Northwestern

Individual Report for STAT_301-1_21: Data Science 1 (Kathleen Coburn)

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

Courses Audience: **51**
Responses Received: **37**
Response Ratio: **72.5%**

Report Comments

For more information about the CTEC Guidelines please visit our website: http://www.northwestern.edu/ctec/guidelines/index.html

Creation Date: **Wednesday, December 18, 2019**

Northwestern University

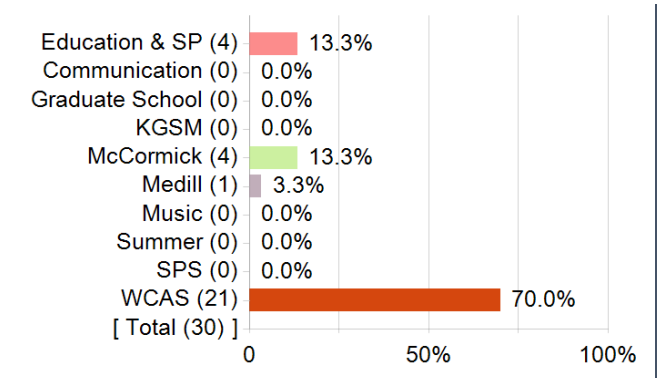
Course Evaluations

Instructor	Course
Kathleen Coburn	**STAT_301-1_21: Data Science 1**

DEMOGRAPHICS

Your School

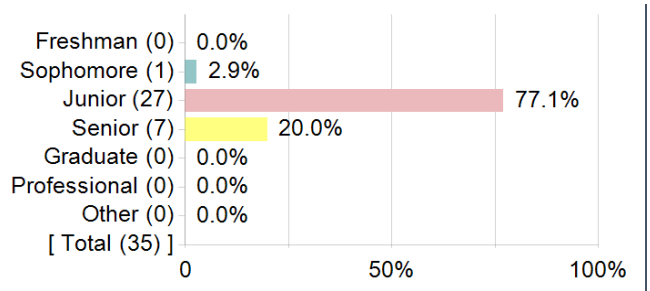
1. Your School



Options	Count	Percentage
Education & SP	4	13.3%
Communication	0	0.0%
Graduate School	0	0.0%
KGSM	0	0.0%
McCormick	4	13.3%
Medill	1	3.3%
Music	0	0.0%
Summer	0	0.0%
SPS	0	0.0%
WCAS	21	70.0%

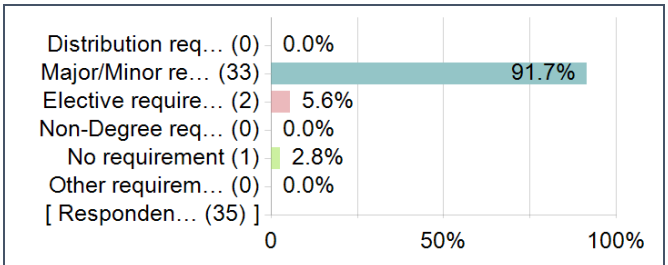
Your Class

1. Your Class



Options	Count	Percentage
Freshman	0	0.0%
Sophomore	1	2.9%
Junior	27	77.1%
Senior	7	20.0%
Graduate	0	0.0%
Professional	0	0.0%
Other	0	0.0%

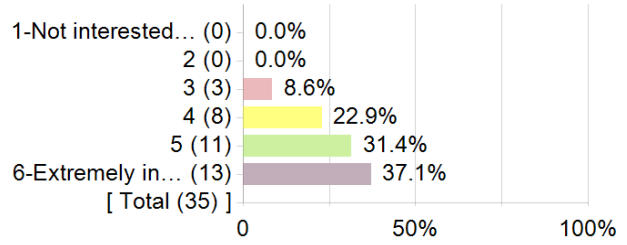
What is your reason for taking the course? (mark all that apply)



Options	Count	Percentage
Distribution requirement	0	0.0%
Major/Minor requirement	33	91.7%
Elective requirement	2	5.6%
Non-Degree requirement	0	0.0%
No requirement	1	2.8%
Other requirement	0	0.0%
Respondent(s)	35	

