BOSTON UNIVERSITY

CAS, CDS DS, EE 508, 537 A1: 988315(Data Science for Conservation Decisions)

Christoph Nolte
Fall 2023

This course-based report contains an overall summary of scaled questions, as well as more detailed analyses of scaled and open-ended questions.

Please note that the textual analytics sections of this report (including the word cloud) are available only as a tool for the individual instructor and do not appear on any report produced for or by a chair or dean. Note, too, that we are piloting this specific feature of Blue reports and welcome feedback on whether we should continue to make use of it.

Response Rate

Raters	Student
Responded	11
Invited	13
Response Ratio	84.62%

Summary

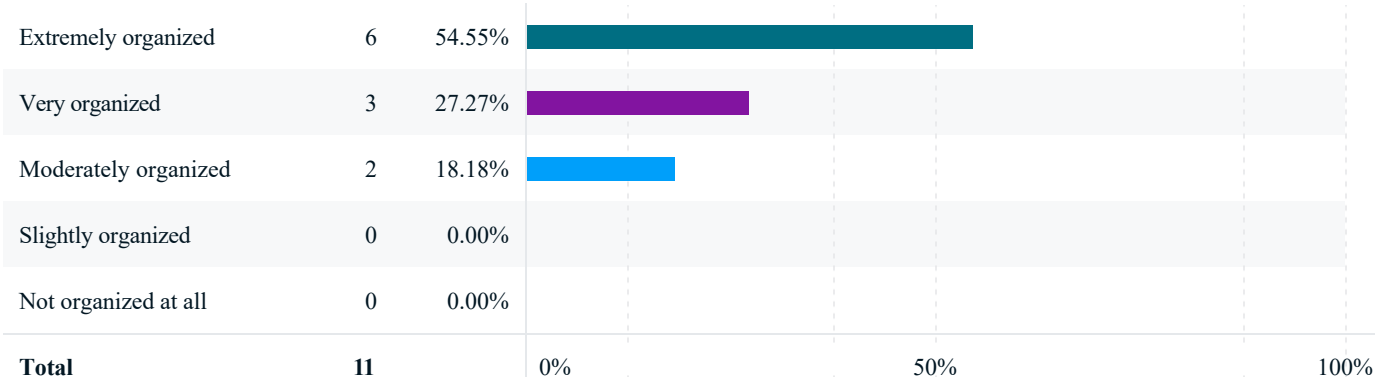
Competency	Average
How organized did the course seem to you?	4.36
How well were the course learning objectives communicated?	4.55
How well did the course fulfill its stated learning objectives?	4.64
How much did you learn from this course?	4.82
How well did the course foster a sense of belonging and an inclusive climate that was supportive of learning for all students?	4.73
Total Score	4.62

University-Wide Student Course Feedback

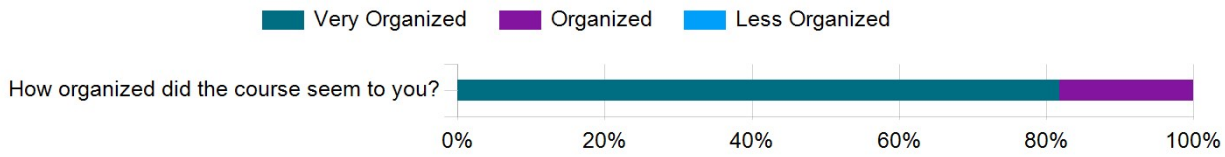
Course Content and Instruction

How organized did the course seem to you?

How organized did the course seem to you?



Statistics	Value
Response Count	11
Mean	4.36
Median	5.00
Mode	5
Standard Deviation	0.81



How well were the course learning objectives communicated?

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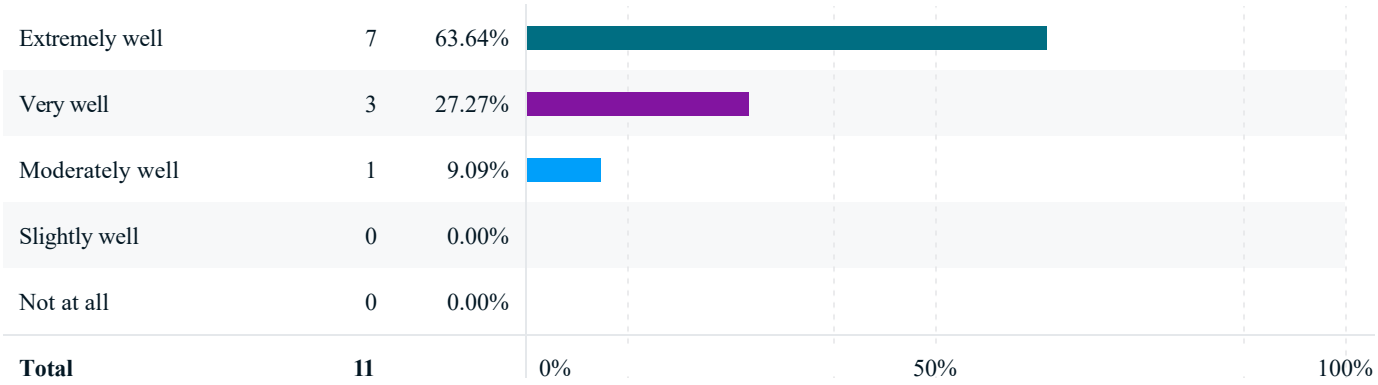
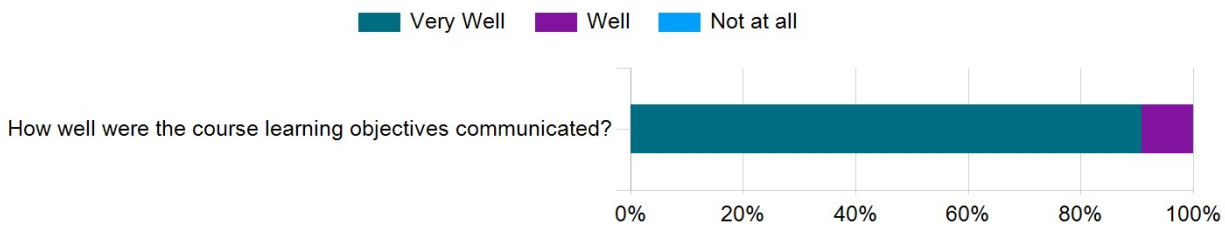


Statistics	Value
Response Count	11
Mean	4.55
Median	5.00
Mode	5
Standard Deviation	0.69



How well did the course fulfill its stated learning objectives?

