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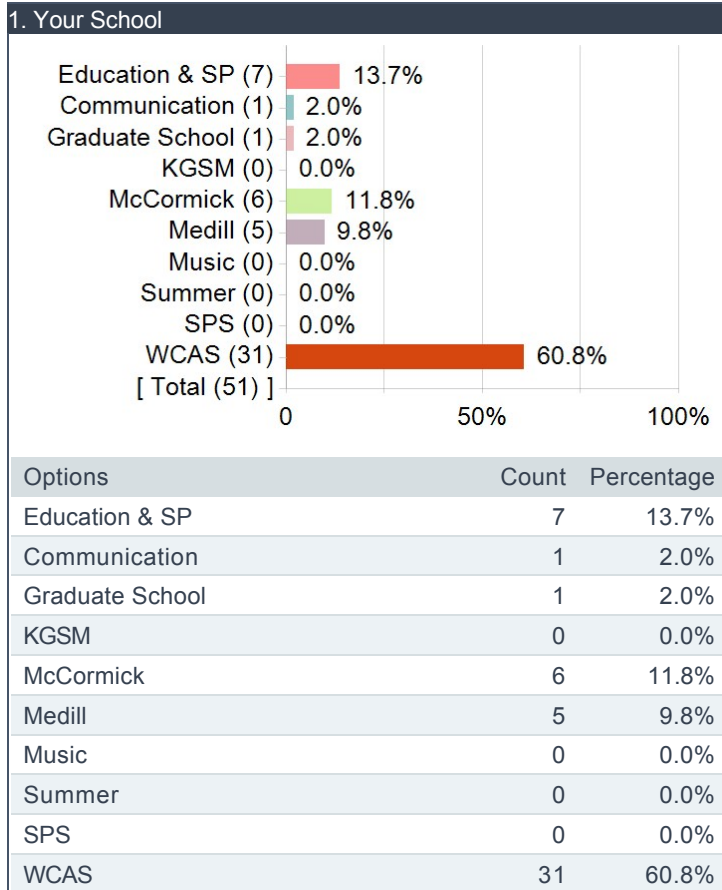
Northwestern University

Course Evaluations

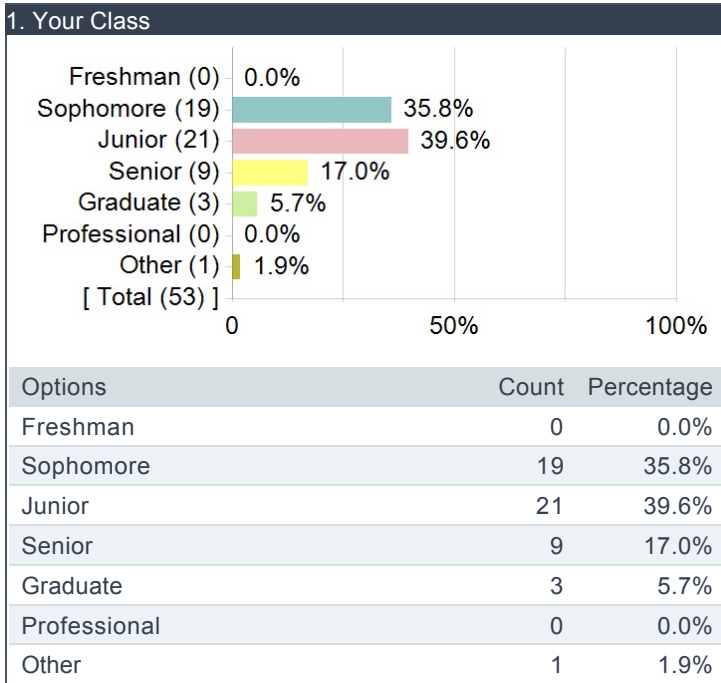
Instructor	Course
Kathleen Coburn	STAT_301-2_21: Data Science 2

DEMOGRAPHICS

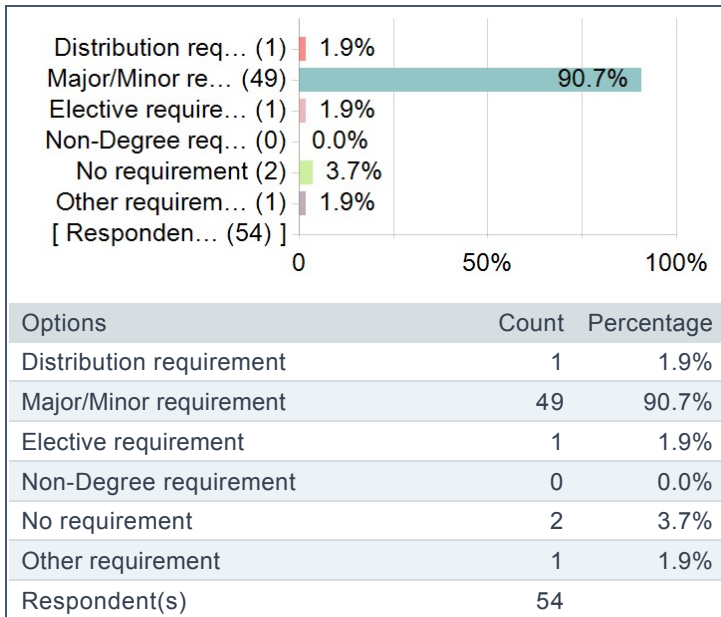
Your School



Your Class

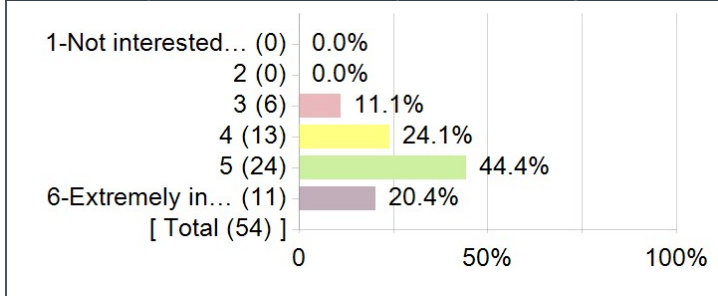


What is your reason for taking the course? (mark all that apply)



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

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

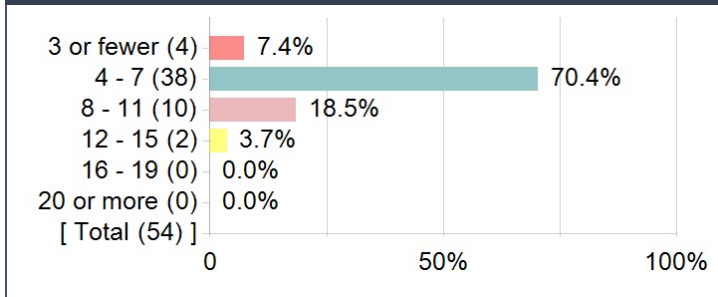


Options	Count	Percentage
1-Not interested at all	0	0.0%
2	0	0.0%
3	6	11.1%
4	13	24.1%
5	24	44.4%
6-Extremely interested	11	20.4%