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

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

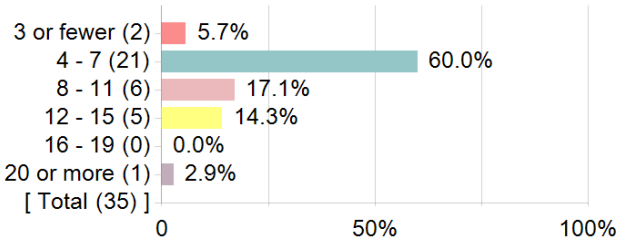


Options	Count	Percentage
1-Not interested at all	0	0.0%
2	0	0.0%
3	3	8.6%
4	8	22.9%
5	11	31.4%
6-Extremely interested	13	37.1%

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.

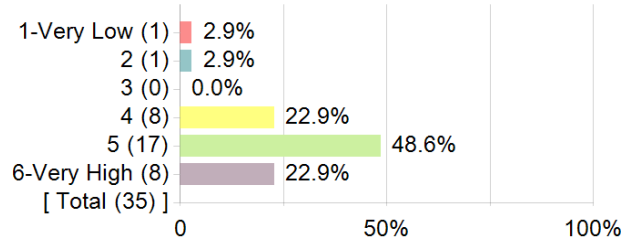


Options	Count	Percentage
3 or fewer	2	5.7%
4 - 7	21	60.0%
8 - 11	6	17.1%
12 - 15	5	14.3%
16 - 19	0	0.0%
20 or more	1	2.9%

COURSE QUESTIONS

Provide an overall rating of the course.

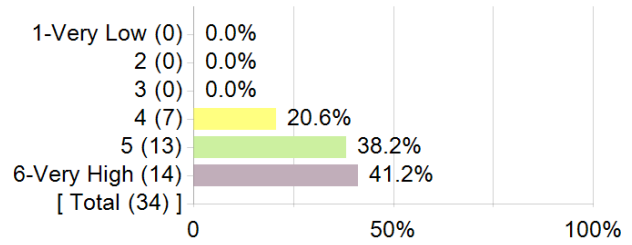
1. Provide an overall rating of the course.



Options	Score	Count	Percentage
1-Very Low	1	1	2.9%
2	2	1	2.9%
3	3	0	0.0%
4	4	8	22.9%
5	5	17	48.6%
6-Very High	6	8	22.9%
Statistics			Value
Response Count			35
Mean			4.80
Median			5.00
Standard Deviation			1.08

Estimate how much you learned in the course.

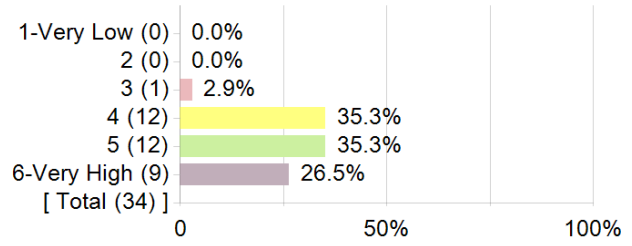
1. Estimate how much you learned in the course.



Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	0	0.0%
3	3	0	0.0%
4	4	7	20.6%
5	5	13	38.2%
6-Very High	6	14	41.2%
Statistics			Value
Response Count			34
Mean			5.21
Median			5.00
Standard Deviation			0.77

Rate the effectiveness of the course in challenging you intellectually.

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

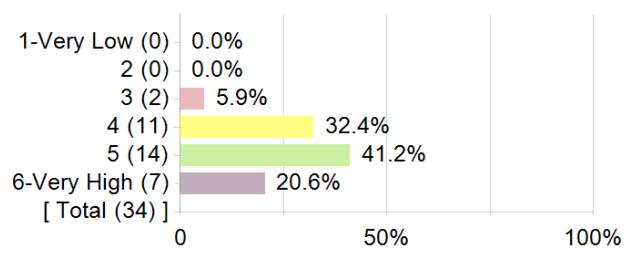


Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	0	0.0%
3	3	1	2.9%
4	4	12	35.3%
5	5	12	35.3%
6-Very High	6	9	26.5%

Statistics	Value
Response Count	34
Mean	4.85
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.