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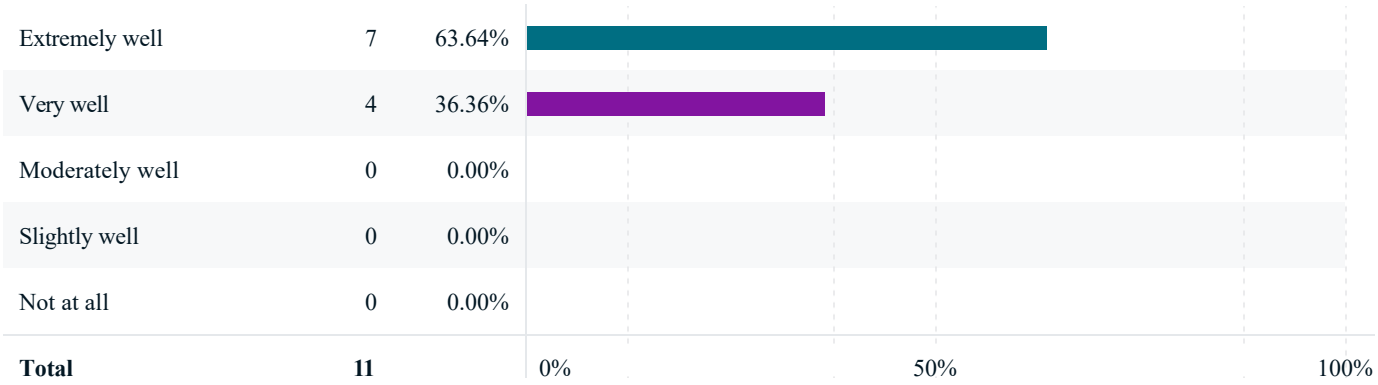
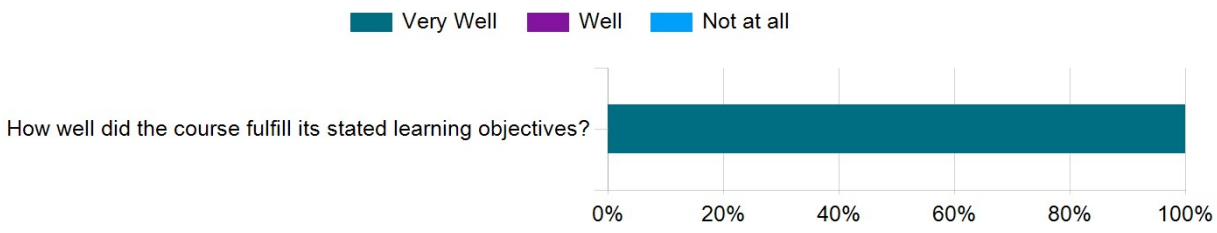
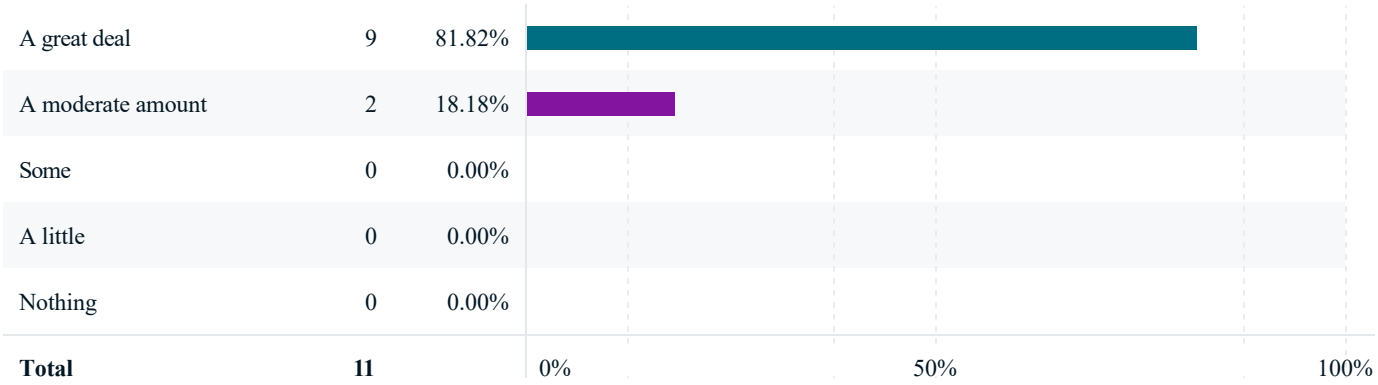


Statistics	Value
Response Count	11
Mean	4.64
Median	5.00
Mode	5
Standard Deviation	0.50

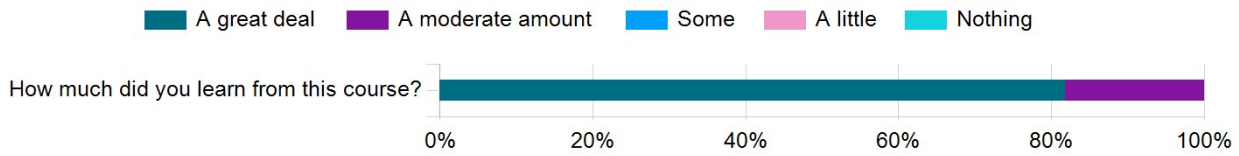


How much did you learn from this course?

How much did you learn from this course?