TIME-SURVEY QUESTION

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

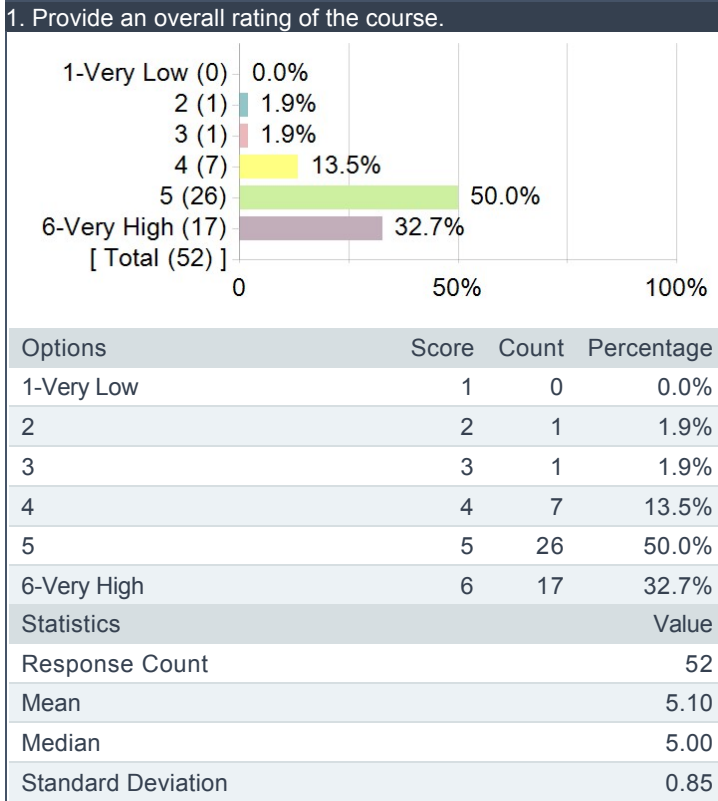
1. Estimate the average number of hours per week you spent on this course outside of class and lab time.



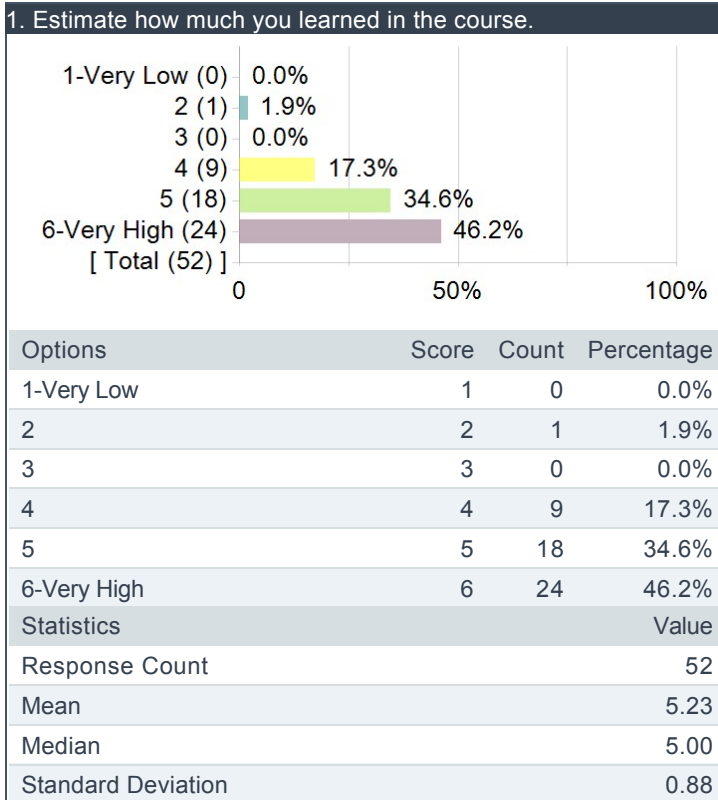
Options	Count	Percentage
3 or fewer	4	7.4%
4 - 7	38	70.4%
8 - 11	10	18.5%
12 - 15	2	3.7%
16 - 19	0	0.0%
20 or more	0	0.0%

COURSE QUESTIONS

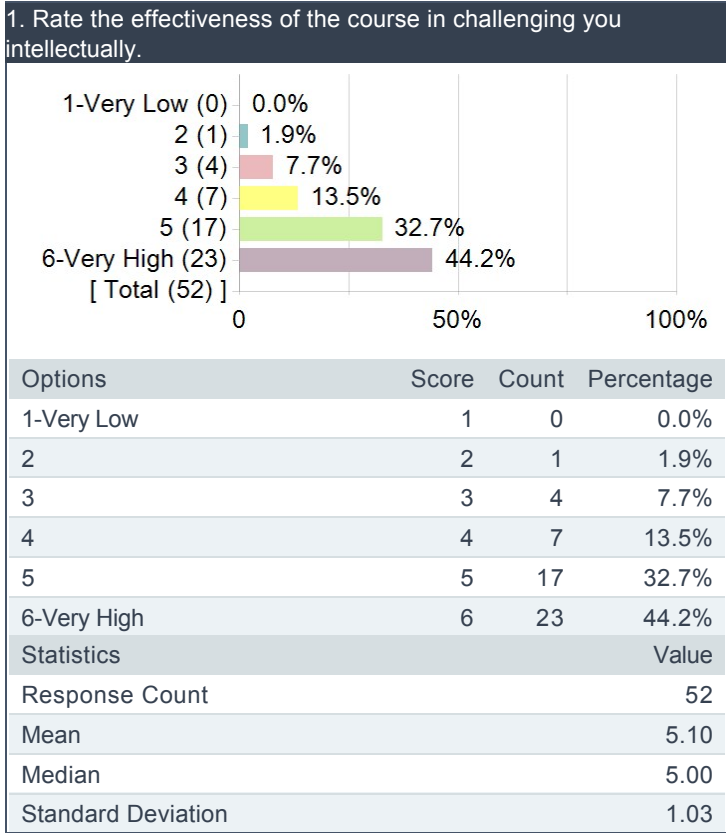
Provide an overall rating of the course.