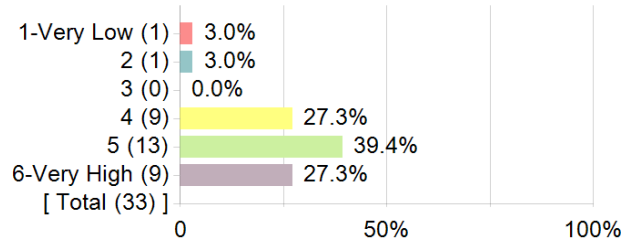


Options	Score	Count	Percentage
1-Very Low	1	0	0.0%
2	2	0	0.0%
3	3	2	5.9%
4	4	11	32.4%
5	5	14	41.2%
6-Very High	6	7	20.6%

Statistics	Value
Response Count	34
Mean	4.76
Median	5.00
Standard Deviation	0.85

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

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

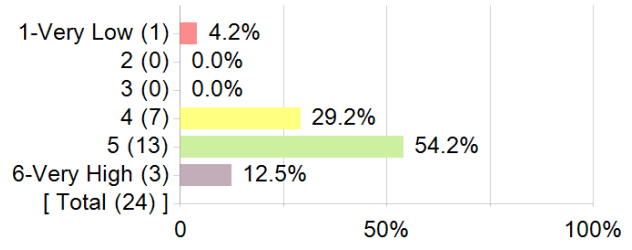


Options	Score	Count	Percentage
1-Very Low	1	1	3.0%
2	2	1	3.0%
3	3	0	0.0%
4	4	9	27.3%
5	5	13	39.4%
6-Very High	6	9	27.3%

Statistics	Value
Response Count	33
Mean	4.79
Median	5.00
Standard Deviation	1.14

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.

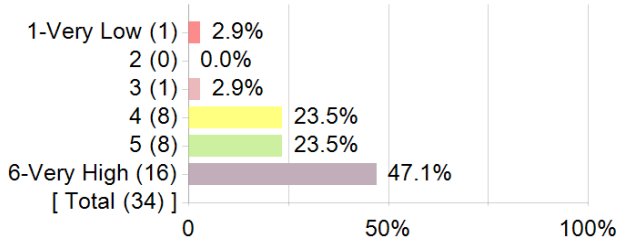


Options	Score	Count	Percentage
1-Very Low	1	1	4.2%
2	2	0	0.0%
3	3	0	0.0%
4	4	7	29.2%
5	5	13	54.2%
6-Very High	6	3	12.5%
Statistics			Value
Response Count			24
Mean			4.67
Median			5.00
Standard Deviation			1.01

INSTRUCTOR QUESTIONS

Provide an overall rating of the instruction.

1. Provide an overall rating of the instruction.

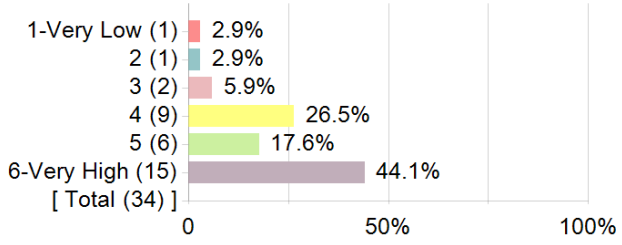


Options	Score	Count	Percentage
1-Very Low	1	1	2.9%
2	2	0	0.0%
3	3	1	2.9%
4	4	8	23.5%
5	5	8	23.5%
6-Very High	6	16	47.1%

Statistics	Value
Response Count	34
Mean	5.06
Median	5.00
Standard Deviation	1.15

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.