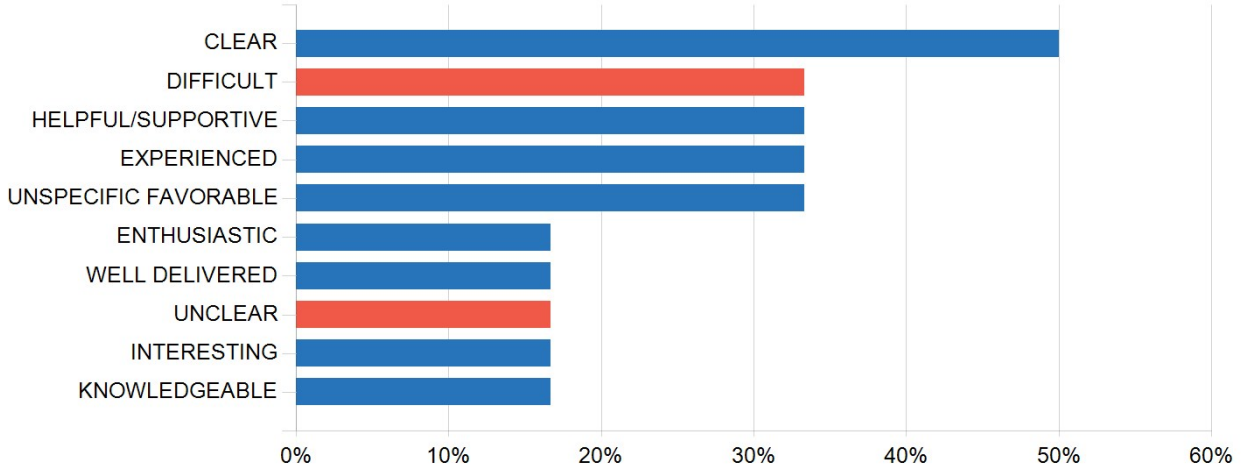


Statistics	Value
Response Count	11
Mean	4.82
Median	5.00
Mode	5
Standard Deviation	0.40



Please explain your response.

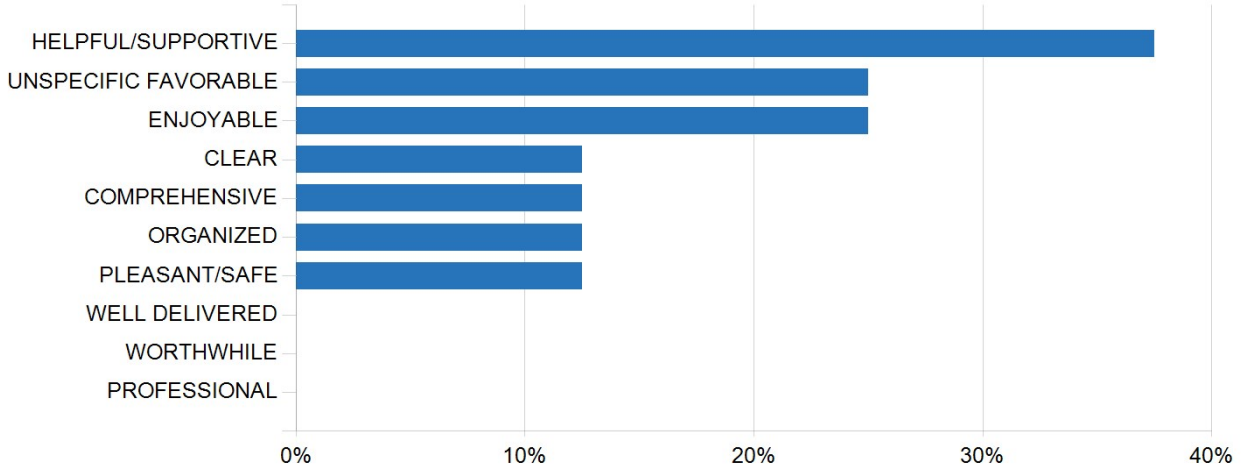
Comments
Course design follows decision framework, very clear explanations
Content is difficult but Christoph is very good at teaching it in a digestible manner even to students who aren't experienced with the material.
Professor Nolte is extremely knowledgeable and passionate about his craft.
Professor Nolte had a very clear schedule on the syllabus and stayed in constant communication with us about expectations and suggestions; he sent us helpful reminder emails with info about additional resources, office hrs, etc., which was very appreciated. We learned a helluva lot in this class, each lab covered a different topic that could be very helpful for real life analysis (in a job). The machine learning and the Marxan labs were especially interesting to me because they are actually used in conservation.
This was such a fantastic course. This is my second semester TA'ing Data Science in R and I dearly wish I could have experienced your course first. The processes, materials, and organization of your course ought to represent the gold standard!
I often felt confused about geodata processing tools like GDLA, Geopandas, and Rasterio. They seemed to offer similar functions, leaving me unsure about when to use each one and what set them apart. The labs in this class really helped clear up most of my questions about that. Also, as a student without a background in social science or economics, I found it hard to grasp some core theories during lectures. But when I got into the lab and followed the step–by–step process, things started to click. The little explanations and questions the professor added to the lab manual along the way helped me connect what I was doing in the lab to the theories we learned in class. I also liked that the professor introduced new Python functions and packages, giving us options to choose from and explaining their pros and cons. It really expanded my understanding and skills.



Attributes - t&I [No. of comments]	Overall [6]
CLEAR	50.00%
DIFFICULT	33.33%
HELPFUL/SUPPORTIVE	33.33%
EXPERIENCED	33.33%
UNSPECIFIC FAVORABLE	33.33%
ENTHUSIASTIC	16.67%
WELL DELIVERED	16.67%
UNCLEAR	16.67%
INTERESTING	16.67%
KNOWLEDGEABLE	16.67%

What were the most valuable aspects of the course?

Comments
theories and logics behind techniques
Professor Nolte explains every thing and provides detailed instructions (for both programming code and theoretical knowledge) really well so that students without background knowledge in coding can understand everything and enjoy the course.
Christoph's ability to help students outside of class time: piazza and office hours
Professor Nolte always relates course material to real–world scenarios, and makes it clear which tools are used at the highest levels of conservation science.
The use of free, cross–platform applications; the use of Python (the upcoming dominant computer language as I have heard).
Working with zonal statistics, learning more about mapping, and getting even more comfortable with Python.
Flexibility wth course pace and allowance for time to learn from your mistakes. Also great system for feedback on assignments
I liked the way that the class was organized, from identifying the problems to impact analysis. It helped me to follow the thought process that goes into conservation and the process. Also, I appreciate the time spent on lab discussions with frequent revisits.



