

## EVALUATION: TEMPLATE

### Name:

Class Year:  
Major:  
Eval #:  
Eval ID:  
Time Entered:  
IP Address:  
UID:  
Username:

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Thank you for taking the time to provide feedback about your experience in this course. Teaching is highly valued at Amherst, and your reflections are an important part of our efforts to assess and improve our teaching. Please be thoughtful, fair, and honest. Your instructor will be able to view your responses only after final grades have been submitted, and to them your identity will be anonymous. As part of the reappointment, tenure, and promotion process, your responses will also be read by the president, provost and dean of the faculty, and other senior faculty, and to them your identity will not be anonymous.

**PLEASE NOTE:** Use the TAB key or your mouse to move between questions; the Enter / Return key will submit the webform.

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**For the questions below, please evaluation your own commitment to and effort exerted in the course.**

1. How often did you:

- Prepare for class
- Attend class
- Participate in class
- Complete assignments
- Meet with professor outside of class

2. Using specific examples, please briefly describe what you did that was particularly effective for improving your learning in this course:

**The following questions ask you to reflect upon the ways the course and instructor helped you to develop your thinking, skills, and abilities. Please provide specific details to support your reflections.**

3. In what ways did this course and instructor stimulate or shape your intellectual interests, thinking, and/or imagination?

4. Please describe the most significant skills and/or knowledge that you gained or further developed during this course:

**The following questions ask you to reflect on how the course structure and your instructor's teaching affected your learning in the course. Please provide specific details to support your feedback.**

5. Considering the overall design of the course, how did the pace, presentation of information, clarity of expectations, assignments, activities, and/or discussions in the course impact your learning?

6. Please describe the nature of your interactions with the instructor in the course, including the instructor's engagement with student questions and ideas in class, their cultivation of an inclusive learning environment, their availability outside of class, and the feedback you received on your coursework.

**Please use this space to provide any additional comments you have about this course and/or instructor.**

7. Additional comments:

## EVALUATION: #1 (of 21)

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**For the questions below, please evaluation your own commitment to and effort exerted in the course.**

1. How often did you:

- |                                        |               |
|----------------------------------------|---------------|
| • Prepare for class                    | <i>often</i>  |
| • Attend class                         | <i>always</i> |
| • Participate in class                 | <i>rarely</i> |
| • Complete assignments                 | <i>always</i> |
| • Meet with professor outside of class | <i>often</i>  |

2. Using specific examples, please briefly describe what you did that was particularly effective for improving your learning in this course:

*Tried my best to keep up with my work during remote learning. May not have done a great job towards the end of the semester, but the foundation built early on helped me a lot.*

**The following questions ask you to reflect upon the ways the course and instructor helped you to develop your thinking, skills, and abilities. Please provide specific details to support your reflections.**

3. In what ways did this course and instructor stimulate or shape your intellectual interests, thinking, and/or imagination?

*Professor Alvarado is very open to answering questions during class or office hours, and always is willing to help a student go the extra mile if they were interested. He is very personable, so reaching out to him was never a barrier to my learning.*

4. Please describe the most significant skills and/or knowledge that you gained or further developed during this course:

*I improved my proof writing and mathematical reasoning. Professor Alvarado was very particular about this, and I think it helped me a lot.*

**The following questions ask you to reflect on how the course structure and your instructor's teaching affected your learning in the course. Please provide specific details to support your feedback.**

5. Considering the overall design of the course, how did the pace, presentation of information, clarity of expectations, assignments, activities, and/or discussions in the course impact your learning?

*All of the above were made clear to me and the students. When remote learning started, professor was quick to revise them and communicate it to us immediately.*

6. Please describe the nature of your interactions with the instructor in the course, including the instructor's engagement with student questions and ideas in class, their cultivation of an inclusive learning environment, their availability outside of class, and the feedback you received on your coursework.

*Very personable man! It was apparent that he is a big fan of inclusive learning and is great at lifting students to the standards he expects. I never felt unsupported during the course, with the abundance of accessible professor and fellow office hours. Professor was always engaged with ideas that students brought to the table and encouraged and helped finding the root of the issues with students' ways of thinking, so as to improve learning.*

**Please use this space to provide any additional comments you have about this course and/or instructor.**

7. Additional comments:

*[No Response]*

## EVALUATION: #2 (of 21)

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**For the questions below, please evaluation your own commitment to and effort exerted in the course.**

1. How often did you:

- |                                        |               |
|----------------------------------------|---------------|
| • Prepare for class                    | <i>often</i>  |
| • Attend class                         | <i>always</i> |
| • Participate in class                 | <i>always</i> |
| • Complete assignments                 | <i>always</i> |
| • Meet with professor outside of class | <i>often</i>  |

2. Using specific examples, please briefly describe what you did that was particularly effective for improving your learning in this course:

*Before the remote learning period, attending TA hours more regularly, utilizing the Q center, and attending office hours at least twice a week helped me when I was struggling with the workload. After the remote learning period, attending zoom office hours whenever I have the energy to do so has been one of my most productive learning strategies. I also like to set up zooms with other students to work on homework in sync as an accountability tool.*

**The following questions ask you to reflect upon the ways the course and instructor helped you to develop your thinking, skills, and abilities. Please provide specific details to support your reflections.**

3. In what ways did this course and instructor stimulate or shape your intellectual interests, thinking, and/or imagination?

*Professor Alvarado is always so excited when introducing a new topic, so it makes me excited about that topic too! I really enjoyed the greater understanding of calculus I got from analysis, so I would be interested in continuing to study analysis.*

4. Please describe the most significant skills and/or knowledge that you gained or further developed during this course:

*I significantly improved my proof-writing during this course. Professor Alvarado helped me understand ways to start proofs when I'm not sure where they are going, and what language to use to be as clear and rigorous as possible. I feel a lot more confident doing proof writing on my own now than I did at the start of the semester.*

**The following questions ask you to reflect on how the course structure and your instructor's teaching affected your learning in the course. Please provide specific details to support your feedback.**

5. Considering the overall design of the course, how did the pace, presentation of information, clarity of expectations, assignments, activities, and/or discussions in the course impact your learning?

*I struggled a bit with the assignments in this course, especially after the remote learning period. I wish assignments had been due twice a week instead of once to help with pacing, but that is also a personal preference and time management issue. I really appreciated Professor Alvarado's examples and visual representations of concepts. The number line style drawings always helped me grasp a theorem on a practical level.*

6. Please describe the nature of your interactions with the instructor in the course, including the instructor's engagement with student questions and ideas in class, their cultivation of an inclusive learning environment, their availability outside of class, and the feedback you received on your coursework.

*Professor Alvarado always encourages questions, pauses to wait for us to think of questions, and follows through to answer each question thoroughly until he is satisfied that the student understands the answer. He is available in very frequent office hours and makes time for individual appointments as well, even over zoom. I can tell that he works incredibly hard (and long hours!) to be available to his students. Professor Alvarado also works to make adjustments based on student feedback so that the class works well for everyone. He has done the best job of any of my professors BY FAR at adjusting to remote learning.*

**Please use this space to provide any additional comments you have about this course and/or instructor.**

7. Additional comments:

*Give this man tenure!!*

**EVALUATION: #3 (of 21)**

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**For the questions below, please evaluation your own commitment to and effort exerted in the course.**

1. How often did you:

- |                                        |                  |
|----------------------------------------|------------------|
| • Prepare for class                    | <i>always</i>    |
| • Attend class                         | <i>often</i>     |
| • Participate in class                 | <i>sometimes</i> |
| • Complete assignments                 | <i>always</i>    |
| • Meet with professor outside of class | <i>always</i>    |

2. Using specific examples, please briefly describe what you did that was particularly effective for improving your learning in this course:

*I reviewed my notes and made very detailed theorem/definition sheets. I would go to office hours/fellow hours/Q center regularly to do work, even if there were no concepts I needed help on. After every homework assignment was graded and returned, I would look through the feedback and make the appropriate changes. Lastly, for theorems that were listed as "homework proofs" in the notes, I would work through them as we go through the notes.*

**The following questions ask you to reflect upon the ways the course and instructor helped you to develop your thinking, skills, and abilities. Please provide specific details to support your reflections.**

3. In what ways did this course and instructor stimulate or shape your intellectual interests, thinking, and/or imagination?

