Report Comments

Opinions expressed in these evaluations are those of students enrolled in the specific course and do not represent the University.

What are the most important things that you learned in this course? Please reflect on the knowledge and skills you gained.

Comments
How to write proofs. How to present in front of the class.
How to write proofs
Excellent course. Really rigorous. Interesting. Made a lot of progress.
How to think and write proofs
From this class, I've gained significant knowledge about proof writing and formats, and I think that I gained skills regarding mathematical self–sufficiency.
The main skill I gained in this class is strict logical thinking and its application to proofs. While the content of the class does cover building a connected continuum, the main skill I have gained from this class is basic proof writing.
Formal proof–writing in math, basics of calculus and real analysis, using LaTeX, amongst others.
How to tackle mathematical proofs
The basis of mathematics! We don't actually learn any calculus as we know it this quarter, but build up our basic understanding of mathematics. Also, I learnt how to do proof–based math and the various techniques that entails.
I learned how to build the real numbers up from the naturals. This included introductory set theory, and topology. I also learned how to use latex and write/critique proofs.
I really liked how this class teaches math in a very different way than I've seen before. Approaching math from such an abstract and theoretical angle is a really fun and interesting challenge, it is a lot more satisfying than high school calculus where you practice being a human calculator. I think this class has helped me to develop new critical thinking skills and I've also learned about how to work hard and be resilient because the class was such a steep learning curve the first few weeks.

Describe how aspects of this course (lectures, discussions, labs, assignments, etc.) contributed to your learning.

Comments
Watching/understanding others' presentations was the main way we learned in class. Preparing proofs before class gave us practice that we applied for the presentations we signed up to present.
The IBL is great. Much less stressful than p–sets and I felt I learned at least as well if not better. It's even fun
IBL class presentations are very very good. great format.
Office hours were super helpful for understanding concepts and answering questions. Class discussions were essential and very interesting. Journals were useful for solidifying my learning.
Sometimes the rather lengthy journals were a bit much work, though they were helpful in developing a rudimentary understanding of formalized mathematics. The class discussions have been helpful, and I feel like I've learned a lot from my classmates.
The in class discussion are the very essence of this class. The quality of the course will rely on the quality of your classmates. In my case, I was very lucky and had amazingly smart and dedicated classmates that made every class extremely good.
Class discussions were immensely helpful, with lots of student participation and the professor guiding the class very well. The assignments were, although time–consuming, very rewarding and deeply interesting.
The discussions and scripts forced me to understand all the content on a very deep level.
Presentations were the unique aspect of this course. Every problem in a journal is presented in class, creating a group discussion environment.
The classes made sure I understood all the proofs I had sketched out beforehand. I was able to see other (often better) ways of proving theorems or proofs I wasn't able to figure out on my own. The office hours were also very much worth going to both for the enrichment of being able to talk to people about the math and also getting extra help if i needed any on specific problems.
I like the IBL format, it's fun hearing classmates present and also presenting myself. It is interesting doing the homework first before class trying to figure it out on my own and then hearing other people's solutions, but it is sometimes kind of frustrating or overwhelming. I'm really grateful that Professor Propp and our TA Jake put lots of effort into office hours and giving thorough feedback on assignments, that helped me a lot.

Please respond to the following:

	Mean	Median	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
This course challenged me intellectually.	4.80	5.00	0.00%	0.00%	0.00%	20.00%	80.00%
I understood the purpose of this course and what I was expected to gain from it.	4.80	5.00	0.00%	0.00%	0.00%	20.00%	80.00%
I understood the standards for success on assignments.	4.70	5.00	0.00%	0.00%	0.00%	30.00%	70.00%
Class time enhanced my ability to succeed in graded assignments.	4.70	5.00	0.00%	0.00%	0.00%	30.00%	70.00%
I received feedback on my performance that helped me improve my subsequent work.	4.90	5.00	0.00%	0.00%	0.00%	10.00%	90.00%
My work was evaluated fairly.	4.80	5.00	0.00%	0.00%	0.00%	20.00%	80.00%
I felt respected in this class.	4.70	5.00	0.00%	0.00%	10.00%	10.00%	80.00%
Overall, this was an excellent course.	4.80	5.00	0.00%	0.00%	0.00%	20.00%	80.00%

Additional comments about the course:

Comments
This course is not impossible, but extremely difficult if you don't have prior proof writing experience. Prepare for a significant time commitment.
This class is great if you enjoy abstract math!
This is a very, very difficult class. If you love math, absolutely take this class. If you don't, find something else.
The most math–y math course!
This course is very individual driven: the professor isn't 'teaching' in the traditional sense, but only there to help you along the way. Would highly recommend if you can/ want to be able to think about mathematics yourself, and not just plug in formulas and solve equations.
I wish there was a similar course to 161 but with a slower pace because it took me a while to comprehend the subject matter so I often felt like I was falling behind. However if you want to learn math, this class is much better than 150s or 180s for getting a feel for what "real math" is like

I would recommend this course to:

	No	Yes
Highly-motivated and well-prepared students	0.00%	100.00%
Anyone interested in the topic	45.45%	54.55%

Thinking about your time in the class, what aspect of the instructor's teaching contributed most to your learning?