Attributes - t&l [No. of comments]	Overall [8]
HELPFUL/SUPPORTIVE	37.50%
UNSPECIFIC FAVORABLE	25.00%
ENJOYABLE	25.00%
CLEAR	12.50%
COMPREHENSIVE	12.50%
ORGANIZED	12.50%
PLEASANT/SAFE	12.50%
WELL DELIVERED	0.00%
WORTHWHILE	0.00%
PROFESSIONAL	0.00%

How well did the course foster a sense of belonging and an inclusive climate that was supportive of learning for all students?

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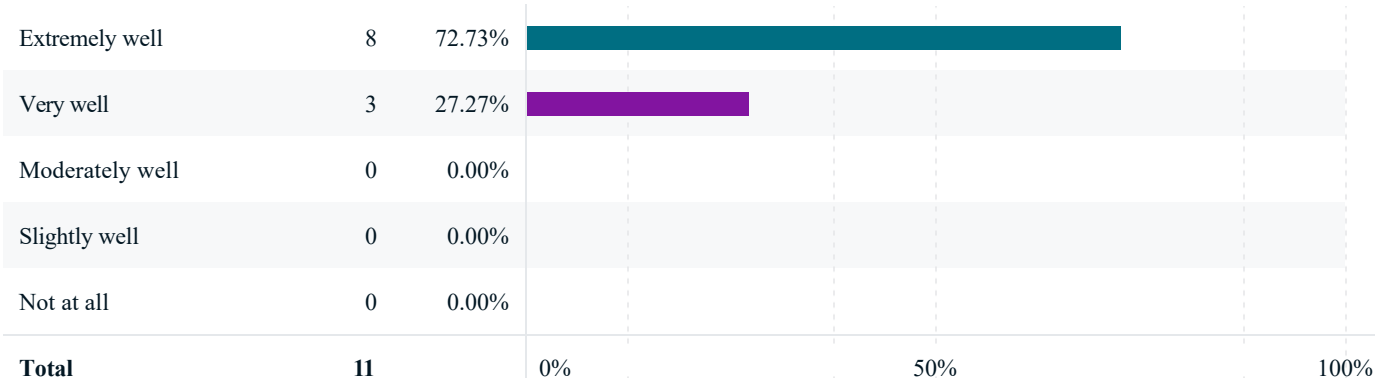
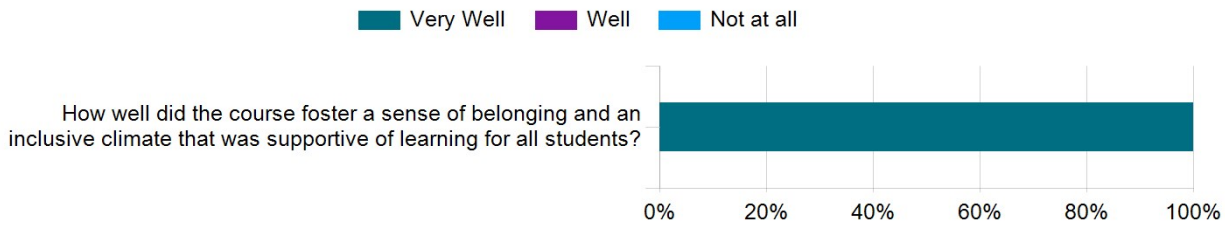


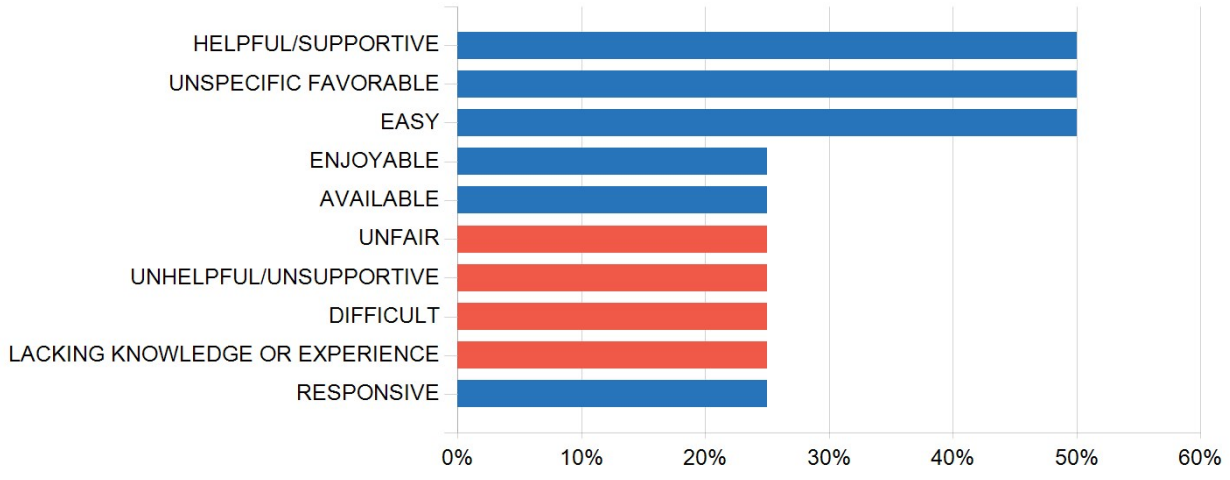
Statistics	Value
Response Count	11
Mean	4.73
Median	5.00
Mode	5
Standard Deviation	0.47