*Professor Alvarado was very thorough in the notes, provided recordings of the lectures for students to access later, encouraged student participation, and was extremely engaging in all of his lectures. I enjoy how he structures his lectures to first guide students through different approaches and examples and encourages them to then use these "templates" to work through their own proofs. I found that this helped me create my own approach to working with different proofs/ helped me develop my own proof techniques for different problems, and allowed me to foster a genuine enjoyment for the course and topic, both of which are outside of my major requirements.*

4. Please describe the most significant skills and/or knowledge that you gained or further developed during this course:

*As mentioned above, on top of the actual course material, I believe Professor Alvarado taught me how to write clear and concise explanations of my thoughts and how to get from point A to point B in a well-laid-out proof. This has been extremely useful not only in the course itself but also in my other courses, as others have noted that my explanations make more sense and are easy to follow regardless of the audience's level of expertise in the subject matter.*

**The following questions ask you to reflect on how the course structure and your instructor's teaching affected your learning in the course. Please provide specific details to support your feedback.**

5. Considering the overall design of the course, how did the pace, presentation of information, clarity of expectations, assignments, activities, and/or discussions in the course impact your learning?

*The pace of the course was extremely fast, though I do believe this was partly due to the change in the circumstances for the semester. Nonetheless, like all of Professor Alvarado's other courses, having the class notebook available has made the pace manageable (though still fast) and lectures more engaging (since I was less focused on copying notes and more so on listening to the explanations). I found the recorded lectures were extremely helpful for my learning because I was able to listen to the lecture and if I missed a concept could go back and rewatch the lecture itself.*

6. Please describe the nature of your interactions with the instructor in the course, including the instructor's engagement with student questions and ideas in class, their cultivation of an inclusive learning environment, their availability outside of class, and the feedback you received on your coursework.

*Professor Alvarado is an amazing professor, and his engagement with students both in class and out, as well as his openness to taking student's feedback/comments and incorporating them into the course has made this course extremely enjoyable, even for a second semester senior like me who has mentally checked out for the rest of the semester. He is always readily available, both during office hours and outside, and responds promptly to emails, with thorough answers to any questions. He is extremely accommodating and understanding, and this has helped immensely in not only encouraging me to try my best in this class but also to not give up in my other classes as well. The feedback is always clear and helpful, and I genuinely enjoyed the entire semester, despite all of the ups and downs and changes that we have experienced in light of the pandemic.*

**Please use this space to provide any additional comments you have about this course and/or instructor.**

7. Additional comments:

*I had Professor Alvarado for a previous class in my junior fall semester, and all of the material that he taught me then is still fully retained in my memory now, even though that semester was extremely difficult for me. I think this says a lot about the effectiveness of his teaching style and the level of sincerity he puts into each student. I always enjoy talking to him, both in class and out, and he truly is someone who cares about his students and his work. Even after two classes with him, I still am disappointed I will not be able to take another course with Professor Alvarado. I think he is an amazing professor and am thankful for the opportunity to have learned what I learned from him.*



EVALUATION: #4 (of 21)

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For the questions below, please evaluation your own commitment to and effort exerted in the course.

1. How often did you:

- |                                        |               |
|----------------------------------------|---------------|
| • Prepare for class                    | <i>always</i> |
| • Attend class                         | <i>often</i>  |
| • Participate in class                 | <i>rarely</i> |
| • Complete assignments                 | <i>always</i> |
| • Meet with professor outside of class | <i>often</i>  |

2. Using specific examples, please briefly describe what you did that was particularly effective for improving your learning in this course:

*Reading and rereading the Thm/Defs sheets. The Homework, too. Many things made far more sense after doing the homework and working with others in office hours.*

**The following questions ask you to reflect upon the ways the course and instructor helped you to develop your thinking, skills, and abilities. Please provide specific details to support your reflections.**

3. In what ways did this course and instructor stimulate or shape your intellectual interests, thinking, and/or imagination?

*I think I became more confident that math is something I want to understand better. This the semester finally decided to declare Math.*

4. Please describe the most significant skills and/or knowledge that you gained or further developed during this course:

*How to analyze functions in  $\mathbb{R}$  and why its even possible to do so, put simply. I feel like sequences of functions and series of functions were totally to me. Very cool though. Also, I feel like I never really knew what limit was until now, you know what mean?*

**The following questions ask you to reflect on how the course structure and your instructor's teaching affected your learning in the course. Please provide specific details to support your feedback.**

5. Considering the overall design of the course, how did the pace, presentation of information, clarity of expectations, assignments, activities, and/or discussions in the course impact your learning?

*The pace is so fast, but I suppose that's just what has to happen for this course to prepare us for comps, so as much as it destroyed me, I see no reason to complain. I also realize Alvarado did the best he could with the pacing so that the class did pummel us, like how he spaced out the exams and when he made homework's due. Also, Professor Alvarado's lecture notes are next-tier good. I really feel like if I had another professor I don't I could've done well in this class at all once we went remote. But he was accommodating and made his notes easily presentable for class and so we had easy access to them afterward too, which was incredibly useful. I often couldn't keep up with the speed of lectures, so I notes legibility would falter or I just had gaps in them. Without being able to refer back to his notes to fill in my own and make correction, I would've been lost in this class.*

6. Please describe the nature of your interactions with the instructor in the course, including the instructor's engagement with student questions and ideas in class, their cultivation of an inclusive learning environment, their availability outside of class, and the feedback you received on your coursework.

*He was very helpful in office hours, especially after we went remote. You can tell he really wanted you to succeed and he would help you get to where you needed to be so you could do so. He also regularly checked in on people and always brought up the vibes of the class.*

**Please use this space to provide any additional comments you have about this course and/or instructor.**

7. Additional comments:

*[No Response]*

**EVALUATION: #5 (of 21)**

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**For the questions below, please evaluation your own commitment to and effort exerted in the course.**

1. How often did you:

- |                                        |                  |
|----------------------------------------|------------------|
| • Prepare for class                    | <i>sometimes</i> |
| • Attend class                         | <i>often</i>     |
| • Participate in class                 | <i>often</i>     |
| • Complete assignments                 | <i>always</i>    |
| • Meet with professor outside of class | <i>sometimes</i> |

2. Using specific examples, please briefly describe what you did that was particularly effective for improving your learning in this course:

*I read the textbook.*

**The following questions ask you to reflect upon the ways the course and instructor helped you to develop your thinking, skills, and abilities. Please provide specific details to support your reflections.**

3. In what ways did this course and instructor stimulate or shape your intellectual interests, thinking, and/or imagination?

*Professor Alvarado is a professor with a lot of energy. That really has a huge impact on the vibe of the class.*

4. Please describe the most significant skills and/or knowledge that you gained or further developed during this course:

*I learned why calculus is true, for the most part.*

**The following questions ask you to reflect on how the course structure and your instructor's teaching affected your learning in the course. Please provide specific details to support your feedback.**

5. Considering the overall design of the course, how did the pace, presentation of information, clarity of expectations, assignments, activities, and/or discussions in the course impact your learning?

*I think Professor Alvarado designed most of the parts very well, though I do feel like the course is a little bit tilted towards the beginning. We spent very long on the first two chapters, and we rushed through the rest.*

6. Please describe the nature of your interactions with the instructor in the course, including the instructor's engagement with student questions and ideas in class, their cultivation of an inclusive learning environment, their availability outside of class, and the feedback you received on your coursework.