Comments
Office hours were super helpful for getting help and seemed to be the only way to succeed if you couldn't figure something out yourself.
Well, it's an IBL class so the professor doesn't do as much as in some other classes, but he was great. He was very nice and helpful whenever questions arose.
Office hours
Office hours were so helpful
The professor was very kind and helpful in providing feedback and criticism. He was also very helpful and his office hours provided a good window into what was expected of me, and what I can do to succeed.
Feedback on hand–ins was very helpful and solutions posted by the professor were always helpful in resolving questions I had. The professor was always available to answer questions at pretty much any time, and always did so thoughtfully.
He was very good at creating a balance between interactivity and the more traditional classroom setup that ensured that we learned a lot and didn't get sidetracked, but also got to ask our doubts and test our understanding.
When professor Propp tried to guide the discussions rather than tell us the answer really pushed us to understand the core concepts we were learning of
Whenever Professor would present pictures after a presented proof and office hours. Office hours were extremely available and so so helpful.
By moderating the class discussion and by being very responsive to questions during office hours.
I really liked going to office hours to work with him in small groups or one on one. He is really good at explaining concepts clearly and making it easier to understand.

What could the instructor modify to help you learn more?

Comments
He started providing more instruction in the second half of the quarter which definitely helped provide a basis for the proofs that so that everyone was on the same page.
Not much!
Not much
Some more guidance at the beginning of the course would've been helpful. It took me a while to get my bearings and understand the expectations of the class as well as what it means to write a proof.
I think perhaps more direct instruction and more office hours would be helpful my learning.
Not much, he was great.
Honestly, nothing – he was great!
Sometimes I feel there exists a disconnect between Professor's math knowledge and how much he thinks we know. Professor is clearly extremely knowledgeable about the subject, but sometimes it could help if he simplified things for us. For example, presenting the picture before and not after the proof would help me to follow the proof a lot better. Further, an explanation in words of the mathematical notation he explains in would be very helpful too.
Nothing
I feel like there's a really big difficulty spike early on in the class or around the midpoint of the class (the end of Script 1), I wish we could go slower on that content, although I understand that we have a lot to cover in a short time. I also would have liked more of a feel for what proofs should look like (ie genre conventions etc) early on, like maybe seeing a few more example proofs or a list of guidelines/tips because it was hard figuring out what was expected on the first couple assignments (Jake's solid feedback and Prof Propp's example proofs helped a lot though and by now I think I have the hang of it). Overall Professor Propp really put his heart into helping me learn, he is amazing!!

The Instructor . . .

	Mean	Median	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
Organized the course clearly.	4.91	5.00	0.00%	0.00%	0.00%	9.09%	90.91%	0.00%
Presented lectures that enhanced your understanding.	4.44	5.00	0.00%	0.00%	18.18%	9.09%	54.55%	18.18%
Facilitated discussions that were engaging and useful.	4.82	5.00	0.00%	0.00%	0.00%	18.18%	81.82%	0.00%
Stimulated your interest in the core ideas of the course.	4.82	5.00	0.00%	0.00%	0.00%	18.18%	81.82%	0.00%
Challenged you to learn.	5.00	5.00	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
Helped you gain significant learning from the course content.	4.91	5.00	0.00%	0.00%	0.00%	9.09%	90.91%	0.00%
Was available and helpful outside of class.	5.00	5.00	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
Motivated you to think independently.	4.82	5.00	0.00%	0.00%	0.00%	18.18%	81.82%	0.00%
Worked to create an inclusive and welcoming learning environment.	4.82	5.00	0.00%	0.00%	0.00%	18.18%	81.82%	0.00%
Overall, this instructor made a significant contribution to your learning.	5.00	5.00	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%

Please include the name of the TA/CA/Intern you are evaluating. What aspects of the TA's teaching contributed most to your learning? What could the TA modify to help you learn more? Please include any additional feedback for the TA/CA/Intern.