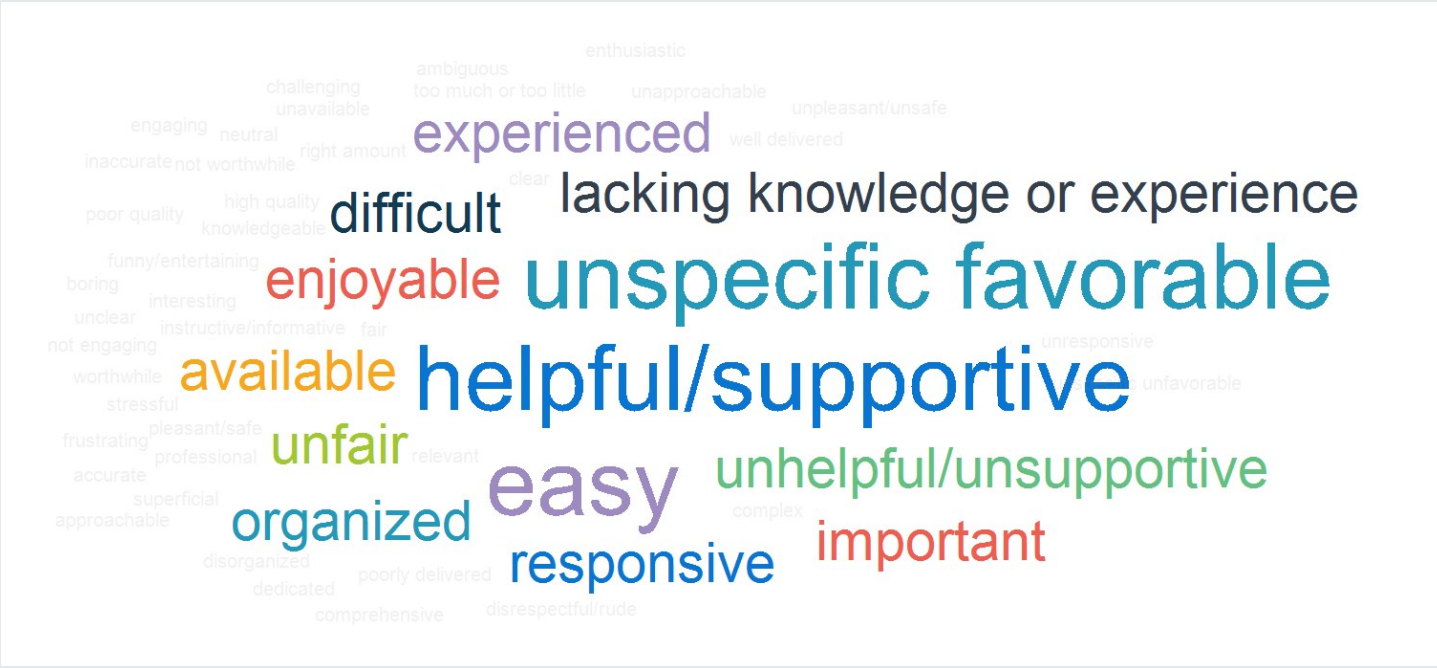


Additional Feedback

If you have additional comments about this course, please provide them below.

Comments
Very well organized course but if there was one thing I would change it would be incorporating some group work. For each lab, there was at least one or two lectures where Christoph would display his code on the screen and walk us through it. This was extremely helpful, but another approach could be to let us try doing the block of code ourselves in small groups and then walking us through it. A simple change, but one that may be helpful to students that aren't experienced in coding. It was always helpful when Christoph made us talk for 2–3 minutes at the beginning of class to see if we had problems or questions.
I really appreciate that Professor Nolte made himself available during class and office hours for answering questions, and checked in with us almost every lecture about any questions. He was also very understanding when people asked him to repeat an explanation (some professors visibly seem upset when this happens, but I appreciate that Professor Nolte doesn't assume any reason why people didn't catch / understand his explanation the first time around. Some people have ADHD or OCD and it's already hard for them to be in class). I also appreciate that he explains the concepts behind the algorithms and code we write in a very easy–to–understand manner, and his labs don't have "traps" where you realize you must change something without him giving you a heads–up. The sneak–peek of expected results is also pretty helpful for staying on track, too.
Thank you Christoph! Good luck!
I used to be quite judgmental about conservation projects, thinking they were mostly political or NGO–driven schemes. I had no clue about the depth of strategic planning, advanced data science, and modeling involved in these initiatives. This class truly opened my eyes to that reality. I understand that not every conservation project meets the high standards we discussed, but it's great to learn about the efforts and possibilities out there. Overall, this was a very productive class for me. Thank you so much for teaching this class!