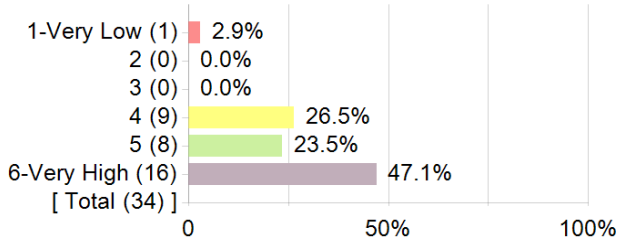


Options	Score	Count	Percentage
1-Very Low	1	1	2.9%
2	2	1	2.9%
3	3	2	5.9%
4	4	9	26.5%
5	5	6	17.6%
6-Very High	6	15	44.1%

Statistics	Value
Response Count	34
Mean	4.85
Median	5.00
Standard Deviation	1.31

Rate how well prepared the instructor was for the class.

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

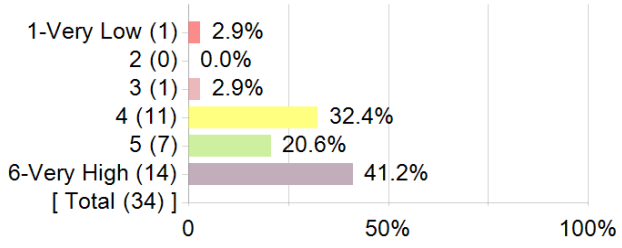


Options	Score	Count	Percentage
1-Very Low	1	1	2.9%
2	2	0	0.0%
3	3	0	0.0%
4	4	9	26.5%
5	5	8	23.5%
6-Very High	6	16	47.1%

Statistics	Value
Response Count	34
Mean	5.09
Median	5.00
Standard Deviation	1.11

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.

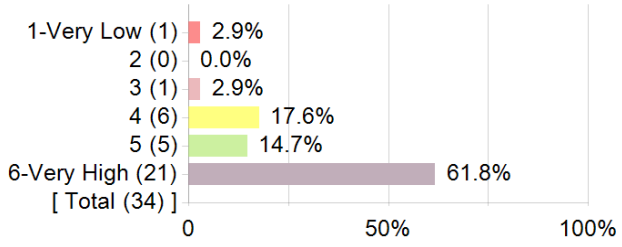


Options	Score	Count	Percentage
1-Very Low	1	1	2.9%
2	2	0	0.0%
3	3	1	2.9%
4	4	11	32.4%
5	5	7	20.6%
6-Very High	6	14	41.2%

Statistics	Value
Response Count	34
Mean	4.91
Median	5.00
Standard Deviation	1.16

Rate the instructor's enthusiasm in teaching this class.

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

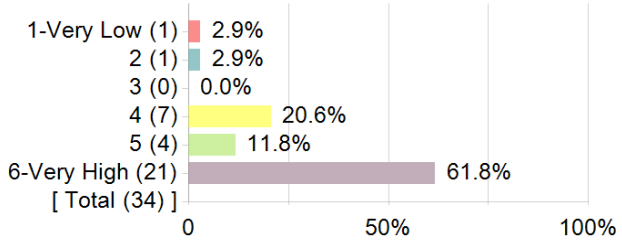


Options	Score	Count	Percentage
1-Very Low	1	1	2.9%
2	2	0	0.0%
3	3	1	2.9%
4	4	6	17.6%
5	5	5	14.7%
6-Very High	6	21	61.8%

Statistics	Value
Response Count	34
Mean	5.26
Median	6.00
Standard Deviation	1.16

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

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

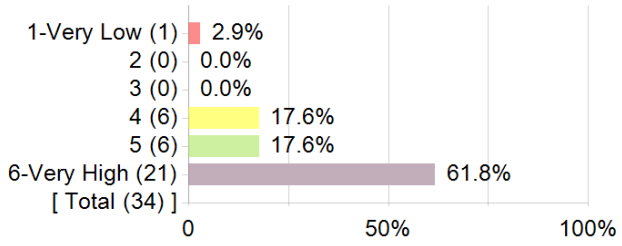


Options	Score	Count	Percentage
1-Very Low	1	1	2.9%
2	2	1	2.9%
3	3	0	0.0%
4	4	7	20.6%
5	5	4	11.8%
6-Very High	6	21	61.8%

Statistics	Value
Response Count	34
Mean	5.21
Median	6.00
Standard Deviation	1.25

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.