*Professor Alvarado is very accessible outside of the class. It's a pleasure taking the class with him.*

**Please use this space to provide any additional comments you have about this course and/or instructor.**

7. Additional comments:

*I can understand professor Alvarado's kind intention when he assigned the mind maps and the thm/def sheets. However, I personally don't think that works for me.*

**EVALUATION: #6 (of 21)**

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**For the questions below, please evaluation your own commitment to and effort exerted in the course.**

1. How often did you:

- |                                        |                  |
|----------------------------------------|------------------|
| • Prepare for class                    | <i>often</i>     |
| • Attend class                         | <i>always</i>    |
| • Participate in class                 | <i>sometimes</i> |
| • Complete assignments                 | <i>always</i>    |
| • Meet with professor outside of class | <i>often</i>     |

2. Using specific examples, please briefly describe what you did that was particularly effective for improving your learning in this course:

*Reviewing the online notes was the best. I found them much easier to read than my own notes. Also, the theorem and def sheets were great for keeping me on top of the course.*

**The following questions ask you to reflect upon the ways the course and instructor helped you to develop your thinking, skills, and abilities. Please provide specific details to support your reflections.**

3. In what ways did this course and instructor stimulate or shape your intellectual interests, thinking, and/or imagination?

*The web of analysis assignments were good at linking the pieces of the course and giving me a bigger picture view of what was going on in the course which helped me think big picture about analysis.*

4. Please describe the most significant skills and/or knowledge that you gained or further developed during this course:

*How to write proofs, how to do math that isn't just computation.*

**The following questions ask you to reflect on how the course structure and your instructor's teaching affected your learning in the course. Please provide specific details to support your feedback.**

5. Considering the overall design of the course, how did the pace, presentation of information, clarity of expectations, assignments, activities, and/or discussions in the course impact your learning?

*Very very well designed course. The pace was fast but all the info was clear and the assignments were the perfect amount of difficulty. Alvarado also did a great job adapting to the remote learning, slowing down the pace of the course slightly but making sure we still got the info we needed.*

6. Please describe the nature of your interactions with the instructor in the course, including the instructor's engagement with student questions and ideas in class, their cultivation of an inclusive learning environment, their availability outside of class, and the feedback you received on your coursework.

*Great availability outside of class, gave just the right amount of help in office hours. Always answered questions in class in a manner that was informative but quick.*

**Please use this space to provide any additional comments you have about this course and/or instructor.**

7. Additional comments:

*The way Alvarado broke down assignments (and even problems inside of assignments) into manageable but constant tasks really helped me stay on top of the course. I was a little scared of the class going in, but by the end I looked forward to doing the HWs.*

EVALUATION: #7 (of 21)

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For the questions below, please evaluation your own commitment to and effort exerted in the course.

1. How often did you:

- |                                        |               |
|----------------------------------------|---------------|
| • Prepare for class                    | <i>always</i> |
| • Attend class                         | <i>always</i> |
| • Participate in class                 | <i>always</i> |
| • Complete assignments                 | <i>always</i> |
| • Meet with professor outside of class | <i>often</i>  |

2. Using specific examples, please briefly describe what you did that was particularly effective for improving your learning in this course:

*I kept up with my homework including the Theorem Definition sheets. The extra problems that he gives in class were very helpful as test review.*

**The following questions ask you to reflect upon the ways the course and instructor helped you to develop your thinking, skills, and abilities. Please provide specific details to support your reflections.**

3. In what ways did this course and instructor stimulate or shape your intellectual interests, thinking, and/or imagination?

*Because we had so much material to get through, I did find that Alvarado did not go on many tangents about the applications of the material. I did find that without those tangents, it was hard for me to get super excited about Analysis itself. But also, I don't think that Analysis is my area of interest, which might just be Analysis's fault, not Alvarado's.  
That being said, it was an engaging math course. I especially liked when the material got weirder and harder to predict and we started talking about sequences and series of functions.*

4. Please describe the most significant skills and/or knowledge that you gained or further developed during this course:

*I think that this class definitely made me better at writing more rigorous proofs. This was the first class that required me to write proofs in paragraph form which felt like a significant step forward as a math student.*

**The following questions ask you to reflect on how the course structure and your instructor's teaching affected your learning in the course. Please provide specific details to support your feedback.**

5. Considering the overall design of the course, how did the pace, presentation of information, clarity of expectations, assignments, activities, and/or discussions in the course impact your learning?

*This was an incredibly well thought out course. It was clear that Professor Alvarado chose each example and homework problem with immense care. He often introduced homework problems that were used as examples several units later.*

*I think that the pace of the class building as the semester progressed made a lot of sense because the later material ends up directly mirroring earlier concepts. However, I felt that the first unit could be sped up slightly and the final unit (sequences of functions) could be slowed down by a day or two. Mostly, I would have liked the last midterm to be a week earlier. This could also be achieved if the last midterm did not cover all of the final unit.*

6. Please describe the nature of your interactions with the instructor in the course, including the instructor's engagement with student questions and ideas in class, their cultivation of an inclusive learning environment, their availability outside of class, and the feedback you received on your coursework.

*Professor Alvarado was so intent on helping all of his students and continuously solicited feedback. He made it really clear that if we were struggling, he was there to help us. This was especially clear after quarantine. I got the sense that if we were having trouble completing the material, he would do all in his power to support us.*

*He also told a lot of jokes, played music, and worked SO hard to keep our spirits up during online learning. It was by far the best class that I had after quarantine.*

**Please use this space to provide any additional comments you have about this course and/or instructor.**

7. Additional comments:

*Give this man tenure!*



**EVALUATION: #8 (of 21)**

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**For the questions below, please evaluation your own commitment to and effort exerted in the course.**

1. How often did you:

- |                                        |               |
|----------------------------------------|---------------|
| • Prepare for class                    | <i>often</i>  |
| • Attend class                         | <i>often</i>  |
| • Participate in class                 | <i>often</i>  |
| • Complete assignments                 | <i>always</i> |
| • Meet with professor outside of class | <i>often</i>  |

2. Using specific examples, please briefly describe what you did that was particularly effective for improving your learning in this course:

*I read over my notes after class, received assistance from my peer tutor, completed each homework completely with help from my Peer Tutor and professor and fellow office hours, and studied very hard for each exam by rewriting my notes, reading the textbook, and working on practice problems.*

**The following questions ask you to reflect upon the ways the course and instructor helped you to develop your thinking, skills, and abilities. Please provide specific details to support your reflections.**

3. In what ways did this course and instructor stimulate or shape your intellectual interests, thinking, and/or imagination?

*He was very enthusiastic about the subject and I found the material of the class very interesting and satisfying. This class taught me a lot about thinking logically and paying attention to detail*

4. Please describe the most significant skills and/or knowledge that you gained or further developed during this course:

*I definitely improved my proof-writing skills. Professor Alvarado is very clear when he is writing his proofs, and I learned to incorporate that into my own proof writing. This class is the hardest class that I have taken in college so far, and it has taught me a lot more about asking for help, perseverance, and about self-acceptance.*

**The following questions ask you to reflect on how the course structure and your instructor's teaching affected your learning in the course. Please provide specific details to support your feedback.**

5. Considering the overall design of the course, how did the pace, presentation of information, clarity of expectations, assignments, activities, and/or discussions in the course impact your learning?

*I felt that the pace was a bit fast, especially during the last quarter of the semester, but I understand that we had a lot of content to cover in this class. The presentation of information using the tablet was very effective for me, along with the demonstrations on Desmos for the graphs. I felt that expectations were very clear and that the problem sets were effective and helpful for later concepts in the course. The theorem/definitions sheets were quite useful as well. I struggled with the Web of Analysis and I found that I didn't learn as much from it as I would've liked to, given the time I put in.*

6. Please describe the nature of your interactions with the instructor in the course, including the instructor's engagement with student questions and ideas in class, their cultivation of an inclusive learning environment, their availability outside of class, and the feedback you received on your coursework.