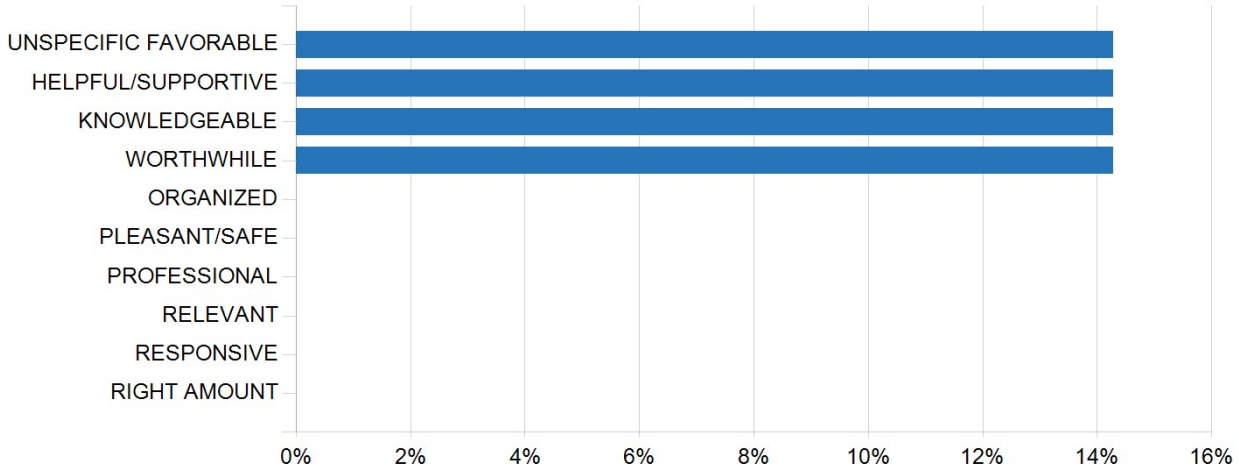


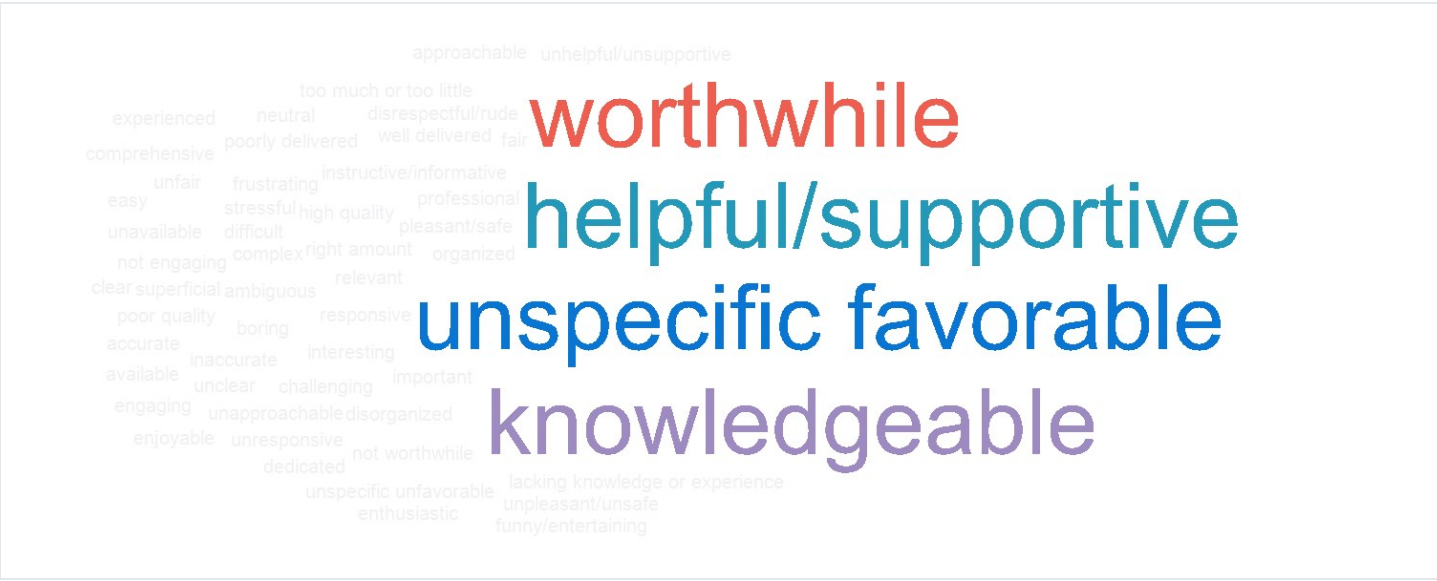
Attributes - t&l [No. of comments]	Overall [4]
HELPFUL/SUPPORTIVE	50.00%
UNSPECIFIC FAVORABLE	50.00%
EASY	50.00%
ENJOYABLE	25.00%
AVAILABLE	25.00%
UNFAIR	25.00%
UNHELPFUL/UNSUPPORTIVE	25.00%
DIFFICULT	25.00%
LACKING KNOWLEDGE OR EXPERIENCE	25.00%
RESPONSIVE	25.00%

Student learning

What skills or knowledge did you learn or improve in this course?

Comments
data analytics and visualization
python, r, conservation policy
I learned basic data analysis tips, QGIS, Marxan, python, pandas, R, statistical matching, and more.
Learning how to use Python (boot camp at the beginning was thoughtful and helpful!), using R, MACHINE LEARNING, MARXAN, integrating geospatial data into analysis with Python (ha, in your face ArcGIS Pro)! This was a really great class.
Python, Mapping, Zonal Statistics, and how we understand conservation through data.
Coding in Python for ecological geospatial analysis
I improved my Python skills related to geospatial data processing in addition to Maxran and Matching R package, which were totally new to me.



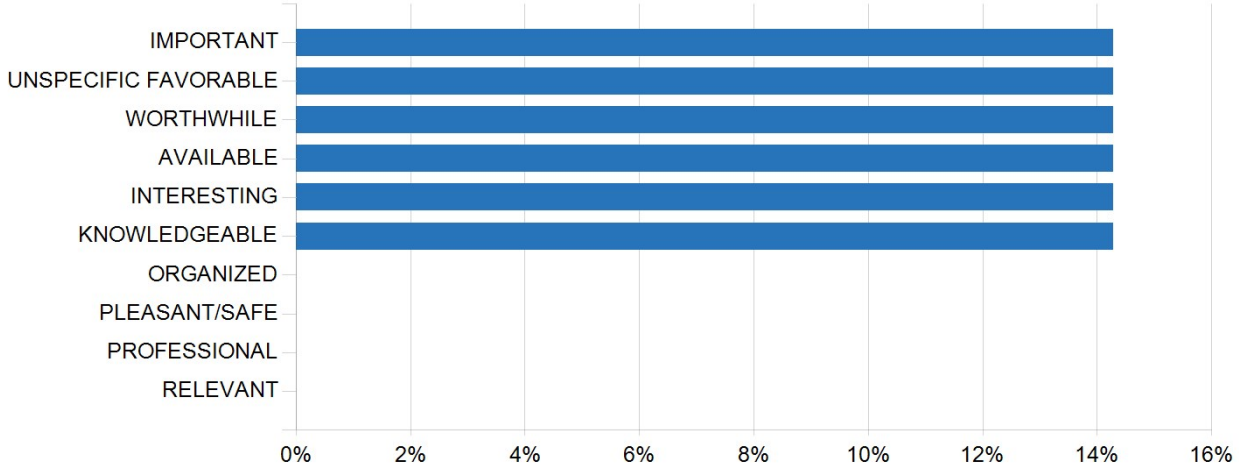


Attributes - t&I [No. of comments]	Overall [7]
UNSPECIFIC FAVORABLE	14.29%
HELPFUL/SUPPORTIVE	14.29%
KNOWLEDGEABLE	14.29%
WORTHWHILE	14.29%
ORGANIZED	0.00%
PLEASANT/SAFE	0.00%
PROFESSIONAL	0.00%
RELEVANT	0.00%
RESPONSIVE	0.00%
RIGHT AMOUNT	0.00%

For Students

What advice would you give to students considering taking this course in the future?

Comments
Project time management on the student's end is important since professor has nonbinding deadlines
Christoph is very useful, so you should utilize his expertise. he is both excellent at what he does and teaching it in a digestible manner.
Start labs early!
Start early on labs so you can get feedback. The lab manual speaks truth, so there are no "traps" you need to worry about. Make a friend or two in the class so you can compare code and results, and help each other see where you went wrong.
Make a point of consistently coding and working on your labs almost everyday!
Start on labs as early as possible, ask a lot of questions
For those interested in conservation approaches or geospatial data processing, this class is ideal. I think closely following the labs and taking advantage of available office hours is the key to maximise the outcome in this class.