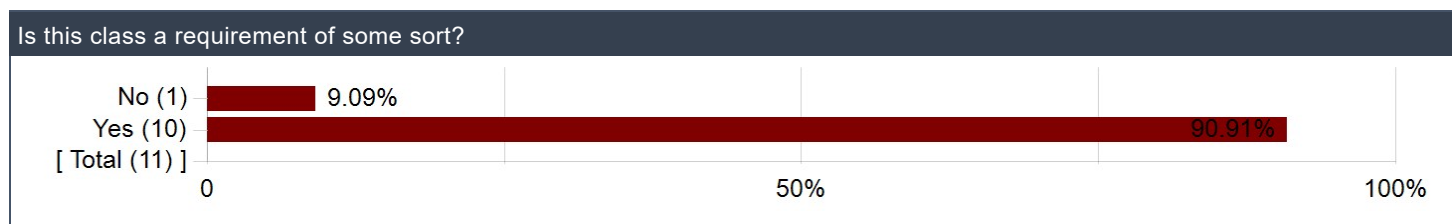| Comments |
|---|
| Jake Zummo. Jake provided in–depth comments on our journals and that feedback was super helpful as we learned to write proofs. |
| Jake. Great guy. Very helpful. |
| Jake |
| Jake Zummo. The TA's office hours were helpful in getting some clarity after class discussion. I think sometimes some elaboration on assignments, specifically why points were marked off, would be helpful. |
| Jaze Zummo |
| Jake Zummo. His office hours sessions were really comprehensive and helpful and his feedback on all the assignments was concise and gave me great guidance on how to improve. |
| Jake's feedback on assignments was the reason I was actually able to progress my learning in class and meet the standards that we required of me. He is overall just really easy going and approachable if you have any questions. |
| Jake Zummo |
| Jake |
| Jake |

The TA/CA or Intern. . .

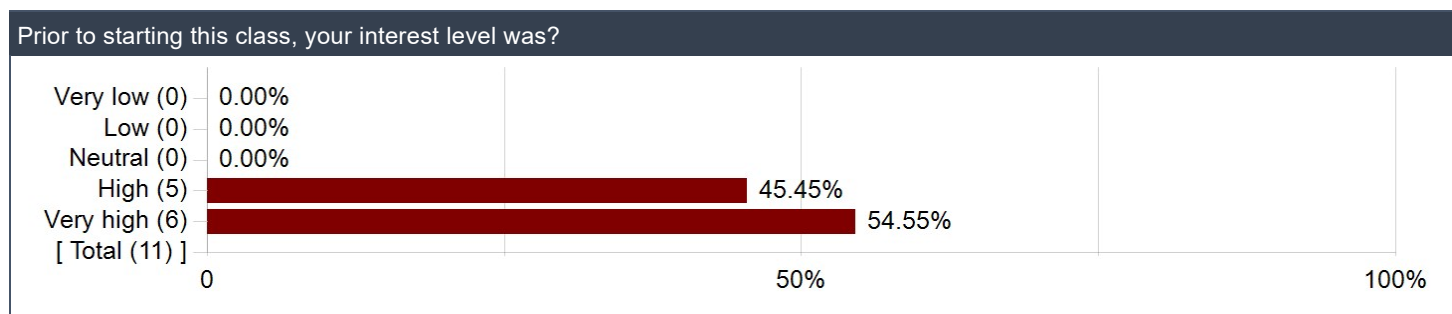|	Mean	Median	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
Facilitated discussions that supported your learning.	4.57	5.00	0.00%	0.00%	0.00%	30.00%	40.00%	30.00%
Gave you useful feedback on your work.	4.70	5.00	0.00%	0.00%	10.00%	10.00%	80.00%	0.00%
Stimulated your interest in the core ideas of the class.	4.22	4.00	0.00%	0.00%	20.00%	30.00%	40.00%	10.00%
Challenged you to learn.	4.60	5.00	0.00%	0.00%	0.00%	40.00%	60.00%	0.00%
Helped you succeed in the class.	4.50	4.50	0.00%	0.00%	0.00%	50.00%	50.00%	0.00%
Was available and helpful outside of class.	4.60	5.00	0.00%	0.00%	0.00%	40.00%	60.00%	0.00%
Overall, this individual made a significant contribution to your learning.	4.50	4.50	0.00%	0.00%	0.00%	50.00%	50.00%	0.00%

How much did the following elements of the course contribute to your learning gains?

