that helped me understand the topics covered in the online lectures.



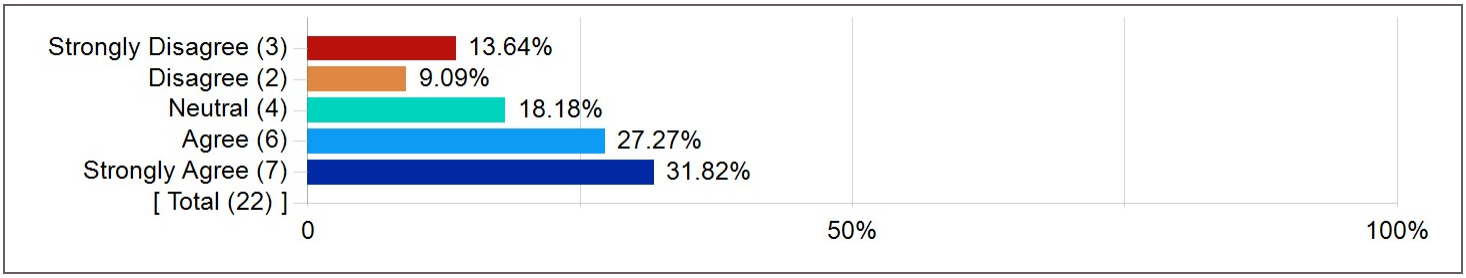
Section	Course	Level	Dept
4.61	4.21	4.08	4.05

The recitation/workshop instructor posted content that helped me understand the topics covered in the online recitations/workshops.



Section	Course	Level	Dept
4.48	4.25	3.98	3.95

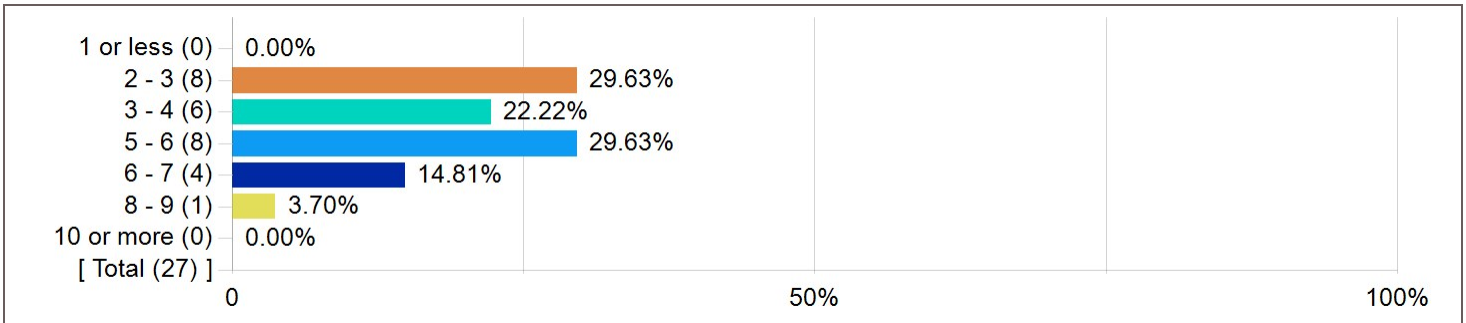
I was glad to take this course in an online format; for me it is the preferred format for this course.