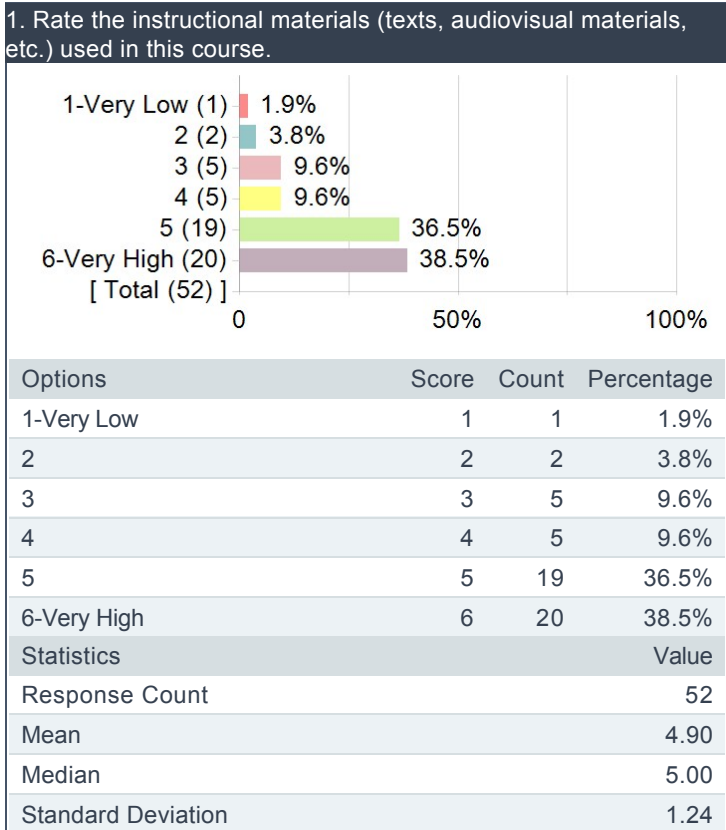
Estimate how much you learned in the course.



Rate the effectiveness of the course in challenging you intellectually.

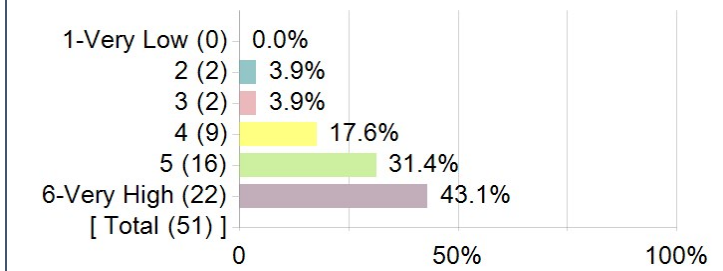


Rate the instructional materials (texts, audiovisual materials, etc.) used in this course.



Rate how well the organization of the course facilitated your learning.

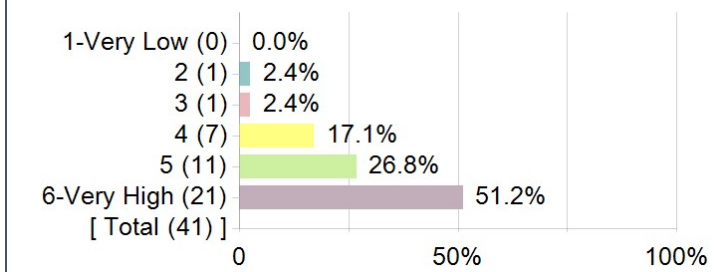
1. Rate how well the organization of the course facilitated your learning.



Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	2	3.9%
3	3	2	3.9%
4	4	9	17.6%
5	5	16	31.4%
6-Very High	6	22	43.1%
Statistics			Value
Response Count			51
Mean			5.06
Median			5.00
Standard Deviation			1.07

Rate lab/discussion (if present) section's usefulness in learning and applying course material.

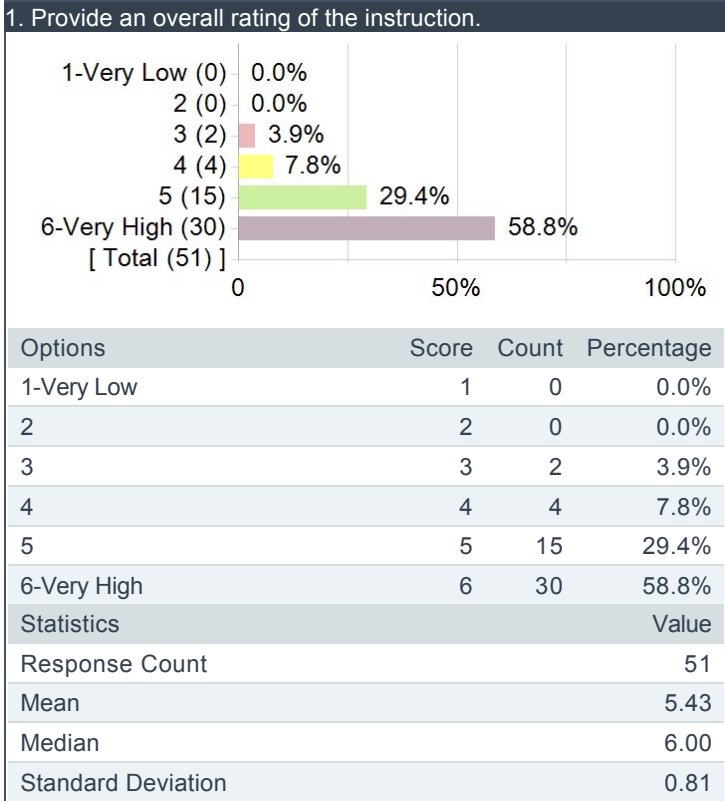
1. Rate lab/discussion (if present) section's usefulness in learning and applying course material.



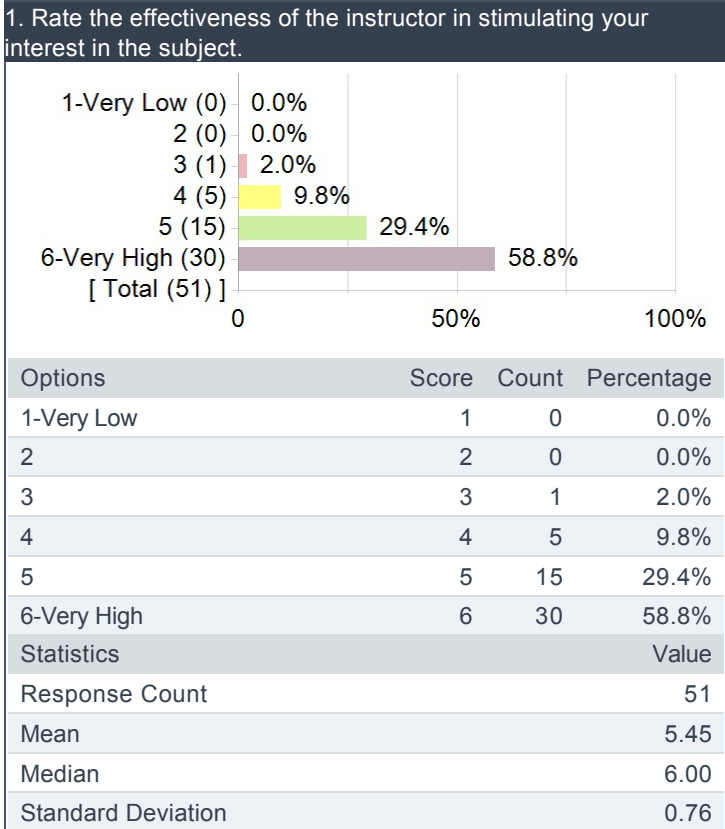
Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	1	2.4%
3	3	1	2.4%
4	4	7	17.1%
5	5	11	26.8%
6-Very High	6	21	51.2%
Statistics			Value
Response Count			41
Mean			5.22
Median			6.00
Standard Deviation			0.99