*He was very receptive to student questions and ideas in class, always responding to anything that came up and always making sure no one had any questions before moving on. Because of this, I felt that the environment was very inclusive and comfortable. He had office hours almost every day, at times that we voted on as a class which was super helpful. He was also readily available for meetings outside of office hours, and he checked on me and my well-being outside of math multiple times during the semester, and I am immensely grateful and appreciative of his doing so. The comments provided on the homework were very detailed and helpful; I do wish that we could receive more feedback on exams and that we could receive grades on the Webs of Analysis (when we still did them) after each one to ensure that we have the right connections between concepts.*

**Please use this space to provide any additional comments you have about this course and/or instructor.**

7. Additional comments:

*[No Response]*

**EVALUATION: #9 (of 21)**

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**For the questions below, please evaluation your own commitment to and effort exerted in the course.**

1. How often did you:

- |                                        |                  |
|----------------------------------------|------------------|
| • Prepare for class                    | <i>always</i>    |
| • Attend class                         | <i>always</i>    |
| • Participate in class                 | <i>always</i>    |
| • Complete assignments                 | <i>always</i>    |
| • Meet with professor outside of class | <i>sometimes</i> |

2. Using specific examples, please briefly describe what you did that was particularly effective for improving your learning in this course:

*I just did the required homework and took notes in lecture and that was sufficient.*

**The following questions ask you to reflect upon the ways the course and instructor helped you to develop your thinking, skills, and abilities. Please provide specific details to support your reflections.**

3. In what ways did this course and instructor stimulate or shape your intellectual interests, thinking, and/or imagination?

*Professor Alvarado clearly puts a lot of time and thought into considering how best to structure the course and present information in an absorbable and useful way. I think it is fundamentally pretty neat material and that it will serve me well in the rest of my studies. In particular I think professor Alvarado helped me develop capacity for extended proof writing and pushed me towards clearer, less ambiguous proof technique.*

4. Please describe the most significant skills and/or knowledge that you gained or further developed during this course:

*As mentioned above, proof writing technique as well as technical background.*

**The following questions ask you to reflect on how the course structure and your instructor's teaching affected your learning in the course. Please provide specific details to support your feedback.**

5. Considering the overall design of the course, how did the pace, presentation of information, clarity of expectations, assignments, activities, and/or discussions in the course impact your learning?

*I think this course is overall pretty well paced, maybe a little bit back heavy in terms of material, although that problem was somewhat ameliorated by shift to remote learning and the consequent paring back of material. On a class to class basis, information was clearly conveyed with very little ambiguity and the assignments were helpful in developing understanding of the material. Most of the other assignments were useful as well.*

6. Please describe the nature of your interactions with the instructor in the course, including the instructor's engagement with student questions and ideas in class, their cultivation of an inclusive learning environment, their availability outside of class, and the feedback you received on your coursework.

*I went to see Professor Alvarado several times in office hours and in general he made himself very available by scheduling those hours at convenient times for the students in the class. He was friendly and engaging and in general fostered a good learning environment.*

**Please use this space to provide any additional comments you have about this course and/or instructor.**

7. Additional comments:

*I think Professor Alvarado's commitment to continual improvement as a professor is admirable and makes him stand out from the average professor.*

**EVALUATION: #10 (of 21)**

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**For the questions below, please evaluation your own commitment to and effort exerted in the course.**

1. How often did you:

- |                                        |                  |
|----------------------------------------|------------------|
| • Prepare for class                    | <i>always</i>    |
| • Attend class                         | <i>always</i>    |
| • Participate in class                 | <i>always</i>    |
| • Complete assignments                 | <i>always</i>    |
| • Meet with professor outside of class | <i>sometimes</i> |

2. Using specific examples, please briefly describe what you did that was particularly effective for improving your learning in this course:

*First of all, I did all of the homework and the theorem/definition sheets, both of which was very effective for me. While we were still on campus, I also attended office hours multiple times each week and worked with peers while there to better understand the material.*

**The following questions ask you to reflect upon the ways the course and instructor helped you to develop your thinking, skills, and abilities. Please provide specific details to support your reflections.**

3. In what ways did this course and instructor stimulate or shape your intellectual interests, thinking, and/or imagination?

*I wasn't sure what to expect when entering Analysis---I wasn't quite sure what the class was about, honestly. It was my first proof-heavy math class, and my first math class to ever talk about rigor in a true sense. It taught me a way of thinking that is utterly different from those that I used before, yet I'm also realizing that I'm using that way of thinking in other places. The course itself has made me excited about the field of Analysis as a whole and filled in a lot of the cracks from previous courses. The stuff that we did makes me want to try to write a thesis in math, and was very exciting. Prof. Alvarado did a great job, despite teaching over Zoom for half the semester, motivating the material we learned and connecting it to a wide unknown beyond the course.*

4. Please describe the most significant skills and/or knowledge that you gained or further developed during this course:

*The most important skills I developed/learned were a) proof writing and b) attentiveness to qualifiers. By proof writing, I mean the ability to write logical, clear, and concise proofs of mathematical facts based on first principles. I also mean the problem-solving skills required to find those proofs. By attentiveness to qualifiers, I mean understanding the precise meaning of language and respecting that precision in my writing. Both of these skills apply beyond math.*

**The following questions ask you to reflect on how the course structure and your instructor's teaching affected your learning in the course. Please provide specific details to support your feedback.**

5. Considering the overall design of the course, how did the pace, presentation of information, clarity of expectations, assignments, activities, and/or discussions in the course impact your learning?

*I think that for the most part, the pace was good. Occasionally I'd leave class utterly bewildered, and occasionally class would go too slow for me, but those days were outliers. Expectations were very clear---every assignment was well-motivated, well-explained, and accompanied by a list of resources, due dates, and next steps. The information was presented very well.*

6. Please describe the nature of your interactions with the instructor in the course, including the instructor's engagement with student questions and ideas in class, their cultivation of an inclusive learning environment, their availability outside of class, and the feedback you received on your coursework.

*Prof. Alvarado was especially attentive to in-class questions and non-verbal communication. If we didn't understand something, or if anyone was even thinking about a question, he seemed to somehow know and would ask that particular person about what was on their mind. Prof. Alvarado also tried hard to build an inclusive learning environment, from opening up responses to only people who hadn't spoken and personally reaching out to me (and I suspect others) on a number of occasions. Prof. Alvarado's office hours were very accessible and tailored to the class to help ensure that everyone could come to office hours at least one day a week---that was helpful especially for me, since I ended up being quite busy during the day this semester. Feedback on coursework was helpful (only tests were graded by Prof. Alvarado, as far as I could tell).*

**Please use this space to provide any additional comments you have about this course and/or instructor.**

7. Additional comments:

*Prof. Alvarado is a wonderful, caring professor. It's obvious that he is excited about math, and it's even more obvious that he loves to teach.*

EVALUATION: #11 (of 21)

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For the questions below, please evaluation your own commitment to and effort exerted in the course.

1. How often did you:

- |                                        |                  |
|----------------------------------------|------------------|
| • Prepare for class                    | <i>often</i>     |
| • Attend class                         | <i>always</i>    |
| • Participate in class                 | <i>always</i>    |
| • Complete assignments                 | <i>always</i>    |
| • Meet with professor outside of class | <i>sometimes</i> |

2. Using specific examples, please briefly describe what you did that was particularly effective for improving your learning in this course:

*Constantly going over the notes was particularly useful to digest the materials since Professor Alvarado makes sure the transition from one concept to the next one very smoothly. The examples he chooses are illuminating too.*

**The following questions ask you to reflect upon the ways the course and instructor helped you to develop your thinking, skills, and abilities. Please provide specific details to support your reflections.**

3. In what ways did this course and instructor stimulate or shape your intellectual interests, thinking, and/or imagination?

*Professor Alvarado is really passionate about the "SCIENCE" of mathematics. When he first introduced the formal logical epsilon-delta definition of convergence, he invited us to appreciate the great achievement of mathematics becoming a science, rather than an intuition. Such a passion teaches me that do not take any intellectual achievement for granted.*

4. Please describe the most significant skills and/or knowledge that you gained or further developed during this course:

*The most significant skill I learned is to formalize logical statements, and make sense of the differences in terms of graphs. A specific example would be the logical and graphical comparison between pointwise and uniform convergence of sequences of functions.*

**The following questions ask you to reflect on how the course structure and your instructor's teaching affected your learning in the course. Please provide specific details to support your feedback.**

5. Considering the overall design of the course, how did the pace, presentation of information, clarity of expectations, assignments, activities, and/or discussions in the course impact your learning?