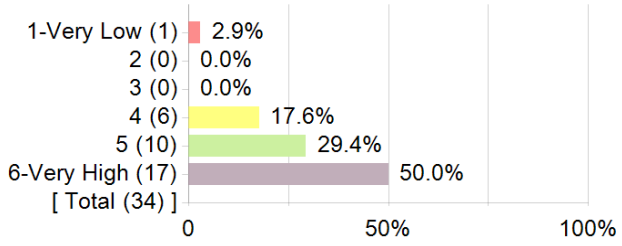


Options	Score	Count	Percentage
1-Very Low	1	1	2.9%
2	2	0	0.0%
3	3	0	0.0%
4	4	6	17.6%
5	5	6	17.6%
6-Very High	6	21	61.8%

Statistics	Value
Response Count	34
Mean	5.32
Median	6.00
Standard Deviation	1.09

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	2.9%
2	2	0	0.0%
3	3	0	0.0%
4	4	6	17.6%
5	5	10	29.4%
6-Very High	6	17	50.0%

Statistics	Value
Response Count	34
Mean	5.21
Median	5.50
Standard Deviation	1.07

OPEN-ENDED QUESTIONS

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

Comments
First time coding. Awesome experience. Throw in the deep end so steep learning curve but by end of quarter I feel comfortable with R.
There was a lot to take in throughout this course. It was like a John Green crash course on Data Science, so don't expect to learn every concept, but you will pick up on the most important things.
Yes, the course presented the material in a clear and concise manner.
I learned a lot about R by default since the course is a primer for how to use R.
Yes. Course was designed very well and stimulated challenging learning
Yes definitely. The flipped classroom style was a good way to learn R. The textbook was really good and the practice tested our understanding of the material.
yes – I like the way it was structured.
I think that the labs weren't really helping me learn that much. Would have liked a test to force myself to actually know and reflect on the material.
This course is a very good introduction to R and general data science techniques/strategies.
Yes! It was very much learning by doing which is helpful. The professors were always encouraging about reaching out. I think the demand for their attention was a lot. They weren't always accessible.
The course didn’t really help me learn. It’s open lab–period structure makes me wonder if I could’ve just learned the material on my own.
Yes I learnt a ton just because there were so many labs and you had to learn b yyourself to do them.
Not in the slightest. This "flipped classroom" nonsense is the most ridiculous thing I've ever heard, especially in a data science class which is very technical. If you don't have any prior coding experience, reading the textbook or even coding along with the book isn't going to be helpful. I can't teach myself something when I literally don't know the first thing about it. The class says no prior coding experience is required, but that is ridiculously wrong. Almost everyone in the class had some prior computer science experience, and the class was extremely inaccessible for me. The textbook solutions are online and easily accessible, and that is the only way I was able to get through this class, so I didn't really learn much.