Section	Course	Level	Dept
3.55	3.28	3.44	3.42

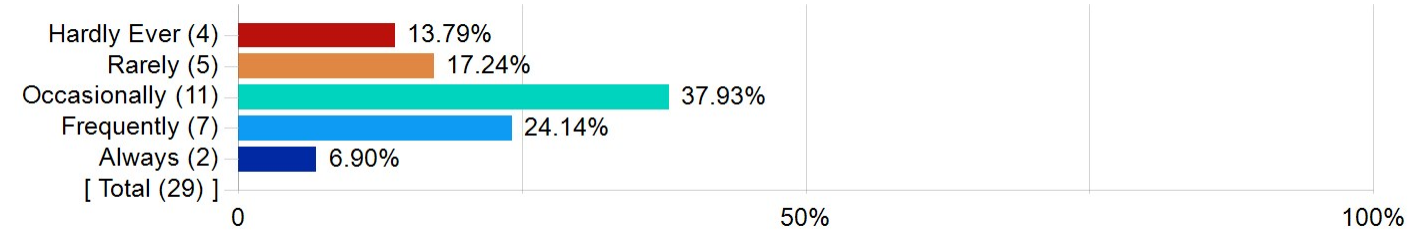
Questions Chosen by Instructor

Since the beginning of this course how many hours a week, on average, have you spent on this course in addition to class time?



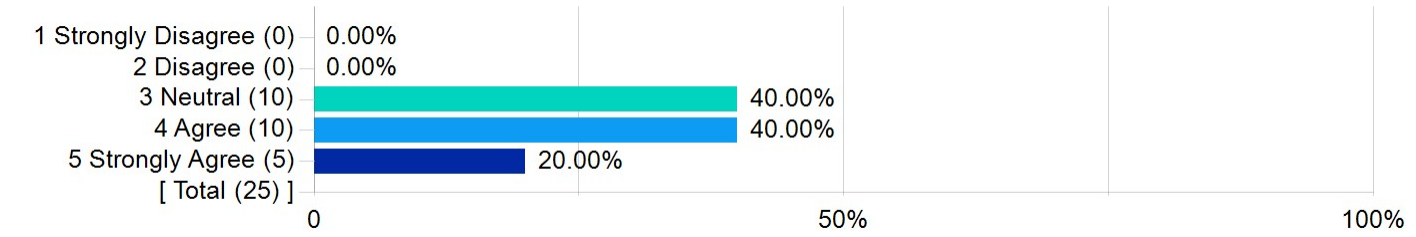
Statistics	Value
Response Count	27
Mean	3.41
Median	3.00

How often did you use the recommended texts?



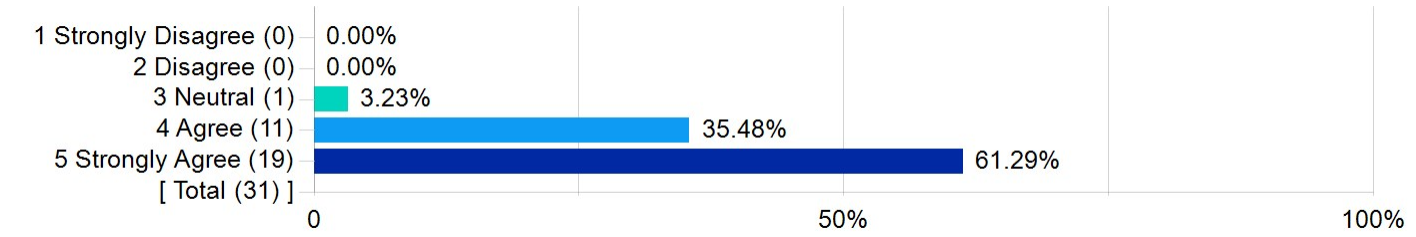
Statistics	Value
Response Count	29
Mean	2.93
Median	3.00

The textbook was easy to understand.



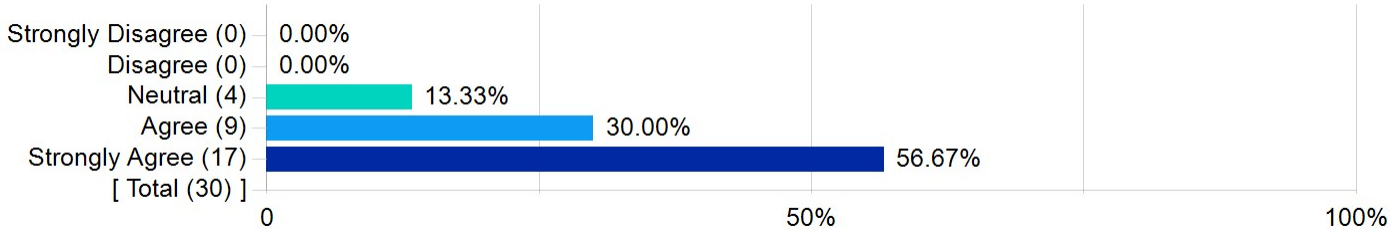
Statistics	Value
Response Count	25
Mean	3.80
Median	4.00

The classroom environment supported my learning.