*The pace is awesome. Professor Alvarado clearly spent a lot of time designing the pace of the class. He did not rush to dump many stuff. Instead, he made sure that each concept had been hit home using proofs and examples. Assignments were great, especially there is a part "Reflecting Class Materials", which helped me to think over some essential details that I often ignored.*

6. Please describe the nature of your interactions with the instructor in the course, including the instructor's engagement with student questions and ideas in class, their cultivation of an inclusive learning environment, their availability outside of class, and the feedback you received on your coursework.

*Professor Alvarado is more than a professor. He reached out to me during the pandemic to offer help if I need any. He would set up breakout rooms in classes to make sure our peers can talk to each other. So the sense of community in our class remained even though we were not in classroom together. He is welcoming to answer questions and gives useful hints. Overall, I like his personality and kindness which directly contributed my learning in analysis. Analysis is friendly and enjoyable.*

**Please use this space to provide any additional comments you have about this course and/or instructor.**

7. Additional comments:

*[No Response]*



EVALUATION: #12 (of 21)

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**For the questions below, please evaluation your own commitment to and effort exerted in the course.**

1. How often did you:

- |                                        |                  |
|----------------------------------------|------------------|
| • Prepare for class                    | <i>often</i>     |
| • Attend class                         | <i>always</i>    |
| • Participate in class                 | <i>sometimes</i> |
| • Complete assignments                 | <i>always</i>    |
| • Meet with professor outside of class | <i>always</i>    |

2. Using specific examples, please briefly describe what you did that was particularly effective for improving your learning in this course:

*I would go to office hours and Q-center hours to receive extra clarification for topics we learned in class and for help on the problem sets. I am also a visual learner, so I benefitted from Professor Alvarado's incorporation of visuals including desmos demonstrations and actual sketches in the notes.*

**The following questions ask you to reflect upon the ways the course and instructor helped you to develop your thinking, skills, and abilities. Please provide specific details to support your reflections.**

3. In what ways did this course and instructor stimulate or shape your intellectual interests, thinking, and/or imagination?

*Prior to the course, I was certain I hated theoretical math, and that I was only interested in learning its applications. However, Professor Alvarado has changed my mindset about this. His enthusiasm about real analysis ended up rubbing off on me. I would often find myself very excited about a specific result or a completed proof. We often celebrated these little victories. He also helped shape my thinking in terms of problem solving. He pushed me by never explicitly telling me the answer to problems on the homework, for example, but he instead led in the right directions. I also grew more confident in my mathematical abilities because of this.*

4. Please describe the most significant skills and/or knowledge that you gained or further developed during this course:

*I gained significant skills in this class regarding math including proof writing and rigorous reasoning. This class was very difficult but not as difficult as I expected it to be (I expected it to be nearly impossible), and I also learned way more than I originally thought I would (I believed that a lot of the information would simply go over my head).*

**The following questions ask you to reflect on how the course structure and your instructor's teaching affected your learning in the course. Please provide specific details to support your feedback.**

5. Considering the overall design of the course, how did the pace, presentation of information, clarity of expectations, assignments, activities, and/or discussions in the course impact your learning?

*I really appreciated the structure of this course. There was a lot of material to cover, but Professor Alvarado struck a pretty good balance of not moving too fast but not discouraging questions/discussions either. The structure of this course was so consistent, that it essentially remained the same during remote learning. Information was presented very clearly, and the class notes were always available to check later for more clarity if needed.*

6. Please describe the nature of your interactions with the instructor in the course, including the instructor's engagement with student questions and ideas in class, their cultivation of an inclusive learning environment, their availability outside of class, and the feedback you received on your coursework.

*I found Professor Alvarado to be extremely supportive and helpful throughout this course (even before the switch to remote learning). He knew how difficult the course was, so he was constantly checking in with everyone to make sure no one was falling behind. He truly cared about us as students. I always felt comfortable asking Professor Alvarado questions about problems on homework or for extra clarification on something we learned in class. I appreciated all of this tremendously.*

**Please use this space to provide any additional comments you have about this course and/or instructor.**

7. Additional comments:

*I don't think I would have been as successful in this course if it hadn't been for Professor Alvarado's support and clear teaching methods!*

**EVALUATION: #13 (of 21)**

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**For the questions below, please evaluation your own commitment to and effort exerted in the course.**

1. How often did you:

- |                                        |               |
|----------------------------------------|---------------|
| • Prepare for class                    | <i>always</i> |
| • Attend class                         | <i>always</i> |
| • Participate in class                 | <i>often</i>  |
| • Complete assignments                 | <i>always</i> |
| • Meet with professor outside of class | <i>always</i> |

2. Using specific examples, please briefly describe what you did that was particularly effective for improving your learning in this course:

*I was sure to make use of resources outside the class, such as TAs, fellows, and office hours. This helped me reinforce material learned in the classroom.*

**The following questions ask you to reflect upon the ways the course and instructor helped you to develop your thinking, skills, and abilities. Please provide specific details to support your reflections.**

3. In what ways did this course and instructor stimulate or shape your intellectual interests, thinking, and/or imagination?

*Professor Alvarado helped stimulate my intellectual interests by providing robust tools for solving new types of problems. His course opened opportunities for future study and problem-solving.*

4. Please describe the most significant skills and/or knowledge that you gained or further developed during this course:

*The most significant skill I learned from this course is how to apply theorems to make mathematical arguments.*

**The following questions ask you to reflect on how the course structure and your instructor's teaching affected your learning in the course. Please provide specific details to support your feedback.**

5. Considering the overall design of the course, how did the pace, presentation of information, clarity of expectations, assignments, activities, and/or discussions in the course impact your learning?

*The pace of the course was good at first, but then I think it was overwhelming towards the end. This, of course, has to do with remote learning, too. The clarity of expectations and assignments was always good, and I think the course lectures were an effective tool to convey the material.*

6. Please describe the nature of your interactions with the instructor in the course, including the instructor's engagement with student questions and ideas in class, their cultivation of an inclusive learning environment, their availability outside of class, and the feedback you received on your coursework.

*Professor Alvarado did an excellent job engaging with students and ensuring they felt welcome in his class. He also made himself extremely available outside of class, helping students with questions, or just learning about their lives. He also encouraged student participation, which helped me feel comfortable asking questions.*

**Please use this space to provide any additional comments you have about this course and/or instructor.**

7. Additional comments:

*Excellent professor!*

EVALUATION: #14 (of 21)

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**For the questions below, please evaluation your own commitment to and effort exerted in the course.**

1. How often did you:

- |                                        |                  |
|----------------------------------------|------------------|
| • Prepare for class                    | <i>often</i>     |
| • Attend class                         | <i>often</i>     |
| • Participate in class                 | <i>sometimes</i> |
| • Complete assignments                 | <i>often</i>     |
| • Meet with professor outside of class | <i>never</i>     |

2. Using specific examples, please briefly describe what you did that was particularly effective for improving your learning in this course:

*I read the textbook closely and rewrote important theorems until I had memorized them. I made sure I understood why each step in a theorem was necessary. I made sure I grasped the intuition and geometric meanings behind the symbolic manipulations (especially for functional limits and convergence).*

**The following questions ask you to reflect upon the ways the course and instructor helped you to develop your thinking, skills, and abilities. Please provide specific details to support your reflections.**

3. In what ways did this course and instructor stimulate or shape your intellectual interests, thinking, and/or imagination?

*He was a good instructor, he presented the material lucidly, he offered help when needed.*

4. Please describe the most significant skills and/or knowledge that you gained or further developed during this course:

*Analysis*

**The following questions ask you to reflect on how the course structure and your instructor's teaching affected your learning in the course. Please provide specific details to support your feedback.**

5. Considering the overall design of the course, how did the pace, presentation of information, clarity of expectations, assignments, activities, and/or discussions in the course impact your learning?

