#### **EVALUATION:** #1 (of 15)

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.

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

1. How often did you:

•	Prepare for class	always
•	Attend class	always
•	Participate in class	always
•	Complete assignments	always
•	Meet with professor outside of class	often

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

office hours great and lectures were exciting and engaging

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?

made me love analysis

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

I am studying for the final right now (which is why this is brief) but I feel like I really learned so much and it is all coming together neatly in time for the final this week

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?

pacing was great, always challenging but never rushed

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.

always incredibly friendly and welcoming and available

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

8. Additional comments:

great professor he is a great addition to the math department - really fits the friendliness/helpfulness/excitement about math/engaging lectures I've come to expect from the department

### **EVALUATION: #2 (of 15)**

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.

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

1. How often did you:

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

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

I attended office hours multiple times per week almost every week of the course. This allowed me to get a very good understanding of the assignments, which helped me to understand the content very well.

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 did a really good job of working in higher level topics and "weird" examples that were really cool without getting too caught up in the weeds about how specific things worked when they weren't directly relevant to what we were doing. This made me very excited about continuing work in higher level math classes without feeling overwhelmed by the material.

I feel that I have a really strong understanding of the types of proof techniques that are used in analysis from taking the class. I think that there were a lot of new ways of thinking about math that I had to learn in the early portion of the class, and Professor Alvarado did a really good job giving helpful examples in class that applied to problems throughout the 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?

The pace was very good overall. I think that the assignment length and frequency was difficult without feeling overwhelming. Additionally, the posted notes on the Moodle helped a lot whenever I made a mistake in my notes, or if I missed a few minutes of class for any reason.

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 was really happy with my interactions with Professor Alvarado. He was always very helpful and understanding in office hours and had a lot of availability and flexibility. I also was very happy with the feedback I received: Professor Alvarado was very consistent with clarifying the level of detail he expected throughout the course.

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

8. Additional comments:

Not answered

**EVALUATION: #3 (of 15)** 

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.

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

1. How often did you:

Prepare for class always
 Attend class always
 Participate in class sometimes
 Complete assignments always
 Meet with professor outside of class rarely

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

I completed all of the assigned homework problems and made sure to pay attention during all lectures and go over my notes weekly wen completing my Theorem/Definition sheets.

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 did an amazing job of expanding my curiosity about the world of Math and Analysis by connecting what we were learning to math theories and important discoveries in te field of mathematics.

I further developed my mathematical understanding and proof building/theorem reverse engineering.

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 believe that Professor Alvarado did a wonderful job pacing the course and presenting the information as clearly as possible. He was always extremely clear about is expectations on assignments and exams.

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 always extremely energetic and welcoming during lectures and would engage with all questions posed by my classmates. He worked hard to cultivate an inclusive learning environment and took feedback very seriously.

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

8. Additional comments:

I believe Professor Alvarado should be considered for tenure!

### **EVALUATION: #4 (of 15)**

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.

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

1. How often did you:

•	Prepare for class	often
•	Attend class	often
•	Participate in class	always
•	Complete assignments	always
•	Meet with professor outside of class	rarely

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

When I was in class, I did not focus on writing notes. I focussed on really trying to understand the material deeply and ask relevant questions. Then when doing homeworks, going over the notes the professor wrote felt more useful, because I had understood it well.

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?

This course and professor Alavarado's deep passion for the subject has really transmitted. Deriving and understanding the intricacies of important mathematical definitions and conditions has really shaped the way I think about the mathematical method. This is true outside of pure mathematics too, for example in my economics classes.

Proof based thinking and applications. Understanding of a wide range of mathematical tools and foundations.

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?

It was great! Expectations were clear, workload was manageable but effective, the pace was appropriate, class was engaging and interesting.

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.

There is absolutely no doubting professor Alvarado's dedication and passion for the subject and his students. He cares so much about us and is so intensely willing to go the extra mile to make sure you understand the material well. His teaching is of the highest quality. His desire to engage and make the classes a truly comfortable and fun experience are unparalleled. His feedback may sometimes seem a bit infrequent, but if you want personalized and detailed feedback, his is immediately able/willing to do that for you, and this experience is immensely fruitful and helpful. After my first exam, I realised I needed feedback, and he met with me soon after, and methodically went through the questions with me. It was so helpful!

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

#### 8. Additional comments:

Professor Alvarado is fantastic. His passion, interest, intelligence, and care is really apparent to all his students. I am very happy to have had him as a professor (:

### **EVALUATION: #5 (of 15)**

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.

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

1. How often did you:

•	Prepare for class	often
•	Attend class	often
•	Participate in class	rarely
•	Complete assignments	always
•	Meet with professor outside of class	rarely

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

Going to office hours and ta hours helped.

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 always keeps class interesting and engaging as well as having a light mood the whole class.

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

*I better understand 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?

The pace of the class felt very quick, but that is to be expected. It was quite challenging.

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.