Statistics	Value
Response Count	31
Mean	4.58
Median	5.00

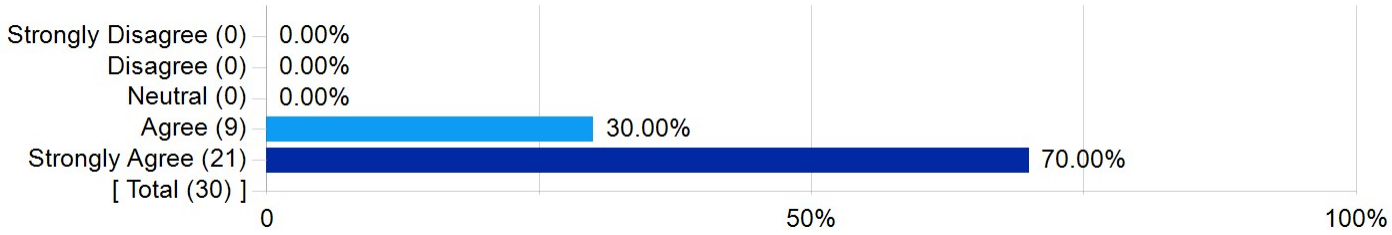
Course participation was encouraged.



Statistics	Value
Response Count	30
Mean	4.43
Median	5.00

Questions Created by Instructor

The lecture recordings posted to Canvas were helpful and should be continued in future semesters.

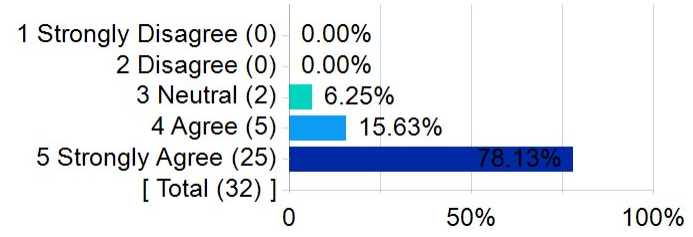


Statistics	Value
Response Count	30
Mean	4.70
Median	5.00

Rate the following statements about the online presence of the course.

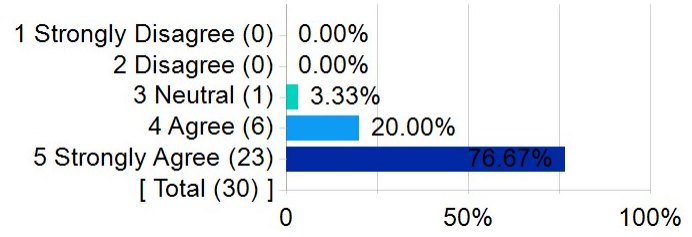
Competency Statistics	Value
Mean	3.93
Median	5.00
Mode	5
Standard Deviation	1.30
Standard Error (base on SD)	0.11
Population Standard Deviation	1.29
Standard Error (base on PSD)	0.11

1. I knew that the lectures were being simultaneously casted on Zoom.



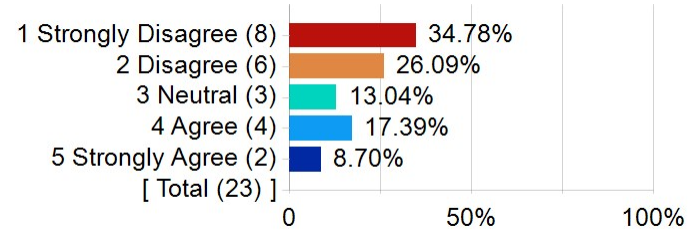
Statistics	Value
Response Count	32
Mean	4.72
Median	5.00