INSTRUCTOR QUESTIONS

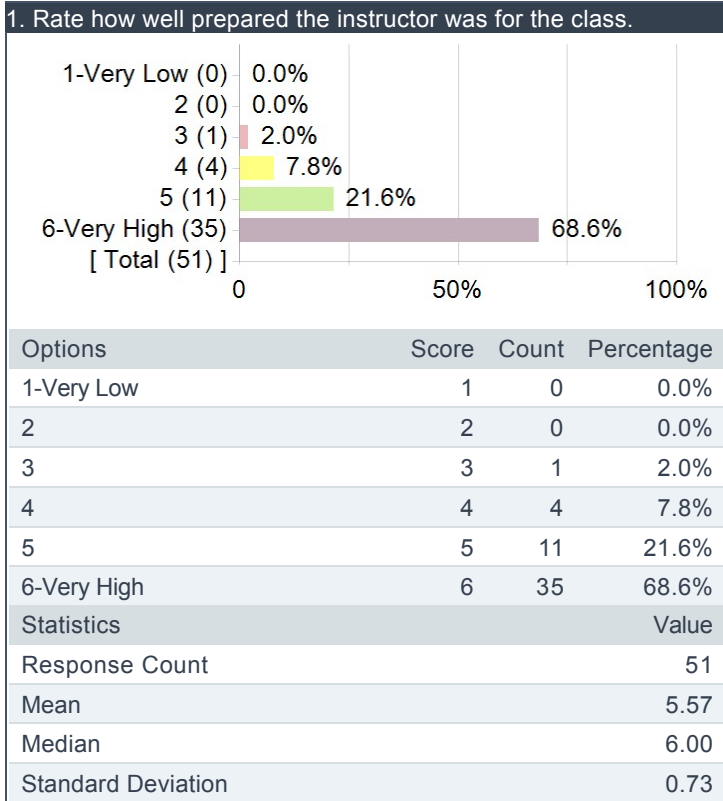
Provide an overall rating of the instruction.



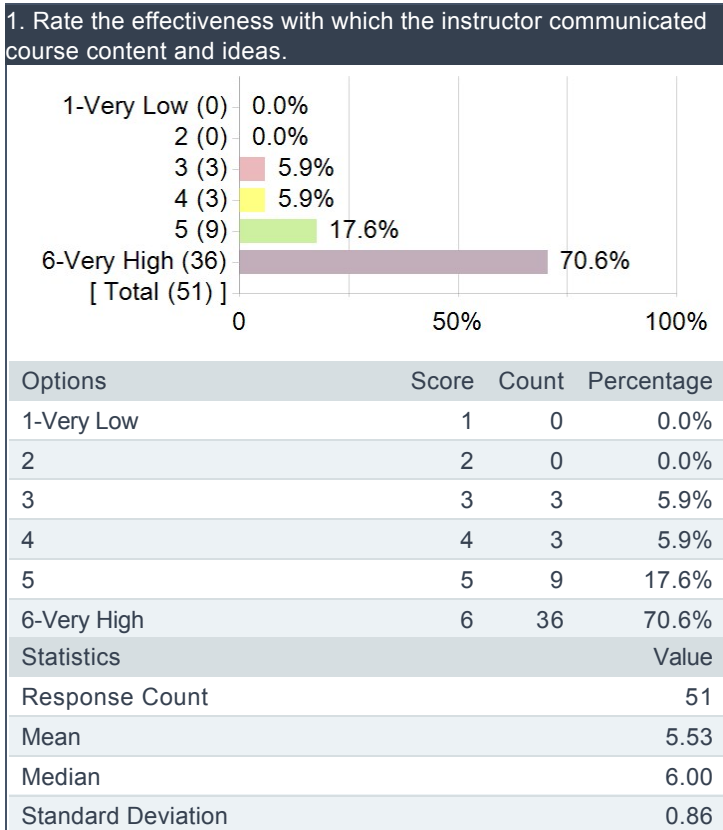
Rate the effectiveness of the instructor in stimulating your interest in the subject.



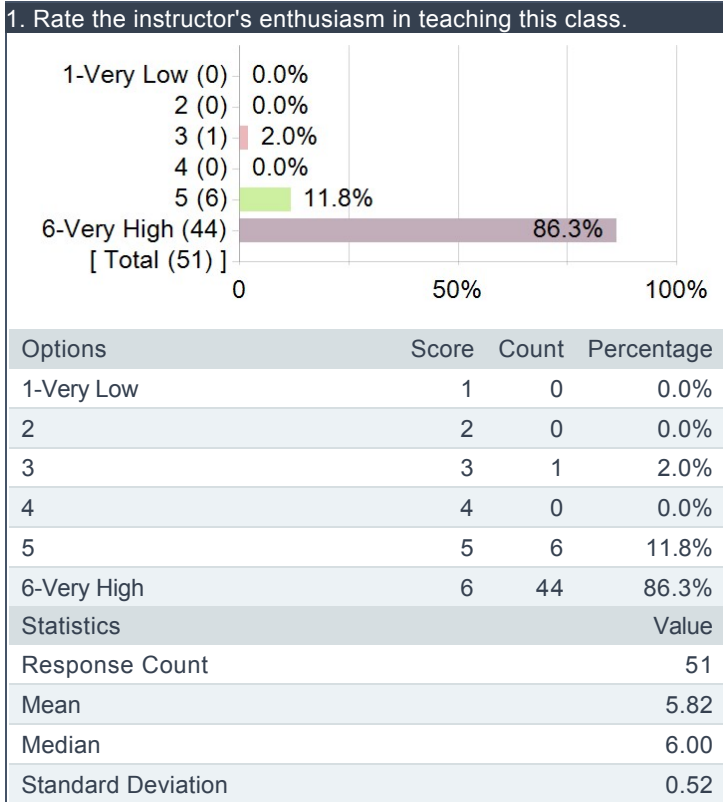
Rate how well prepared the instructor was for the class.