8. Additional comments:

**EVALUATION:** #6 (of 15)

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.

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

1. How often did you:

Prepare for class often
 Attend class always
 Participate in class sometimes
 Complete assignments always
 Meet with professor outside of class often

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

Read the textbook and go over notes outside of class, go to office & TA hours a lot, review theorems and definitions to understand their intent and how to use them.

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 instructor was always committed to teaching the class about various interesting aspects of analysis while still communicating rigor and an insightful way of thinking. They would make sure every example succeeded in shining new light on the topic being discussed, from uniform convergence to series convergence to Riemann integration and pathological functions. They also taught the class on how to write rigorous, eloquent proofs throughout the course.

How to write rigorous, elegant, efficient proofs. How to formulate questions that allow for new mathematical insight. How to use the tools of analysis and apply them to various different places.

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?

Lectures were consistently very informative and engaging. Expectations on problem sets and other coursework were always very clear.

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 instructor was extremely helpful in office hours and always made sure to help everyone there. They were consistently enthusiastic about not only analysis, but also math in general and very open-minded to students' thoughts. This semester was very difficult for me, and the instructor was very understanding throughout and made sure to help both me and everyone else do their best no matter what.

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

8. Additional comments:

Prof. Alvarado was one of the best professors I have had at Amherst. He was dedicated, hardworking, and helped every student as best he could.

### **EVALUATION: #7 (of 15)**

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.

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

1. How often did you:

Prepare for class often
 Attend class always
 Participate in class always
 Complete assignments always
 Meet with professor outside of class sometimes

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

The theorem-definition sheets were one of the most efficient methods of studying I had in the course. It was a great way to recapitulate whatever we learned during the week, and a solid help for every homework. The second most effective method for helping myself in the course was visiting the Q-Center Fellow Wenzhi Tseng after I had a grasp of the exercise I was working on, and I sometimes visited Prof. Alvarado (I visited him less often because of schedule conflicts). Both were incredibly helpful and they usually provided intuitive and detailed explanations of what I had to do.

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?

Prof. Alvarado was great at conveying his enthusiasm for Analysis. For context, Analysis is sometimes regarded as boring by the mathematics community or is not as popular as other disciplines in Mathematics (e.g., Algebra) but his enthusiasm was so contagious that Analysis felt really exciting. I think taking a class with Prof. Alvarado has really pushed me to think beyond

my intuition. Often times I would find myself exploring further topics that Prof. Alvarado mentioned in class and he made me realize how most of the assumptions we have about mathematics need to have a solid foundation. He has made me a more concise, precise, and sharp mathematician in a semester.

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

I gained a solid foundation to further my study of Analysis; as the course title says, this is merely an introductory course for a rich field of study. But perhaps a stronger skill I learned is how to be more precise when writing mathematical proofs. Professor Alvarado made sure to carefully analyze our proofs and to show us how to make our arguments air-tight. In fact, in two of my exams, I got lower scores than I expected, but upon inspecting my feedback, I immediately agreed with Professor Alvarado's feedback. His feedback showed me how to be more detailed in explaining my thinking process in mathematics.

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?

Throughout the whole course, it was evident how carefully Professor Alvarado planned out the course and each assignment. He was crystal-clear at every stage in what he would expect of us at each exam and homework. The solid organization of the course and its consistency helped me stay on top of my assignments. For example, he constantly provided exam guides where he detailed what we should and should not know. Professor Alvarado took the time to thoroughly explain questions that helped everyone gain a better grasp of the current material and constantly made sure to explain the thinking process behind every proof we did in class.

The transition from 4 to 3 days of lectures was accomplished effectively. To do so, Professor Alvarado assigned some minor results we would have proven in class to the homework. This made the class feel like we still were doing a similar amount of work as we would have done in a 4-day schedule.

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 first impression of Prof. Alvarado was that of a video playing at 2x speed. He is a highly energetic and enthusiastic person who made everyone's time in the class more enjoyable. Professor Alvarado was incredibly kind and helpful to me throughout the whole course. I remember when we talked about how I felt I was underperforming in the course, and he kindly pointed out how that was not true. I'm very fond of the interactions we had outside of class because he made me feel included whenever I felt like an outsider to the math major.

Prof. Alvarado has been very reassuring to me and to the people I know in the class. Specific evidence of the welcoming environment he creates is that his office hours were usually full on any day. He quickly responded to any email we sent him with questions (usually would take him less than 2 hours to respond provided we sent the email at a reasonable hour). He made sure that no questions went unanswered in class and would usually take time after class to talk to students who were confused about a certain concept.

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

#### 8. Additional comments:

Professor Alvarado puts great care into his pedagogy and made Analysis (an otherwise significantly challenging subject) really enjoyable. He cares a lot about his students and his teaching so it would be simply a mistake to not keep him at Amherst College. I hope he continues to inspire other students like me in the department who feel like outsiders all the time. He is a living example that you can accomplish a lot by putting your heart into what you do.