2. I appreciated that the lectures were also live on Zoom.



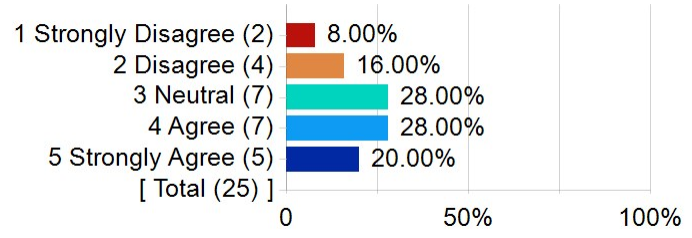
Statistics	Value
Response Count	30
Mean	4.73
Median	5.00

3. I attended lectures on Zoom when I could have attended in person. (Rate based on how often)



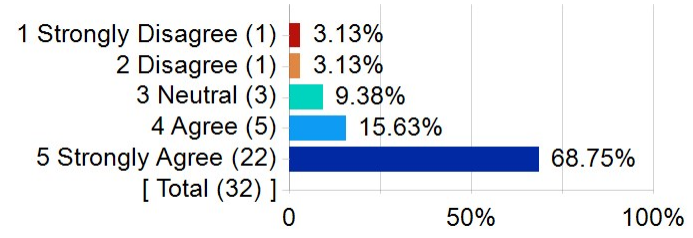
Statistics	Value
Response Count	23
Mean	2.39
Median	2.00

4. The online lecture experience was equivalent to the in-class experience.



Statistics	Value
Response Count	25
Mean	3.36
Median	3.00

5. I attended class (in-person or on Zoom) most of the time this semester.



Statistics	Value
Response Count	32
Mean	4.44
Median	5.00

How did you feel about the daily structure of the course (pre-class videos, poll questions, and practice problems)? Did these help your overall learning in the course?

Comments
The structure was good, it encourages constant practice of the material and accelerated learning.
I loved it. It is absolutely essential. I would take notes and copy down everything from the pre–class videos. I would then attend lecture and fill in anything I was missing. I'd then do the practice problem and save it. Later on when the recitation quizzes came up I would refer to my practice problem I had completed to teach myself about the objective all over again, using the notes I had when needed. This is essential to the overall structure.
All helped greatly. I do feel like there could be more of an emphasis on problem solving for some of the post class practice problems, but it's nothing that some self study can't fix.
Very good and helpful.
They were very helpful and aided my overall learning in the course.
I felt the pre–class videos provided a good introduction to the day's material. It felt like I got a little familiar with the topics before attending the lectures themselves. The poll questions allowed me to check if I was following the material and problem solving methods as the lecture went on. The practice problems provided a good review for what I learned on that day. These components greatly helped my learning in the course.
I thought it was pretty organized.
I loved this hybrid approach, and I feel it strengthened my learning. Please continue this!
They helped a lot
Very good.
I liked those it is better than weekly homework.
Pre–class videos definitely helped the most in getting the ideas in my head before lecture, and the practice problems was a good way to see if I understood how to work out each type of problem, without having to spend hours doing mylab hw
This structure is what I loved most about the class. The focus on putting in work at your own pace on the pre–class notes rather than giving us filler homework assignments that takes hours for no reason is amazing.
I would rarely pay attention to pre–class videos but I think it is a good resource that I should have utilized. The practice problems were more helpful however I feel that we should have 24 hours to complete it.
The structure of the course was extremely helpful and well organized.
The pre–class videos were really helpful and got me focused on the lecture material. The practice problems also were very helpful, allowing me to gauge what would be asked of me on the recitation quizzes.
The pre class videos were where I learned the most. I understood what was happening in the videos and can work from there in class to understand the material better. They helped my overall learning as well as the practice problems.
It's helpful to see the material the day before it's covered in class. I like it.
I loved this structure, it really solidified the material and my understanding of each topic every day. I loved the previous exposure to the material before lecture.
This daily structure definitely helped the material sink in more than if everything was just covered during class time.