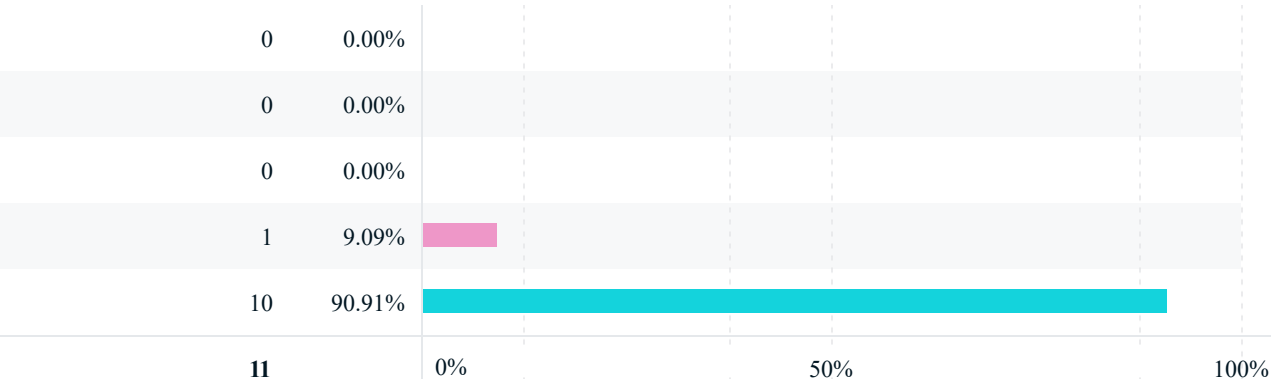
Attributes - t&l [No. of comments]	Overall [7]
IMPORTANT	14.29%
UNSPECIFIC FAVORABLE	14.29%
WORTHWHILE	14.29%
AVAILABLE	14.29%
INTERESTING	14.29%
KNOWLEDGEABLE	14.29%
ORGANIZED	0.00%
PLEASANT/SAFE	0.00%
PROFESSIONAL	0.00%
RELEVANT	0.00%

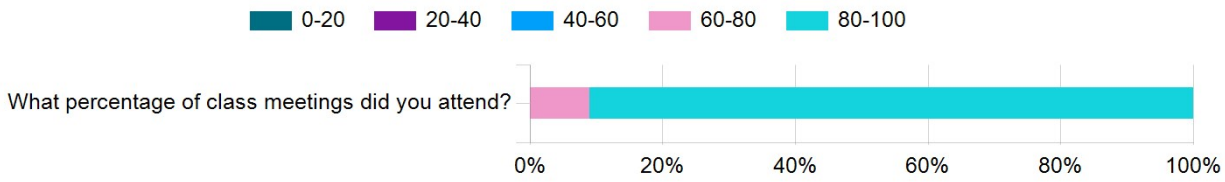
Student effort

What percentage of class meetings did you attend?

What percentage of class meetings did you attend?

0-20	0	0.00%
20-40	0	0.00%
40-60	0	0.00%
60-80	1	9.09%
80-100	10	90.91%
Total	**11**	

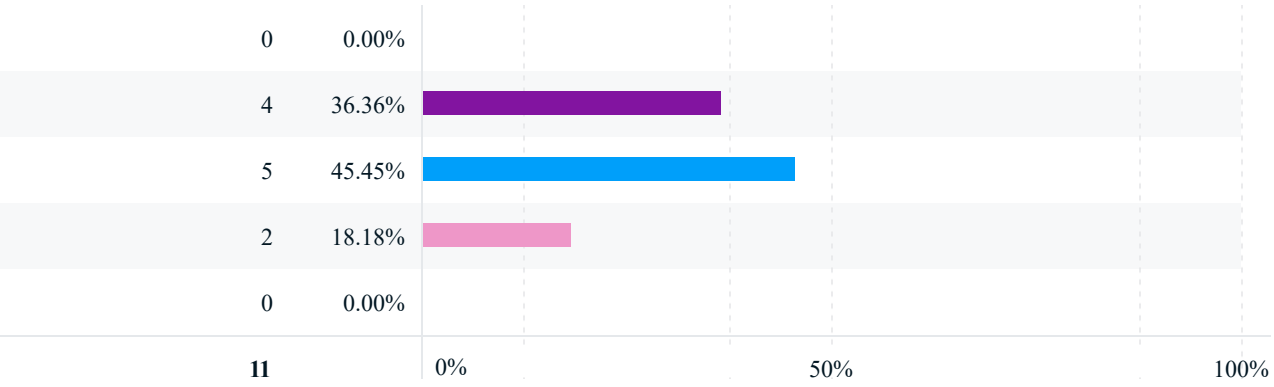


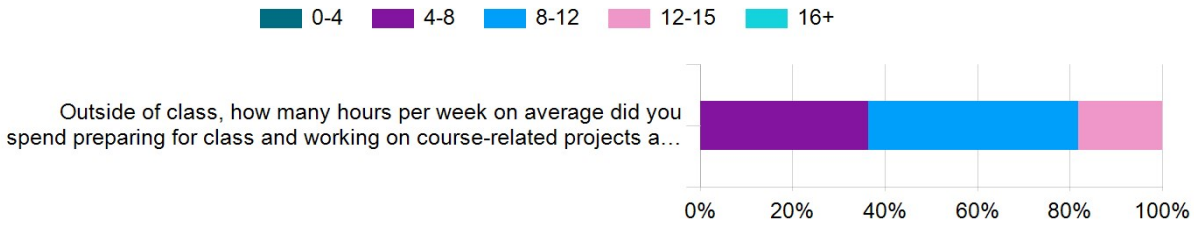


Outside of class, how many hours per week on average did you spend preparing for class and working on course-related projects and assignments?

Outside of class, how many hours per week on average did you spend preparing for class and working on course-related projects and assignments?