*Overall, very positively. The homeworks and exams were appropriately challenging. He required "Webs of Analysis" that were a frustrating waste of study time. That's a minor point, though.*

6. Please describe the nature of your interactions with the instructor in the course, including the instructor's engagement with student questions and ideas in class, their cultivation of an inclusive learning environment, their availability outside of class, and the feedback you received on your coursework.

*Feedback from graders was excellent. Feedback from Alvarado -- we've only received our first exam back, and that feedback was extremely minimal to the point of not at all being clear (he would take points off and just write "careful" in the margins), but he probably would've explained things in office hours; I just didn't take the time to go and ask him about it.*

**Please use this space to provide any additional comments you have about this course and/or instructor.**

7. Additional comments:

*Overall very positive, 8-9/10*

EVALUATION: #15 (of 21)

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**For the questions below, please evaluation your own commitment to and effort exerted in the course.**

1. How often did you:

- |                                        |                  |
|----------------------------------------|------------------|
| • Prepare for class                    | <i>never</i>     |
| • Attend class                         | <i>always</i>    |
| • Participate in class                 | <i>sometimes</i> |
| • Complete assignments                 | <i>always</i>    |
| • Meet with professor outside of class | <i>rarely</i>    |

2. Using specific examples, please briefly describe what you did that was particularly effective for improving your learning in this course:

*I reread the textbook chapters and theorem sheets before an exam*

**The following questions ask you to reflect upon the ways the course and instructor helped you to develop your thinking, skills, and abilities. Please provide specific details to support your reflections.**

3. In what ways did this course and instructor stimulate or shape your intellectual interests, thinking, and/or imagination?

*Whenever introducing a new concept, Prof. Alvarado gave us intuition for what it meant, broke down the definition into multiple pieces, or used Desmos to explain what things were doing. Every time he did that, it was great!*

4. Please describe the most significant skills and/or knowledge that you gained or further developed during this course:

*Knowledge of epsilon-N and epsilon-delta proofs, open/closed sets, continuity.*

**The following questions ask you to reflect on how the course structure and your instructor's teaching affected your learning in the course. Please provide specific details to support your feedback.**

5. Considering the overall design of the course, how did the pace, presentation of information, clarity of expectations, assignments, activities, and/or discussions in the course impact your learning?

*I learned most from doing the homework problems. Having the notes online was GREAT and I wish all my classes had that. Giving worked examples also helped. The web of analysis may have been a lot of work, but I loved the finished sheets and they were very fun. I don't miss making them (that was time-consuming) but I do miss having them. I almost wish we got those at the beginning of the unit so that we could have a high-level idea of what we were building towards as we were slogging through messy definitions.*

6. Please describe the nature of your interactions with the instructor in the course, including the instructor's engagement with student questions and ideas in class, their cultivation of an inclusive learning environment, their availability outside of class, and the feedback you received on your coursework.

*Before virus:*

*Prof. Alvarado was always willing to listen to and answer student questions, and going to office hours helped.*

*After virus:*

*Online classes were harder. In all my classes, I felt a pressure to not ask questions because asking would mean stopping the lecture for everyone else. Online classes only made that worse because of all the delays between saying you want to ask a question and asking the question and lag. I felt isolated and not at all part of a math community, especially because all we did during a lecture was sit in silence for an hour.*

**Please use this space to provide any additional comments you have about this course and/or instructor.**

7. Additional comments:

*[No Response]*



**EVALUATION: #16 (of 21)**

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**For the questions below, please evaluation your own commitment to and effort exerted in the course.**

1. How often did you:

- |                                        |                  |
|----------------------------------------|------------------|
| • Prepare for class                    | <i>always</i>    |
| • Attend class                         | <i>always</i>    |
| • Participate in class                 | <i>sometimes</i> |
| • Complete assignments                 | <i>always</i>    |
| • Meet with professor outside of class | <i>always</i>    |

2. Using specific examples, please briefly describe what you did that was particularly effective for improving your learning in this course:

*What I did to improve my learning in the course was to attend office hours, for the professor, for the qfellow, and also for the evening TAs. for me, this was particularly effective because the material was very delicate, and so getting the concepts and problems explained to me multiple times, or in different words, helped me to see why I could use certain methods in one place, but not in other places, and giving me a better understanding of what to look for and how to apply concepts from class. Because there was so much material, I found that talking about it a lot to different people to be really helpful because this way, it was ruminating in my head a lot.*

**The following questions ask you to reflect upon the ways the course and instructor helped you to develop your thinking, skills, and abilities. Please provide specific details to support your reflections.**

3. In what ways did this course and instructor stimulate or shape your intellectual interests, thinking, and/or imagination?

*The ways that math 355 with Professor Alvarado helped shape my intellectual thinking and abilities was by being a class that really introduced me to a new way of thinking. I had never before really had to think in such detail as where to start the beginning of a sequence, or how important it was to consider all of the theorems in my head that could help me solve a problem I was looking at, and also deal with topics that were not necessarily abstract, but ones that I had to work a lot to see in my head, and I think this class was a really cool and unique way to shape my thinking, especially when it comes to detail.*

4. Please describe the most significant skills and/or knowledge that you gained or further developed during this course:

*While I had previously taken other proof-writing classes before which had each taught me their own way of thinking, this was the first class where attention to detail in proof writing was so important, and I think that after this class, proof-writing finally is coming as more and more natural to me, especially when applied to topics in analysis. I also had to learn in a different way*

*how to incorporate theorems from class and see how they could help us solve problems that we were working on. It was really cool to see how each concept we did connected to the previous one, and that was something that I hadn't been able to do so clearly before. In this class, I had constantly been told that knowledge of theorems and definitions is so important, and now, at the end of the course I really see why and how it was really essential to helping us connect the complex topics in our heads.*

**The following questions ask you to reflect on how the course structure and your instructor's teaching affected your learning in the course. Please provide specific details to support your feedback.**

5. Considering the overall design of the course, how did the pace, presentation of information, clarity of expectations, assignments, activities, and/or discussions in the course impact your learning?

*All of these things impacted my learning in a positive way. While the course is designed to be full of material from the core expectations, not leaving much wiggle room, I think the pace was good to help us get the foundations right at the beginning of the class, such as with the introductory material that we had to learn to get our bearings, with infimums/supremums, and sequences, and then sped up as we continued along the course. As we became stronger students and learned more about analysis, the material definitely became harder to grasp, especially with the transition to remote learning, but we still managed to learn as much as we could with the help of all the resources available to us. I liked the idea of having one problem set per week, because it gave us ample time to go to office hours and get help. Also, I really enjoyed the teaching on a tablet, because if there was ever a time that I just wanted to listen and not take notes, I could go back and get the notes later. Lastly, I found his lectures to be really engaging because he seemed very excited to teach and so it created a positive atmosphere in the class.*

6. Please describe the nature of your interactions with the instructor in the course, including the instructor's engagement with student questions and ideas in class, their cultivation of an inclusive learning environment, their availability outside of class, and the feedback you received on your coursework.