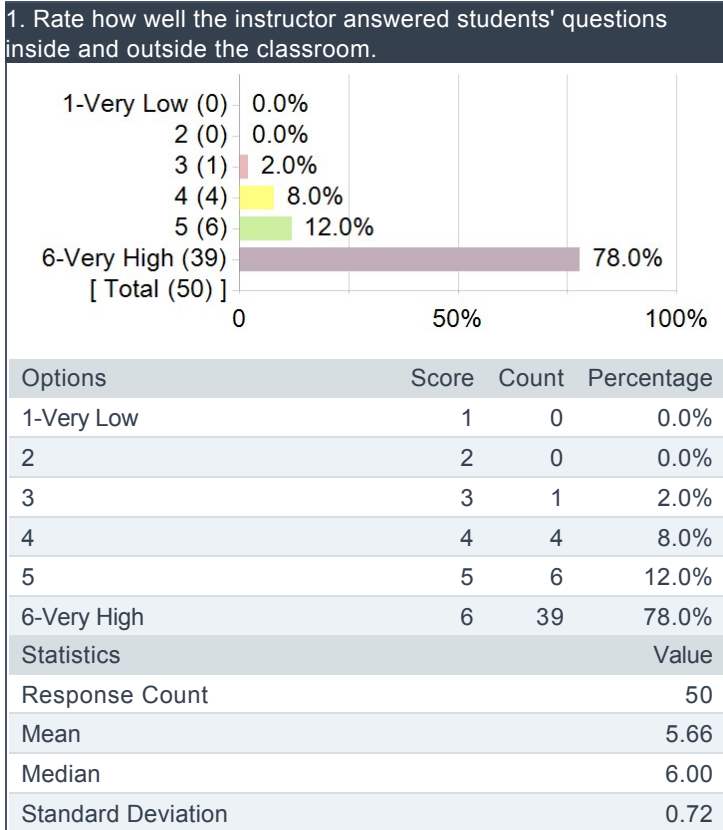
Rate the effectiveness with which the instructor communicated course content and ideas.



Rate the instructor's enthusiasm in teaching this class.

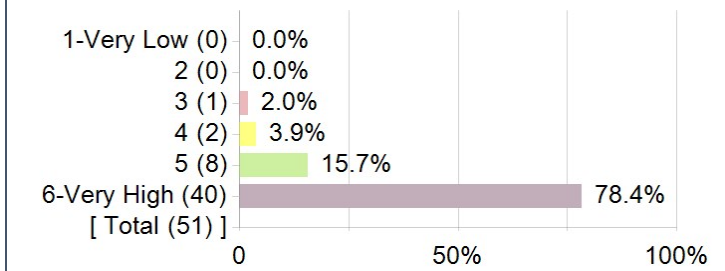


Rate how well the instructor answered students' questions inside and outside the classroom.



Rate how well the instructor displayed interest in students' learning and needs.

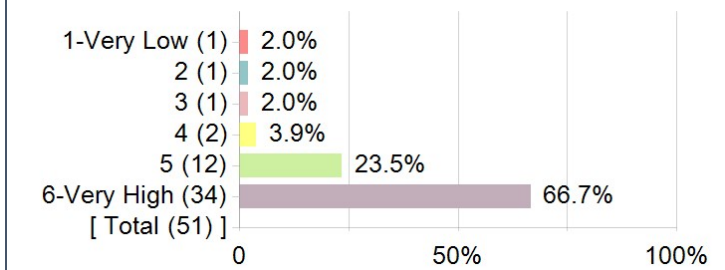
1. Rate how well the instructor displayed interest in students' learning and needs.



Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	0	0.0%
3	3	1	2.0%
4	4	2	3.9%
5	5	8	15.7%
6-Very High	6	40	78.4%
Statistics			Value
Response Count			51
Mean			5.71
Median			6.00
Standard Deviation			0.64

The instructor was well organized for each class.

1. The instructor was well organized for each class.



Options	Score	Count	Percentage
1-Very Low	1	1	2.0%
2	2	1	2.0%
3	3	1	2.0%
4	4	2	3.9%
5	5	12	23.5%
6-Very High	6	34	66.7%
Statistics			Value
Response Count			51
Mean			5.45
Median			6.00
Standard Deviation			1.05

OPEN-ENDED QUESTIONS

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

Comments
Yes, Coburn did a great job.
Was not a big fan of the flipped classroom, still not the biggest fan, but I'm glad it's less true this quarter.
I learned a lot of modeling, tuning, and performance metrics. Also got more familiar with R
This course was moderately effective in helping me learn. Professors are great. Helpful and easy to work with. The struggles we're having are not their fault. This class NEEDS TO BE IN PERSON THOUGH. NU needs to get students back in the classroom. This is beyond ridiculous now.
Yes! I feel even more comfortable with R than last quarter. I also definitely gained a good, base-level understanding of multiple kinds of statistical models.
I really wish that groups were made to have to work in. I feel the online learning is very isolating and the groups give you a smaller direct community to work with during the quarter. It was very frustrating that making these groups wasn't a priority and more so an after thought.
Absolutely taught me how to effectively use R to model stuff. Super interesting to learn about.
Lots of resources and lots of availability to ask questions both in class and in office hours.
Yes there was so much to learn and it really was great.
yes – i had little exposure to the material before
It was a great course!! I would say the only thing was, I didn't get much from the lecture portion of class because honestly I was always 2–3 weeks behind and so was working on something different, and unfortunately usually just didn't have enough time to go back and watch recordings. But hey I enjoyed class anyway and everybody else seemed to get stuff out of that part.
I now know how to use tidymodels to model a set a data.
This course did a great job at helping me learn more about statistical concepts that I had been briefly introduced to in previous coursework. This course also did a great job of teaching me how to apply different machine learning techniques that I'm already finding ways to apply to my own research and manuscripts.
Yes, I have a better understanding of data science models.
The professor and TAs really want to motivate you to learn, and I felt that their teaching style was extremely helpful and informative.
No, I think that the online format of this class really hindered my learning. While I would have had the opportunity to work with others and ask questions directly to the professor if we were in person, only a few people generally dominate the conversation online. I end up working alone, getting confused, and putting off doing the work as a result.
the homework was extremely helpful but lab/lecture i barely paid attention to. it was hard to feel like there was structure (although some lectures where we went over slides were helpful) and mostly felt like an opportunity for students to ask questions. glad there were changes since last quarter where it was entirely slide/lecture-less but not as structured as i would've liked.
Yes. The lectures and labs were the best tools for learning, as was the final project. The book and reading checks were less helpful. If the book was better, I think the reading checks could have been a great tool. I think I mostly felt unclear every time I did a reading check until I heard the lecture on the topic the following day.
I learned more this quarter than fall quarter because of the focus on modeling and how each week built on the previous week's material. Now, my research lab, I was able to propose a predictive model for the project I am working on, and the lab team was amazed by the idea. Couldn't have done it without this class.
it was a good mix of discussing theory and application of statistical models. I could read about the coding component in the online textbook and get an explanation of the theory behind it in class.
I felt that I learned a lot about data modeling, especially because I knew hardly anything about the topic going into the course.
Yes, I really liked how we also got powerpoints this quarter to learn about the concepts
Yes, there was a lot of material that we went over and the labs were put in place to encourage us to practice. However, I felt that it would have been helpful to have more lecture time (which was implemented to an extent near the latter half of the quarter which I greatly appreciated) because I am really against flipped classroom structures for a class this challenging – we are essentially teaching ourselves with the textbook and have limited time in class to fill a lot of those gaps. and also it would have been helpful to go a bit slower – I felt so rushed that I didn't retain as much as I would have if I had some more time to understand and process the content.
Yes.
The textbook was horrible. I learned nothing about statistical methods for DS. I wish the book was more theoretical. The textbook also assumed a lot of prior knowledge; I think there needs to be supplemental readings.
Helped a lot because it was ideal
The course really expanded my analytical thinking skills!
yes. the professor was helpful