	Mean	Median	No Gain	A Little Gain	Moderate Gain	Good Gain	Great Gain	N/A
Laboratory Experience	NRP	NRP	N/A	N/A	N/A	N/A	N/A	N/A
Field Trips	NRP	NRP	N/A	N/A	N/A	N/A	N/A	N/A
Library Sessions	NRP	NRP	N/A	N/A	N/A	N/A	N/A	N/A
Review Sessions	5.00	5.00	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
Writing Seminars	NRP	NRP	N/A	N/A	N/A	N/A	N/A	N/A

Is this class a requirement of some sort?

Is this class a requirement of some sort?

- No (1) — 9.09%
- Yes (10) — 90.91%
- [Total (11)]

(scale: 0, 50%, 100%)

Prior to starting this class, your interest level was?

Prior to starting this class, your interest level was?

- Very low (0) — 0.00%
- Low (0) — 0.00%
- Neutral (0) — 0.00%
- High (5) — 45.45%
- Very high (6) — 54.55%
- [Total (11)]

(scale: 0, 50%, 100%)

Now that this class is over, your interest is?

Now that this class is over, your interest is?

- Diminished (0) — 0.00%
- Satisfied (3) — 27.27%
- Heightened (8) — 72.73%
- [Total (11)]
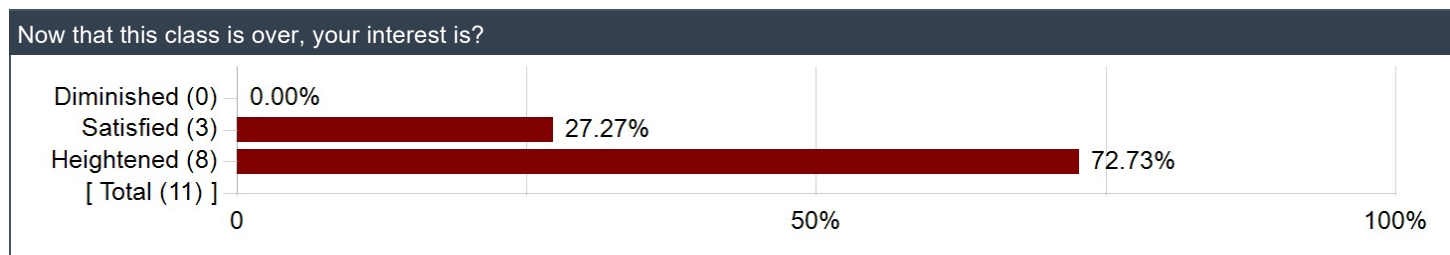
Why did you choose to take this course? (Select all that apply)
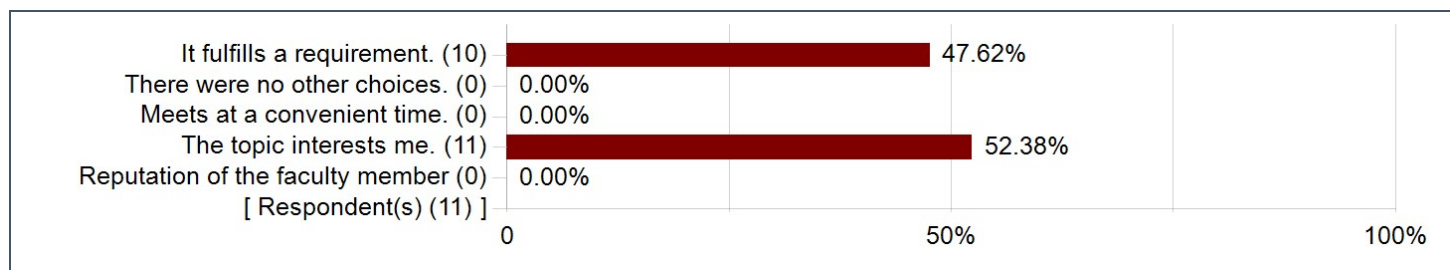
- It fulfills a requirement. (10) — 47.62%
- There were no other choices. (0) — 0.00%
- Meets at a convenient time. (0) — 0.00%
- The topic interests me. (11) — 52.38%
- Reputation of the faculty member (0) — 0.00%
- [Respondent(s) (11)]

How many hours per week outside of attending required sessions did you spend on this course?

How many hours per week outside of attending required sessions did you spend on this course?

- <5 hours (1) — 9.09%
- 5-10 hours (2) — 18.18%
- 10-15 hours (2) — 18.18%
- 15-20 hours (4) — 36.36%
- 20-25 hours (1) — 9.09%
- 25-30 hours (0) — 0.00%
- >30 hours (1) — 9.09%
- [Total (11)]

What proportion of classes did you attend?