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

Comments
Great class! Never coded before so there was a steep learning curve but by the end of quarter I feel comfortable with R. I'm excited to see how my skills progress. Class is a good amount of work (1–2 labs a week that take a few hours each). Class is optional but professors and TA's readily help if you go.
First data science class in the sequence was very much intro to R. Its a flipped classroom so there is limited lecture and the rest of the time is working on the labs which are basically homework. Reasonable workload and professors and TAs were always very helpful. They also would work out the questions on the labs in class if you were confused about something or wanted to go over the question. Would recommend the sequence, if you can get in.
1–2 labs per week and open–ended final project Flipped classroom method Class was facilitated and organized well, instructors always were able to answer students' questions
This course definitely challenged me and took me outside of my comfort zone. I appreciated that a lot of the work was meant to be done in groups, and this definitely helped facilitate my over all learning.
The course is rather interesting and well taught. The workload is substantial, although, not overwhelming.
This is a great class to learn about R. Professors Kuyper and Coburn did a great job helping out students, and were very patient with our issues. It seems like a good foundational course for more studies of R and data science.
TAKE THIS CLASS. very well structured (only labs and final project – no exams) and allows you to really learn R through exercises. Coburn/Kuyper co–teach and allow you to learn a lot in R in the process
The professors, particularly Prof. Kuyper, are really amazing. The whole course is focused on students actually learning the material, not on memorization or tests. Super relevant and a great course to take to supplement any major.
This class was a good intro to data science as it teaches you how to use R. The flipped classroom style makes the class not as demanding as it could have. Overall a good class!
I like the way this class is structured. Having class time be time to work on labs was helpful because I could ask questions on the lab without wasting time in lecture. Attendance points are easy points to get.
This is the first course in the new data science minor sequence. It is fast–paced and if you've never used R and/or coded before in any language it will be a steep learning curve but it is most certainly doable. It isn't an easy A by any means but if you read the book and genuinely try to learn the code you will do well. The final project takes forever. Start it early. I did not. That was a mistake.
1–2 weekly labs and textbook readings to learn R for data science. Very useful skills developed in this course. There's a lot of information covered, and you can get a lot out of it with some effort. Class consists of working on the labs and asking questions if needed.
This class is just okay. You learn a lot through the labs, but the flipped classroom isn't that helpful. You have to do reading and reading quizzes at home, and then just work on the lab during class, so essentially you're not actually being taught anything about R or data science, you just have to learn it all yourself, which can be frustrating at times. There are 16 labs over the course of the quarter, so it's definitely a relatively time–intensive class, but the grading is super easy so as long you complete the labs you can get a high A on every one. The final project also wasn't too bad.
I learned a lot! A little nervous about the next class because it's going to get harder, and I'm not 100% sure about how accessible the professors will be to help when I have questions.
I really enjoyed this course. It's a flipped classroom, so class time is devoted to working on the labs rather than having traditional lectures. There is a larger emphasis on learning than on grades. The final project is fun to complete since you can do it on any topic you want. Everyone on the course staff was very nice and helpful. Highly recommend!
This course works like an open–lab period, where there are weekly or bi–weekly assignments to complete, and anything you don’t finish you do at home. The course was also team–taught by the two professors, alternating on different days. While Professor Coburn was very helpful, oftentimes Professor Kuyper would be dismissive of questions, and would chastise students if they were not using proper procedures, rather than instructing on what the proper procedures are. Sometimes, exact questions in assignments were vague, and he would purposely refuse to clarify the question. I’m not sure if taking this class was better than if I had just read the (free) online textbook and practiced on my own—the fact this class takes attendance using a geo–referenced app shows that maybe I wasn’t the only person to think this.
Professors are really helpful. As long as you attend class, follow along, and do the labs, you’ll get an A and also learn the basics of R.
Great class. Professor Kuyper and Coburn are extremely helpful, and the goal of the class is focused on teaching you skills (grading is very relaxed).
This class was great in terms of learning how to use R. However, there were so many labs and took a lot of time to complete. It starts slow but once you get to 2 labs a week in week 4, you have to spend a lot of time.
This course was without a doubt the worst course of my college career. If you already know R or have some prior coding experience, then you should be fine. But if this is your first time doing any computer science, STAY AWAY. With something as technical as data science, it's really hard to just "teach yourself" when you have literally no idea where to begin. Any time I tried to ask for help or didn't understand something, I felt like I was being ridiculed. Not all the professors and TAs were bad and some of them were really quite kind, but the overall quality of this class is certainly not what I would expect for an institution as reputable as Northwestern. I played survival mode in this class and ended up being completely turned off from a course and a field that could've been really interesting. The class and the teaching staff made me feel like I was dumb and incompetent, and that wasn't a great feeling to be wrestling with all quarter. The one positive thing I can say about this class is that it did give me a chance to learn and get somewhat familiar with R. However, I'm aware that there are classes in other departments at Northwestern that teach R but don't make you feel stupid in the process. If anyone without any computer science experience is considering taking this class, I would STRONGLY encourage them to look at another option, especially if you aren't a stat major or a data science minor.

What are the primary teaching strengths of the instructor?