*I found the interactions with Professor Alvarado to be really engaging and inclusive. He always made sure to ask if we had any questions and answer them in as much depth as he could. While remote learning did reduce some of my ability to learn and understand the material because of my productivity, I found that he was very consistent with lectures, and encouraging us to keep the consistent schedule that was necessary for a class like Math 355, which I found to be really helpful in my learning because all of the consistency that I had before the transition was not taken away. In office hours, he would really encourage us to work together, and answer questions when we were stuck, and also point us in the right direction when there was a problem we really did not have an idea how to start. Lastly, we received a lot of feedback on our course work with exams being returned quickly, and the graders giving back a lot of feedback when the Homeworks were returned.*

**Please use this space to provide any additional comments you have about this course and/or instructor.**

7. Additional comments:

*Thank you for a great semester!*

**EVALUATION: #17 (of 21)**

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**For the questions below, please evaluation your own commitment to and effort exerted in the course.**

1. How often did you:

- |                                        |                  |
|----------------------------------------|------------------|
| • Prepare for class                    | <i>sometimes</i> |
| • Attend class                         | <i>always</i>    |
| • Participate in class                 | <i>rarely</i>    |
| • Complete assignments                 | <i>often</i>     |
| • Meet with professor outside of class | <i>rarely</i>    |

2. Using specific examples, please briefly describe what you did that was particularly effective for improving your learning in this course:

*Usually reviewing the class notes was most helpful for me, though going to office hours was also effective to improving my learning. However, after going remote, I'd probably say that my learning was most affected by stress from this/other classes or from the general circumstances, so it's hard to say how that would've been different otherwise, though Prof. Alvarado was always available with resources to help.*

**The following questions ask you to reflect upon the ways the course and instructor helped you to develop your thinking, skills, and abilities. Please provide specific details to support your reflections.**

3. In what ways did this course and instructor stimulate or shape your intellectual interests, thinking, and/or imagination?

*Through this course, I kind of realized that Analysis wasn't really my cup of tea, but I still enjoyed class and Prof. Alvarado's enthusiasm for the subject matter and showing us its importance and connections with other fields of math, as well as applications for other academic pursuits.*

4. Please describe the most significant skills and/or knowledge that you gained or further developed during this course:

*Probably a lot of organizational methods for keeping track of all the theorems/definitions, which was crucial to knowing how everything comes together and is necessary pre-requisite knowledge that make these grander, fundamental theorems/systems of calculus possible.*

**The following questions ask you to reflect on how the course structure and your instructor's teaching affected your learning in the course. Please provide specific details to support your feedback.**

5. Considering the overall design of the course, how did the pace, presentation of information, clarity of expectations, assignments, activities, and/or discussions in the course impact your learning?

*The presentation style with the online notes was super crucial to me catching up with and reviewing material, and expectations seemed pretty clear (and high) from the outset of class and stayed pretty consistent throughout until going remote. After doing remote classes, it was difficult for me at least to keep up with the same pace that we were doing before (understandable as this is a core major class), but the activities/assignments always seemed important though still pretty daunting. Considering the difficulty of doing anything right about now, it seemed like Prof. Alvarado was doing everything he could to help us out.*

6. Please describe the nature of your interactions with the instructor in the course, including the instructor's engagement with student questions and ideas in class, their cultivation of an inclusive learning environment, their availability outside of class, and the feedback you received on your coursework.

*Feedback was generally helpful, and the flexed grading options were very much appreciated. Class discussions always felt welcoming and inclusive, and the instructor always made great attempts to be engaging and available, which I really appreciate and feel bad not reciprocating (personal morale was very low), but really thanks for that.*

**Please use this space to provide any additional comments you have about this course and/or instructor.**

7. Additional comments:

*Thank you for making this semester worth sticking through, and I really appreciate your being so understanding with everything, it means a lot.*

EVALUATION: #18 (of 21)

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**For the questions below, please evaluation your own commitment to and effort exerted in the course.**

1. How often did you:

- |                                        |                  |
|----------------------------------------|------------------|
| • Prepare for class                    | <i>rarely</i>    |
| • Attend class                         | <i>always</i>    |
| • Participate in class                 | <i>sometimes</i> |
| • Complete assignments                 | <i>always</i>    |
| • Meet with professor outside of class | <i>often</i>     |

2. Using specific examples, please briefly describe what you did that was particularly effective for improving your learning in this course:

*My main strategy for studying for exams was copying and compiling theorems/definitions/proofs from the notes into different groupings so I could see how different ideas built and worked off of each other. For example adding proofs into our weekly thm/defs gave me more insight into how the theorems worked together.*

**The following questions ask you to reflect upon the ways the course and instructor helped you to develop your thinking, skills, and abilities. Please provide specific details to support your reflections.**

3. In what ways did this course and instructor stimulate or shape your intellectual interests, thinking, and/or imagination?

*I loved the energy Prof Alvarado brought to class every day. It really helps keep me focused during morning classes.*

4. Please describe the most significant skills and/or knowledge that you gained or further developed during this course:

*An introductory understanding of analysis*

**The following questions ask you to reflect on how the course structure and your instructor's teaching affected your learning in the course. Please provide specific details to support your feedback.**

5. Considering the overall design of the course, how did the pace, presentation of information, clarity of expectations, assignments, activities, and/or discussions in the course impact your learning?

*I struggled a lot on the second midterm. I think this was mostly because of online learning and my current situation, but I think it could be helpful to move some material from the second midterm to the first midterm.*

6. Please describe the nature of your interactions with the instructor in the course, including the instructor's engagement with student questions and ideas in class, their cultivation of an inclusive learning environment, their availability outside of class, and the feedback you received on your coursework.

*Professor Alvarado has always been very good at answering questions and helping understand topics that don't make sense.*

**Please use this space to provide any additional comments you have about this course and/or instructor.**

7. Additional comments:

*[No Response]*

EVALUATION: #19 (of 21)

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**For the questions below, please evaluation your own commitment to and effort exerted in the course.**

1. How often did you:

- |                                        |               |
|----------------------------------------|---------------|
| • Prepare for class                    | <i>often</i>  |
| • Attend class                         | <i>always</i> |
| • Participate in class                 | <i>often</i>  |
| • Complete assignments                 | <i>always</i> |
| • Meet with professor outside of class | <i>often</i>  |

2. Using specific examples, please briefly describe what you did that was particularly effective for improving your learning in this course:

*Professor Alvarado was incredibly clear about what he expected from us and why. He encouraged clarifying questions that sought to figure out what was recommended for our success in the course and that sought to clarify the types of critical thinking skills and argument templates that would ensure our growth in proof-based mathematics.*

**The following questions ask you to reflect upon the ways the course and instructor helped you to develop your thinking, skills, and abilities. Please provide specific details to support your reflections.**

3. In what ways did this course and instructor stimulate or shape your intellectual interests, thinking, and/or imagination?

*He brought so much enthusiasm for analysis to every class! Class was dynamic, he gave "motivating examples" that contextualized why we were learning each new concepts, and seeing the clarity in his proofs made me want to make mine better (and they truly improved quickly right away)!*

4. Please describe the most significant skills and/or knowledge that you gained or further developed during this course:

*Better proof writing skills. I know how to organize my proofs better and make them clear, clean, and concise.*



**The following questions ask you to reflect on how the course structure and your instructor's teaching affected your learning in the course. Please provide specific details to support your feedback.**

5. Considering the overall design of the course, how did the pace, presentation of information, clarity of expectations, assignments, activities, and/or discussions in the course impact your learning?

*The pace and clarity of this course was phenomenal. I liked knowing what we would cover each week (this was always written on the board at the beginning of each lecture) and Alvarado often mentioned where and how each concept would support the next one. The pace felt quick but in retrospect I was able to absorb everything. I liked that he encouraged reading over the lecture notes daily and that he required turning in theorem/definition sheets because without those I would have gone nowhere in the class.*

6. Please describe the nature of your interactions with the instructor in the course, including the instructor's engagement with student questions and ideas in class, their cultivation of an inclusive learning environment, their availability outside of class, and the feedback you received on your coursework.