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

Comments
Learning how this can be implemented in the real world
You know the drill. Not a big fan of the new reading check format (I think I actually learned less from the reading checks this quarter) but a big fan of the mini lectures now.
I had no idea what I was getting myself into for this course, but now I have a really good sense of what a model is used for and how I can make my own. I'm proud of it!
This was a good succession to the previous quarter. I thought the coding became much easier as I got more familiar with R, but there are some more challenging and abstract concepts in this class. The final project was also quite manageable if you start early and understand things covered in the labs
Good class. Modeling is difficult though. Be prepared to put in work.
Good class! Easy to do well if you just do your work.
A truly amazing course. The instructional team for data science is amazing. They are so dedicated to helping students learn. I liked the structure of this second course in the data science sequence almost better than the first course in the sequence. Having lecture time, where Dr. Coburn would go through power-point slides reviewing content from the book and explaining a "model of the day" was really helpful. And I thought the labs were awesome: they helped me better understand the code from the book and really cemented the modeling process in my mind.
After the first course in this sequence I thought I was doomed because I practically copied all the answers from online for each of the labs. I thought this course would build on that but that was not the case. While the first course gives you a brief background on many elements of R, it is important to know that you do not directly build on any of it. It is more so just an intro. We often worked on the labs together in class which is definitely helpful but we often got a little sidetracked and ran out of time because we'd spend the first 30 minutes not really doing anything, then the next 30 reviewing the reading and then start the lab with like 15 minutes left.
Second class in the Data Science sequence, focused on modeling using the tidymodels R packages. Nothing too too difficult, although running a model can take a really long time, so make sure that you plan out your work so that if you need to run a model for 2 or more hours, you can do it and still get your assignment in on time
Solid course. Kuyper and Coburn are both really nice and have lots of availability to help you throughout the course. Kuyper literally held office hours almost every single day leading up to finals week.
This is the only data science class that actually matters because the stuff you learn is applicable. Try to take this class with Professor Coburn because she will make sure you learn it and the class was great.
it is a continuation of the sequence
This class is a hands-on bootcamp on "how to Tidymodels" with fundamentals on modeling sprinkled in. The labs function as tutorial but what the final project is what really showed how useful the package is. There are still a lot of moving parts in the class, which can make it hard to keep track of. Labs and reading quizzes can feel tedious.
This course was great! I learned about multiple predictive models that are already finding ways to be integrated in my research.
A lot of this class is kind of just mindless coding on labs and reading checks. You definitely learn how to create, run, and evaluate different models in R though. The final project is cooler because you get to choose your own data, so the findings are actually interesting.
I really liked the fact that there were slides this quarter, because I felt like I was actually learning something in class rather than figuring it out for myself on my own. The textbook wasn't really super helpful to read until after lecture. Prof. Coburn is amazing though!
Katie is such a kind and sincere professor. I liked the layout of this class much more than the previous data science class since they started to use slides and reteach some of topics in the textbook. They also spent some of the classtime going over the labs, which I thought was extremely helpful.
Kind of a lot of work, would be much better in person.
This is a good class and it's easier than Data Science 1. Just don't procrastinate the final project and don't be afraid to ask for help
coburn is really personable and makes data science feel accessible to ppl who might be apprehensive. however, this class during covid is just especially easy to tune out of during lecture / class. the only thing that made it feel like there was structure were the weekly labs.
This course was an introduction to tidymodels in R, which allows the user to compare predictive models in a streamlined manner. This course was also an introduction to different types of predictive models. As a graduate student in the social sciences, I may not be using tidymodels a lot for my own work (as I have learned about packages that handle predictive modeling for problems in my field), but I appreciated learning about different types of predictive models and how they work, the differences between inference and prediction, and the challenges of using these models with real data.
I did not learn much in this format. The reading checks did not assess if we actually learned. I felt like there were no assignments that tested my understanding of the material.