How did you feel about the grading scheme for this course? What about the textbook? (I can only add two open-ended questions, so these two get combined together. Any comments you have here would be greatly appreciated!)

Comments
The grading scheme could be explained better or maybe simplified to just be numbers that are easily calculated. The textbook was good, but the lecture notes mostly covered everything.
While I did not use the textbook, the reason I did not is because I felt confident based off of the preclass video, polls, practice problem, and recitation. The teaching quality and effort helped me retain the knowledge and made things clear, and if I ever had a question I felt comfortable to ask it, and it would be cleared up. The Grading scheme was amazing and should be applied to all rutgers courses. In the beginning it was related to being graded on what we retained and able to show we can do rather than traditional grading, and it is completely true. Approaching the objectives as a list of things I need to master broke things up and organized it. I am so confident that when I needed to help people in differential equations in other classes at Rutgers, I was successfully able to help them. It was an amazing experience unlike any other course before, and I sincerely hope I see more like this. Thank you
I didn't look at the textbook all that often, but I did do the additional practice problems posted and they helped me greatly. While the grading scheme was confusing at first, it starting making more sense to me after the first exam.
The grading scheme was fantastic. I didn't really use the textbook at all because your teaching was so great but I have the textbook saved for future review.
I think the grading scheme is very nice, and I appreciate that I don't get penalized horribly for small errors in arithmetic
I liked the grading scheme for this course. It felt fair in the sense that I had multiple attempts to meet a topic. Honestly, I never used the textbook, but I feel I did fine in the course without it. Overall, I believe this was a very well structured class that really got the course material across. Thank you!
It was very rough. Personally, the class was difficult just because I would get the whole question wrong even if I knew 2/3 parts. I would also get the question wrong for a math mistake, even though I knew the concept.
As I said before, I grew fond of the grading scheme. The textbook was helpful, but I learned most from the videos and practice problems—- the assigned and suggested ones. Again, thank you so much for the time you put in!
I don't really like the grading scheme and rarely used the textbook throughout this semester.
Fantastic.
I didnt really like the grading scheme. The objectives throughout the semester were fine but getting that many right on the final doesnt seem fair.
Grading scheme is very fair, especially if there is leniency in algebraic mistakes in longer, tedious problems like matrices.
I liked the grading scheme for the course a lot. Having multiple chances at succeeding at something is very important. You are not supposed to be perfect the first time you do anything else in real life, so this made sense. I wish I used the textbook more. If I had the time and motivation I would have read it before every class, but I have ADHD and am an engineering student with no time.
The grading scheme was awesome! I did not use the textbook.
The grading scheme was new and a lot to take in at first but might be a great way to for other classes to incorporate.
I thought the grading scheme was great. The textbook was also a good reference, although admittedly I did not use it that much.
The grading scheme was a love hate relationship. At times it was great but other times not as much because there really isn't any forms of partial credit when we can get.
I only used the textbook to study before exams but I preferred the worksheets. It'd be nice to see the worked out solutions to those worksheets posted as well. The grading scheme was probably the most frustrating part of this class because I currently have enough overall M's to get an A but not enough M's on Test Objectives to get an A or even a B. Hoping that the grade boosters pull me through. Thanks for a great semester.
At the beginning the grading scheme is kind of intimidating and hard to understand. It is true that it takes a while to understand it. I almost dropped to a different section because of this grading scheme. However, after you understand it or at least semi understand it, I find it extremely useful. I never liked calc before this class and I felt the grading scheme played a role in that. The textbook, I will not lie, I did not look at as often as I should have. I definitely think having learning objectives to reach is very useful because it gives a clear outline of what you do not understand.
It was confusing at first, but it was very reassuring to know that our performance in the course wouldn't be destroyed by an off day.