Comments
So kind and helpful. Would always sit down next to me and help me work through my code when I ran into bugs or had questions.
Professor Coburn seems really passionate and excited about Data Science. She definitely wanted to help answer student's questions.
Professor Coburn is an exceptional instructor who is genuinely interested in helpIn students learn the material.
Eager to help, provided great tips, and was enthusiastic about the material.
friendly and always willing to help outside of class
Very nice and helpful
She's kind and open to questions.
Very cheery and approachable. I felt like any question was valid. Made Data Science seem more friendly.
Passion for the subject.
Great at answering questions patiently and helpfully.
Very knowledgeable about the content.
She was also available and very helpful.
Super friendly and helpful. Always willing to troubleshoot/answer questions about code.
Katie was so nice, and was one of the people who made this class tolerable for me. I still don't love the flipped classroom idea, but any time I talked to her she was helpful. She was really nice and kind–hearted. I appreciated her warmth as a human being in comparison to some of the other teaching staff members.

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

Comments
She's great! First time teaching at NU so I imagine it will only get better.
A lot of times she was unable to answer complicated questions in class. I also reached out to her several times over email for help on the final project and she never responded. Definitely more communication and dedication to the course outside of class would have been much appreciated.
None
Unclear if a lot of students understood the fundamentals well.
n/a. coburn is great!
Not strict enough
None.
Seemed a little out of it sometimes. Too goofy at times.
She could never answer my questions about the lab. I don't understand how she was the instructor for this class, because she never seemed to have any idea how to do the labs. It was excruciating watching her code through the labs during class because it took her SO LONG to finish every problem, to the point where it wasn't even helpful. Incredibly frustrating, but the class was way more enjoyable when Arend taught it.
There were not a lot of ways to get the information. There's only reading the textbook, doing the labs, and asking the professors. It makes me feel uncertain about being able to succeed in the future.
It would have been nice to have more OH options – i had class during the only one scheduled and thus couldn't make it.

Can you offer suggestions for improvement?

Comments
Consider the classroom environment. Lots of independent work. Felt a bit study–hall ish.
Respond to emails and have lectures/ practice problems to go over at the beginning of each class.
None
Inverted classroom may be a smart idea, but it felt like everyone needed a primer at least on basic EDA functions.
reduce the length of the labs, as some seemed very repetitive and unnecessarily long
None
Nope.
See above.
You were great! I think som material was outdated and would make sure the kinks are hammered out.
See above.
I have suggestions for improvement, but they are not for Katie. These are for Prof. Kuyper. Just to be clear, I think Katie is amazing and she did the best she could with this horribly designed class. I'm disappointed that I don't have a chance to rate my time working with him, because we did spend time with both professors and TAs alternating between our classes. Honestly, Prof. Kuyper was part of what made this class so bad for me. The way he speaks in class and office hours is very casual, candid, and often crude. I'm sure many find this funny, and I probably would too, if I wasn't the type of person who was on the receiving end of these side comments. He one time was talking about coding etiquette and said something along the lines of "writing your code like this is bullshit. If you're doing this, you're being dumb." I don't even remember what it was, but it was something that I knew I was doing. Aside from the fact that I felt targeted and ridiculed for not knowing something that I NEVER SHOULD'VE BEEN EXPECTED TO KNOW (as this class explicitly states that no prior data science experience is necessary), he also wouldn't explain how to do it the correct way, so I was stuck not knowing what I was even doing wrong, and just feeling bad about myself. If I asked him about it, he would say it's something you should know by now. Additionally, I one time spoke to him because I had gotten like a 40% on one of the homework assignments because of some formatting error. The problem is, the labs were graded so far after the submission that by the time I got this grade on one lab, I had already submitted like 6 other labs using the same technique. The expectations for labs were never outlined anywhere online, and if he said something in class on the first day, I couldn't keep track of it because I didn't know what anything was because it was DAY ONE in a class I know nothing about. The class also moved so fast that there was never any time for me to catch up and try to actually learn the previous material, because I was already drowning in another week's worth of assignments. Having the two professors go back and forth between the two sections wasn't helpful. For future iterations of this course, I think it would be better to have two completely different sections: one for complete beginners, and one for people who already have familiarity with R or computer science. That way, the people who already know this stuff could enjoy the benefits of the flipped classroom collaborative space, while the beginners could enjoy actually being taught and hopefully get something out of the class other than a lowered self–esteem and feelings of inadequacy.
More lecture and explanation of the topics before class instead of just working on the labs