Comments
<p>easy A class. I liked this course more than 301–1 because there's a focus only on modeling, so you learn a lot about it. Also, working on the labs in class helped me learn the concepts more clearly and made the final project much more manageable.</p>
<p>I was sort of interested about coding before starting the course, but the data science classes have been my favorite classes at Northwestern. Having weekly labs and discussing them in class and on campuswire helped me understand everything.</p>
<p>As an overview of the course: we received a chapter to read every class, for which we had to write the code from the chapter and submit it as part of a reading check. There would be one lab a week. The class was no longer a flipped classroom model for this quarter; instead, Coburn had a "model of the day," provided an overview of the chapter, and answered questions. This would generally take up the entire class, without having a chance to go into breakout rooms. Given that it's an online quarter, and breakout rooms are dead for the most part, I didn't mind. Coburn is a good lecturer, though sometimes we get caught up in small details. Additionally, the textbook reading is too advanced at times for minors to understand, but since there are no tests, only projects, it's not that important to understand every detail.</p>
<p>Class time was fairly useful in completing the labs. I thought that the labs were improved from last quarter's labs — since they wrote them themselves, it was more applicable to what they expected on the final project.</p>
<p>This course is honestly super helpful and I really appreciate how responsive the instructors are!</p>
<p>Katie is such a wonderful professor – possibly my favorite professor at Northwestern because she is always open to questions and has never expressed impatience or annoyance despite us having a lot of questions. Because she is never judgmental, it really encourages students to ask their questions and feel more confident. I felt that it would have been helpful to have more lecture time (which was implemented to an extent near the latter half of the quarter which I greatly appreciated) because I am really against flipped classroom structures for a class this challenging – we are essentially teaching ourselves with the textbook and have limited time in class to fill a lot of those gaps. Also, it would have been helpful to go a bit slower – I felt so rushed that I didn't retain as much as I would have if I had some more time to understand and process the content. Maybe for the students who are more advanced in stats / coding that wasn't a problem, but for others in the class, it can be. I also think that the RCs didn't really help me to learn because the textbook was so difficult that I couldn't understand the concepts anyway, and that would result in me spending hours and hours trying and failing to follow along with the textbook.</p>
<p>STAT 301–2 is definitely improved both from organizing structure and lab content. Professor Coburn will use slides to teach us textbook materials and it is pretty helpful. She also spends time to guide us how to write labs which is pretty helpful. It doesn't have breakout session times which are super awkward and a waste of time.</p>
<p>Katie is so nice, and generally good at answering questions. The campuswire is so active all the time and it's great! Class instruction was actually pretty good— much better than the useless textbook. I absolutely disliked the textbook we used in class as a lot of the information was centered around R. I think the content should be more theoretical because I did not understand a lot of the material. I would definitely recommend reading the supplemental textbook if you are serious about your trade. I think it is important to know about the various ML algorithms/models. I am glad I took an ML class before taking this. Easy class tho; you might just be lost all of the time, and it seems like it is okay to not know about the theory behind these models.</p>
<p>Similar to the first Data Science course in the sequence. More weight was given to the final project compared to the labs. The reading checks included going through the textbook and commenting on the code there. The content was primarily about predictive modeling. Labs were largely done in class.</p>
<p>Coburn and Kuyper are the best. They run the data science minor really well, and if you pay attention and work on the labs throughout the week, you'll do great. The class uses Campuswire for continuous class discussions and questions, which is really helpful. Overall, I'm really impressed with the sequence so far.</p>
<p>tangible and relevant material</p>

What are the primary teaching strengths of the instructor?

Comments
Dedicated to her students
Having Maggie around, obviously. But also understanding where we're coming from and being very eager to help us.
Being very active on CampusWire and providing broad overviews when she sensed the class was not understanding a topic.
So ready and willing to answer questions. She's kind and approachable as well. Lots of different levels of students in the class in terms of their coding abilities, and Katie makes sure they all feel comfortable asking for help.
Dr. Coburn is amazing!! She's so helpful and responsive to any and all questions students have about course content and assignments. She's always very prepared, and is great at explaining concepts and code in a way that is easy to understand. She creates a really fun, relaxed, and welcoming environment in class, and I truly look forward to class every week.
Making the course fun and having a sense of humor.
Knows her stuff and super willing to help students with problems.
Great person, nice, available, understanding.
She provides great instruction and is super informative.
Very helpful in answering questions and really cares about helping students learn the material
caring, ready to experiment, enthusiasm, knowledgeable
Katie was extremely helpful and great at explaining things! Her supportive and friendly attitude also made me really comfortable going to her for help, which helped my learning.
Everything! I'm honestly really sad that Dr. Coburn is only a post-doc at Northwestern because she's a phenomenal instructor. If she were a professor at NU or any other university, I would absolutely ask her to be on my dissertation committee. If there were ever a time she didn't know the answer to the question she was humble enough to admit it, but also driven to find the answer.
Just amazing! Very helpful at breaking down concepts and is also very patient whenever we're confused!
super kind and understanding; chill/makes jokes in class which makes her super approachable and friendly
She was a good communicator and has a fun, positive attitude and she's very receptive to student concerns and you can tell she really cares about everyone
personable, clear explanations, funny
Katie is enthusiastic, even-tempered, patient, curious, persistent, funny, kind, and hard-working. I appreciated the extra kindness and understanding during the pandemic. UH is lucky to be getting her!
always willing to help and available during office hours, very kind and clearly loves her class and data science
Lectures were helpful because she helped illustrate concepts discussed in the online textbook. She was also very approachable during office hours.
Coburn was very accommodating and receptive to feedback.
Very nice! Very effective in understanding students needs for learning and responding appropriately.
Katie is honestly the best, she's funny and genuinely cares about our education and really helps us understand the content. I also enjoy the banter that happens in the chat! Overall I am really grateful that she always answers questions clearly and is an effective teacher who also engages my interest in the subject.
She is my favorite professor hands-down at NU, and probably will be for the rest of my time here. As I mentioned earlier, I love that Katie is always open to students' questions with zero judgment which is so encouraging as someone who is intimidated by the challenging subject of data science. She breaks down the concepts so that they're more approachable and way more understandable than the textbook. She has never expressed any impatience or annoyance with our questions which means the world for us students. Katie being my professor has greatly impacted my experience with the Data Science minor and I hope that she can get a permanent position here.
PROFESSOR COBURN IS THE BEST PROFESSOR EVER, SHE WILL LITERALLY ALWAYS BE THERE TO HELP AND ITS ALWAYS SUCH A FUN TIME IN HER CLASSES. ONE OF MY FAV PROFESSORS AT NU, SHE WILL LITERALLY HELP YOU WITH ANYTHING IN LIFE. ANAD HER DOG IS ABS ADORABLE!!
Coburn is well prepared and detailed, interactive.
Answers questions with a lot of clarity. Generally was very clear with explanations.
Relaxed, enthusiastic, understanding
Professor Coburn is really passionate about data science and loves watching her students improve. It makes class really enjoyable.
helpful

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

Comments
none
Not much, I guess sometimes we get a little too sidetracked but that's fine.
Would have liked the class to have a little more structure instead of being so freeflowing.
None!
Getting sidetracked, going through the slides way too slowly and running out of lab time.
Nothing super major comes to mind
None
More instruction would be great.
None
responding to email as she faces a swarm of them, but she makes up for this with Campuswire
Never apologize for the bulldog, we love the bulldog!
None. She's very relaxed and encouraging of students to pursue their interests.
n/a
none
even small tangents during online lecture make it easy to get bored / distracted (not fault of coburn)
None.
sometimes loses focus quickly based on what people type in the chat or the pets they show. Also sometimes goes on tangents. using time more efficiently in class would help.
Sometimes we can get sidetracked by a question, but most of the time it ends up being useful, just time consuming.
Sometimes it was hard for me to focus in class just due to the nature of the material being taught over Zoom.
None!
None.
Not enough office hours.
Can't think of any.
n/a