*Prof. Alvarado always responded so quickly to my emails, was always willing to meet, held fun office hours where we could get our questions answered, is AMAZING at explaining his thought process and why he thinks about concepts in the way he does, and I always understood why I got the feedback I received. ALL questions were always met with a well-fleshed-out, non-judgmental, non-condescending response.*

**Please use this space to provide any additional comments you have about this course and/or instructor.**

7. Additional comments:

*Prof. Alvarado is perhaps the best professor in math I've had at Amherst. And that's saying something, because each prof I've had here has been incredible. But his organizational skills, clarity of expectations, enthusiasm, and the fact that his course is rigorous but manageable has make Analysis so so awesome.*

**EVALUATION: #20 (of 21)**

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**For the questions below, please evaluation your own commitment to and effort exerted in the course.**

1. How often did you:

- |                                        |                  |
|----------------------------------------|------------------|
| • Prepare for class                    | <i>often</i>     |
| • Attend class                         | <i>always</i>    |
| • Participate in class                 | <i>sometimes</i> |
| • Complete assignments                 | <i>always</i>    |
| • Meet with professor outside of class | <i>sometimes</i> |

2. Using specific examples, please briefly describe what you did that was particularly effective for improving your learning in this course:

*I read from the course's textbook outside of class for at least a dozen hours over the course of the semester. I also re-read my notes after class and before exams.*

**The following questions ask you to reflect upon the ways the course and instructor helped you to develop your thinking, skills, and abilities. Please provide specific details to support your reflections.**

3. In what ways did this course and instructor stimulate or shape your intellectual interests, thinking, and/or imagination?

*I think this course introduced me to several new ways to reason about how mathematicians deal with infinity and different mathematical objects that utilize notions of infinity in their definitions - that is, beyond concepts I was already familiar with like induction. For example, convergence specifically relates to how we measure behavior of objects as they approach the infinitely large, while continuity and open/closed-ness relates to how we measure the behavior of objects as we look at the infinitely small. I think before this class, I wasn't sure what Real Analysis was like (and how it was different from more discrete math courses), but now I feel like I have a solid grasp on what the "essence" of real analysis is. I don't think in the end I was left thinking that Real Analysis is something I want to pursue as a deep research interest, but that's mostly for personal taste reasons.*

4. Please describe the most significant skills and/or knowledge that you gained or further developed during this course:

*Besides the kinds of mathematical ideas that I mentioned above, I also feel like this course gave me more practice and confidence in my problem solving skills as far as they concern how to reason about complex proofs.*

**The following questions ask you to reflect on how the course structure and your instructor's teaching affected your learning in the course. Please provide specific details to support your feedback.**

5. Considering the overall design of the course, how did the pace, presentation of information, clarity of expectations, assignments, activities, and/or discussions in the course impact your learning?

*I think there are some parts of the classes where Prof. Alvarado seems to get too deep in the weeds as far as proving definitions and theorems just in order to guarantee there is a robust path of dependencies from theorems we are proving to theorems we covered at the beginning of the course, but I don't think this is his fault / it seems like there is a lot of material to cover in this course. He presented the proofs extremely well and given that our textbook is pretty brief about proofs, I really valued whenever he explicit even in the cases where I could fill in the dots, just because there are some proofs where there is actually difficult stuff to grok, and so re-reading the notes was a great help afterwards.*

6. Please describe the nature of your interactions with the instructor in the course, including the instructor's engagement with student questions and ideas in class, their cultivation of an inclusive learning environment, their availability outside of class, and the feedback you received on your coursework.

*The feedback on my homework was fantastic and detailed, better than I've ever received in any other math class in my education. I think Prof. Alvarado cultivated a very inclusive learning environment, and I appreciated his efforts to foster a community in the classroom. There was way more office hours available than I've ever been offered in a math class, which was also fantastic. I think Prof Alvarado led course discussions very well, to the extent that if I had to score Prof. Alvarado, I would give him a 105/100. That said, I just want to mention a criticism, since I've also had 110/100 professors. The difference is that if a student asks "in regards to this theorem, what if our sequence was XYZ?" then Prof Alvarado might often just reaffirm "then this theorem wouldn't apply since the sequence doesn't satisfy hypothesis ABC" - a valid, helpful clarification. But 110/100 profs would 80-90% of the time say "then the theorem wouldn't immediately follow, BUT it turns out..." and go off on a 1-2 minute tangent on a related piece of math or interesting case that isn't part of the syllabus, but which inspires students in the class. These are the really magical teaching moments that make me in awe of a professor, and Alvarado did this a few times, but not often enough. I understand it's not always possible to go on tangents since Prof Alvarado is on a tight deadline to cover a lot of material, but personally I prefer these kinds of surprises over the surprises that Prof Alvarado tries to build into the lecture plans. The most profound learning and surprises can't be planned, in my opinion. Anyway there also isn't such thing as a perfect professor, so I would take this with a grain of salt. I would still support giving Prof. Alvarado tenure. :-)*

**Please use this space to provide any additional comments you have about this course and/or instructor.**

7. Additional comments:

*I thought the homework and problem sets in this course were very good. Prof Alvarado handled the move from teaching in-class to remotely very well.*

**EVALUATION: #21 (of 21)**

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**For the questions below, please evaluation your own commitment to and effort exerted in the course.**

1. How often did you:

- |                                        |                  |
|----------------------------------------|------------------|
| • Prepare for class                    | <i>always</i>    |
| • Attend class                         | <i>always</i>    |
| • Participate in class                 | <i>sometimes</i> |
| • Complete assignments                 | <i>always</i>    |
| • Meet with professor outside of class | <i>rarely</i>    |

2. Using specific examples, please briefly describe what you did that was particularly effective for improving your learning in this course:

*Live lecture and the occasional supplemental prerecorded lecture were definitely the most effective and efficient resources in facilitating my leaning the course material. I felt these alone were sufficient (in tandem with my own study) in preparing me for homework, exams, and more generally the fulfillment of the course objectives. I made the mistake of not attending office hours or fellow hours this semester. While I do not feel my education particularly suffered because of this, it was undoubtedly limited, if only in my deeper appreciation of the subject.*

**The following questions ask you to reflect upon the ways the course and instructor helped you to develop your thinking, skills, and abilities. Please provide specific details to support your reflections.**

3. In what ways did this course and instructor stimulate or shape your intellectual interests, thinking, and/or imagination?

*My interest was piqued most during the lessons covering set theory and those covering the topology of the real line. Beyond my specific interest in these two areas, I think I was most engaged by these lessons because they offered the clearest peek beyond the scope of this course. In using tools from set theory and topology to construct the results relevant to our material, we caught a glimpse at some of the deeper machinery at work.*

4. Please describe the most significant skills and/or knowledge that you gained or further developed during this course:

*I now have (1) generally, a fuller understanding of the process by which mathematicians in specific fields go about formalizing the notions of their intuitions and (2) specifically, a better historical perspective of the history and formalization of concepts in single variable calculus.*

**The following questions ask you to reflect on how the course structure and your instructor's teaching affected your learning in the course. Please provide specific details to support your feedback.**

5. Considering the overall design of the course, how did the pace, presentation of information, clarity of expectations, assignments, activities, and/or discussions in the course impact your learning?

*The syllabus for this course was drafted with precision and intention. Every particular of the semester—with regards to lecture topics, homework assignments, exams, office hours, learning objectives—was clearly developed far in advance and described thoroughly both in the syllabus and at the beginning of each class meeting (more often than not). The course itself felt (at times) like a program that had been focus-group tested and refined over the years, resulting in an efficient, streamlined approach. This systematic way of teaching ensures that the learning process is effective and the expectations unambiguous for as many students as possible but risks becoming too rigid or inorganic. Thankfully, Professor Alvarado always brought to class the energy and nuance needed to keep the experience fresh week-to-week.*

6. Please describe the nature of your interactions with the instructor in the course, including the instructor's engagement with student questions and ideas in class, their cultivation of an inclusive learning environment, their availability outside of class, and the feedback you received on your coursework.

*My main regret this semester is that I did not spend more time interacting with Professor Alvarado outside of class. His expertise in the classroom is undeniable: to my knowledge, there were no questions he was unprepared to answer immediately and fully; any interaction he had with any student in the class was ultimately valuable to the class as a whole; he always demonstrated an intense preparedness not only of the course material, but also the methods and practices of his teaching. The class environment seemed totally inclusive and inviting from my point of view—I had everything I felt I needed, which is perhaps why I never felt compelled to attend sessions outside class. I now consider this a mistake, as I found my few private conversations with Professor Alvarado to be both informative and enjoyable and hope to talk shop with him more in the future.*

**Please use this space to provide any additional comments you have about this course and/or instructor.**

7. Additional comments:

*[No Response]*