What proportion of classes did you attend?

- None (0) — 0.00%
- 25% (0) — 0.00%
- 50% (0) — 0.00%
- 75% (0) — 0.00%
- All (11) — 100.00%
- [Total (11)]
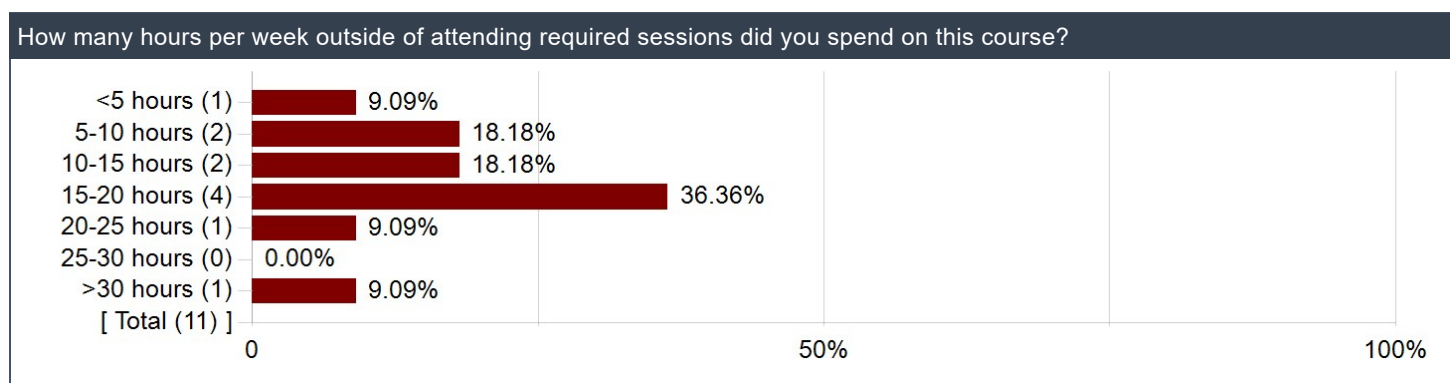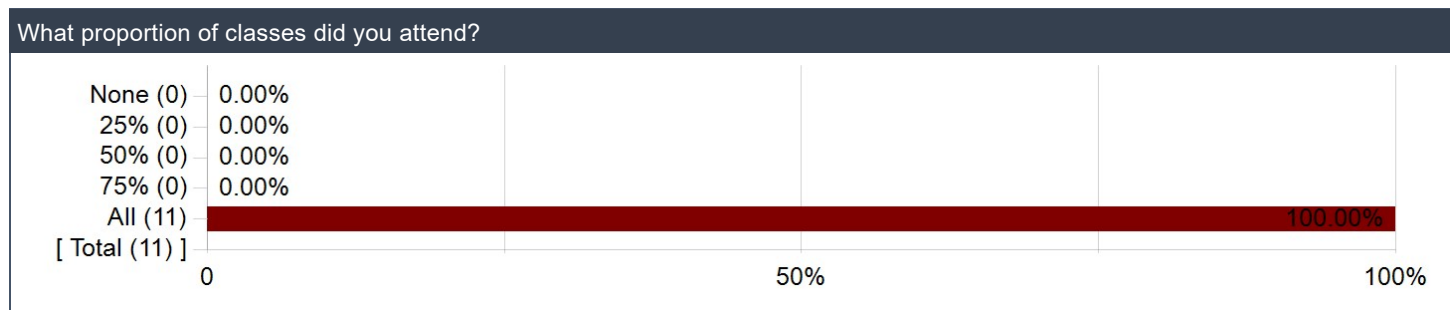
Please comment on the level of difficulty of the course relative to your background and experience.

Comments
It matched my background pretty well, although I think I had done a little more proofs than some others before.
you need to be interested.
This was a challenging course. I had taken advanced math in high school, but no proof–based classes. It was a humbling but rewarding experience.
This class was significantly more difficult than any other math class I've ever taken.
The is a very, very difficult class. I had some experience in writing proofs, but not much. The class will push you to learn one way or another.
It was definitely a hard course, but given that I was interested, it was ultimately a manageable one for me.
It may be difficult at first, however if you put in effort at the start of the quarter everything should be easy
Difficult but so much fun if you enjoy math
Difficult but very manageable
Wayyy harder than I'd done before – although it's more a different type of math that was alien to me than neccesarily "more difficult" or "higher" than before. Experience with AP/IB Calculus wasn't very relevant to most of the proofs we did so far but I imagine we'll get to derivatives and integrals next quarter now that we have the foundation.