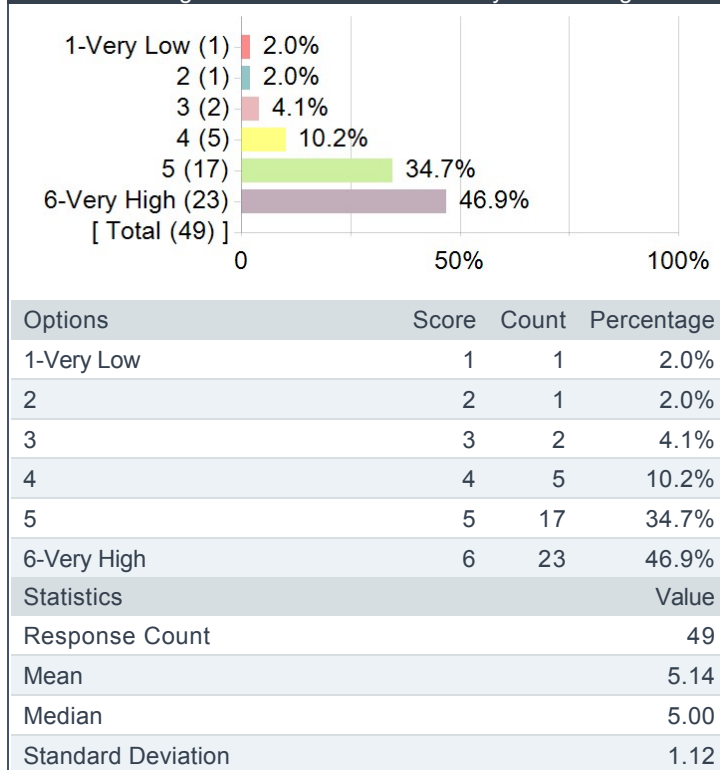
Can you offer suggestions for improvement?

Comments
I really like your teaching style/personality so keep it up :)
None
Never go a quarter of this sequence without making the groups to work in.
None
She was really amazing.
No
na
Nope, she's great!
Nope, you're doing great!
none
Please make attendance *optional*. I would understand the need for mandatory attendance under normal circumstances pre-COVID for the purpose of the flipped classroom, but as of right now, there's no advantage to having students required to come to class. It often feels like a chore to come, especially when it feels more like office hours since a few students take up most of the time asking specific questions.
overview at the beginning of class for that day's lecture, more responsive to emails (!! I sent like 3 emails during the middle of the quarter about my grade and I could never make OH so I never got my questions answered...)
None.
correcting weaknesses listed above
I think having some sort of question for class submission system would help with staying on track (I know it's impossible for everyone to know what they will ask, but this will take care of any major concepts versus specific questions)
I preferred the format of reading checks from the first quarter, data science 301-1.
She is perfect
None.
The labs were written very well and were easy, but I would have enjoyed if they did not follow the textbook 1:1. Maybe a few more challenging problems where we could explore more functions, arguments, or models would have been fun.
None. I'm really excited for next quarter!
n/a

REMOTE LEARNING

Rate how well the approaches used in this course for remote instruction during Winter 2021 contributed to your learning.

1. Rate how well the approaches used in this course for remote instruction during Winter 2021 contributed to your learning.



Which aspects of the remote instruction helped contribute to your success in this course? Please explain.

Comments
Flipped classroom
More ease of access to help.
I really liked using campuswire
Zoom lectures are great, especially the use of power point slides and screen-sharing R so we can code together in class. I also really love the structure of Canvas: its easy to follow, and all due dates and assignment descriptions are clear and easily accessible.
Having a small lecture reviewing the material was super helpful, as was having Professor Coburn work through the code in class. Was super helpful when I was debugging errors and her explaining as she went really helped my understanding.
Honestly as a coding class, there's not a huge difference from in person lectures. Moreover, being remote actually allowed for lectures to be recorded and I could review the code the instructors were doing in class.
The recordings were amazing.
Campuswire is great
The data sci team has done amazing with the transition!
The class was good.
Dr. Coburn was always super understanding and helpful when it came to working with us over zoom. Remote learning also made screen sharing and troubleshooting super easy. If anything, I feel guilty that so many students kept their cameras off.
The lecture slides helped a lot!
The actual class, campuswire, virtual friends
Whenever I talked with Professor Coburn about how I was struggling with motivating myself to do anything in quarantined winter quarter she was super receptive and helpful.
lecture slides, attendance tracking, casual tone of lecture
The Data Science courses are very adaptable to online instruction. Actually, I can't imagine what in-person instruction looked like before the pandemic. Screen sharing is one of the best features out there for learning. I think the online tools we use, namely Zoom, Panopto, Campuswire, and Canvas, make taking the course online really easy.
going over labs in class, the labs, final project because it helped cement my understanding of modeling.
This class is the best suited to be online. I have two screens, so on one I can watch the lecture and on the other, I can code along. It's really easy to share your screen with other people and discuss your code.
The non-flipped classroom approach (lecture + working through lab together) worked better than the breakout rooms. It'd be better to do this approach if learning continues remotely.
I appreciated that the classes were recorded and that we had access to them. Kuyper also provided many chances for us to attend virtual office hours before the final project was due.
powerpoints & working through labs together & campuswire
The breakout room function is so useful in asking questions privately. I also appreciate being able to ask questions anonymously, and being able to watch recorded lectures afterwards.
The textbook and reading check.
The campuswire.
All aspects did
The breakout rooms and use of Campuswire are really helpful because collaboration is necessary for coding, and these methods really helped me out.
breakout rooms

Which aspects of the remote instruction could be improved? Please explain.

Comments
The lack of structure? But not really that bad to be fair.
The professor likes to take questions at any point as she's speaking. At times, this was helpful, but it often hindered our progress to get through things at a reasonable pace.
N/A
None!
Oftentimes, I like to try and understand how something works, but models still feel like a black box to me. I understand how a linear regression works and a KNN model works, but everything else felt foreign and very confusing.
More resources would be great.
maybe get the lab solutions out a bit sooner?
None. This class was great!
n/a
There should be no reason for lectures to have mandatory attendance. I would understand the need for it under normal circumstances pre-COVID, but as of right now, there's no advantage to having students required to come to class. It often feels like a chore to come, especially when it feels more like office hours since a few students take up most of the time asking specific questions.
I wish that we spent much more time in the small groups, and that the professor and TAs would come to breakout rooms and answer questions rather than staying in the big room, where (like I mentioned above) a small group of people dominate the conversation.
more structure during lectures (overview of topic of the day, explanation of how it ties into overall data science education / curriculum)
None.
the slides didn't help me a lot, and I could not follow the lecture at all. Maybe get rid of those or explain topics more clearly.
there should be a discussion board on canvas for people to submit questions for lecture ahead of time (perhaps anonymously) so people can have an idea of what other classmates are struggling with and we can plan our time better.
Sometimes Professor Coburn would spend a lot of time talking generally about the assigned chapter we had to read before actually getting into the lab, which I felt like was time that could have been better used elsewhere.
I think that more office hours would be helpful – maybe once more a week would be great.
Some of the textbook contents are not explained well enough.
More office hours.
None
There could be discussion sections to help run through the selected readings and give more practice before completing the labs.
not having remote instructions