0 to 4	0	0.00%
4 to 8	4	36.36%
8 to 12	5	45.45%
12 to 15	2	18.18%
16+	0	0.00%
Total	**11**	




0-4
4-8
8-12
12-15
16+
Outside of class, how many hours per week on average did you spend preparing for class and working on course-related projects a…
0%
20%
40%
60%
80%
100%

Faculty of Computing & Data Sciences Questions

To what degree did you see material in previous classes that prepared you for this class?

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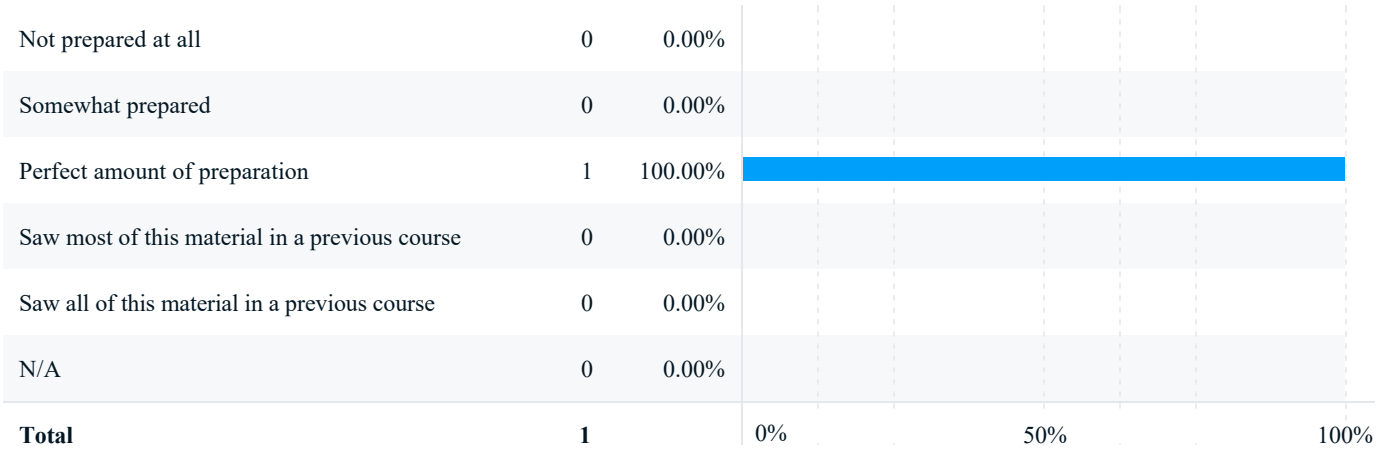
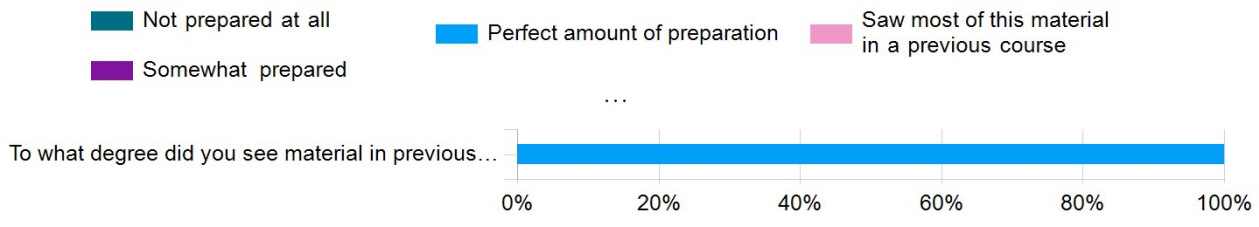


Statistics	Value
Response Count	1
Mean	3.00
Median	3.00
Mode	3
Standard Deviation	N/A

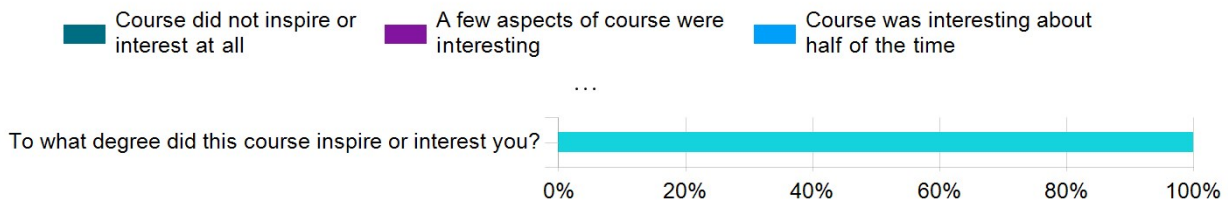


To what degree did this course inspire or interest you?

To what degree did this course inspire or interest you?

Course did not inspire or interest at all	0	0.00%
A few aspects of course were interesting	0	0.00%
Course was interesting about half of the time	0	0.00%
Course was interesting most of the time	0	0.00%
Course strongly motivated me to learn more or do more with the material	1	100.00%
N/A	0	0.00%
Total	**1**	

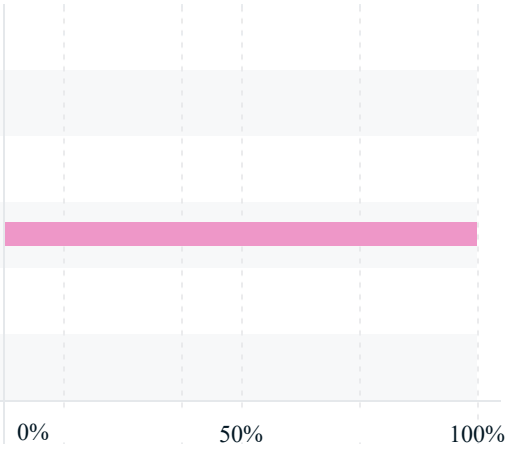
Statistics	Value
Response Count	1
Mean	5.00
Median	5.00
Mode	5
Standard Deviation	N/A



To what degree were you able to get help with this course when you needed it?

To what degree were you able to get help with this course when you needed it?

No help was offered outside lecture	0	0.00%
Little help was offered outside lecture	0	0.00%
A typical amount and quality of help was available	0	0.00%
The amount and quality of help available was above typical	1	100.00%
The amount and quality of help available was exceptional	0	0.00%
N/A	0	0.00%
Total	**1**	



Statistics	Value
Response Count	1
Mean	4.00
Median	4.00
Mode	4
Standard Deviation	N/A