### **EVALUATION: #8 (of 15)**

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.

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

1. How often did you:

Prepare for class often
 Attend class often
 Participate in class rarely
 Complete assignments always

• 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:

Making sure to not only review my notes, the course book, and theorem/definition sheets but also do as much of my problem sets while at Professor Alvarado's office hours or Wenzhi's office hours. It allowed me to ask lots of questions as well as get my questions and uncertainties answered quickly.

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 made sure to try to have some sort of real-life application relate to or tie into whatever we were talking about during that day's lecture.

learning to ask for help and reviewing my notes close to daily. making a theorem definition sheet was new to me but is something I quickly found to be useful.

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 the homework followed quite nicely from the lectures and what material we we were to read in the book which was nice.

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 extremely accommodating and made efforts to check in with me about how I'm handling the course throughout the semester and made time to meet with me outside of office hours when I felt lost or behind and had questions. He is very encouraging and supportive which was extremely helpful especially when I felt I was having trouble or falling behind in the class.

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

8. Additional comments:

I really enjoyed the class and Professor Alvarado's attitude and passion for teaching were a big part of why.

### **EVALUATION:** #9 (of 15)

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.

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

1. How often did you:

•	Prepare for class	always
•	Attend class	always
•	Participate in class	often
•	Complete assignments	always
•	Meet with professor outside of class	often

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

Attending office hours with Professor Alvarado was incredibly helpful for my success in this class. He not only walked us through our questions, he showed an interest in how we were doing outside of math.

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 brings an infectious energy to class every day. Despite getting 3-4 hours of sleep at night, he is wired and ready to talk about math. He would constantly reference previous examples and give perspective to each new concept we tackled.

I learned the importance of truly understanding the capabilities of each new theorem and definition. Given one little fact, the opportunities of what one can do with that fact skyrocket. This is an idea Professor Alvarado often hinted at in his office hours.

# 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?

While the pace was quick, the content was all manageable. The problem sets were tricky, but Profesor Alvarado always seemed available for questions. His aim was to have you understand a tricky problem rather than provide a rote answer.

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 appreciated questions in class and often encouraged them. Anyone could speak up when they wanted, and Professor Alvarado engaged in the class when running through examples building off our previous knowledge. Outside of class, Professor Alvarado was extremely personable, and it's been a pleasure getting to know him this past semester.

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

#### 8. Additional comments:

To Professor Alvarado, listen to The Prophet by Cal Tjader. He's a vibraphone player. It's a little blend of chilled-out Latin jazz and bebop

#### **EVALUATION:** #10 (of 15)

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.

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

1. How often did you:

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

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

Meeting with the O fellow and going to TA hours helped me keep up with this course 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?

Professor Alvarado did a great job of showing us graphs and pictorial visualizations of what we were learning.

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

I honed my proof writing skills.

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 made it at times challenging to keep up.

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 kind and high energy!

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

8. Additional comments:

Not answered

# **EVALUATION:** #11 (of 15)

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.

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

1. How often did you:

•	Prepare for class	always
•	Attend class	always
•	Participate in class	often
•	Complete assignments	always
•	Meet with professor outside of class	often

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

I would be sure to show up to every class as that is where we learned most of the material. I also made sure to complete every problem set. Often times this required me to go office hours with either Professor Alvarado or the Q center. Making sure I understood how to complete the homework was really helpful for the exams and making sure I never felt surprised about the material on them.

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 started the semester off with a question. He asked us how we could prove the fundamental theorem of calculus, which everyone in the class was familiar with. I personally never questioned the theorem or how to prove it. Throughout the semester, I knew that everything we learned would eventually connect back to this proof. It was exciting to finally reach the end and know that all of the work we completed had a purpose.

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

In this class, we learned the basics of real analysis. This included many theorems and definitions. We also worked on proof writing throughout the semester both in class and through problem sets.

# 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 know this semester was a bit off since the class switched from meeting 4 times a week to 3 times a week, however it never felt that way. There was never a moment in the class that felt rushed or like we were missing out on class material. Professor Alvarado is a quick writer but it was easy to keep up with him during in-class lectures. The expectations for this class and assignments were made very clear.

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 never shut down anyone for getting something wrong in class. In just about every lecture he would pose a question that required students to think back to a certain theorem. The answer was meant to help every student in the class get familiar with the materials. Professor Alvarado hosted office hours throughout the week which I always felt welcome to. It was easy to feel valued in the class as Professor Alvarado made an attempt to connect with everyone. In the few minutes before class there would always be conversations about new music, the world cup, how people are feeling, etc.

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

#### 8. Additional comments:

Overall, Professor Alvarado is an amazing professor. His class is by far the best upper level math class I have taken at Amherst. I have always felt a bit out of place in my math classes but that was not the case in this one.

### **EVALUATION: #12 (of 15)**

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.

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

1. How often did you:

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

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

Going to the Q-Center was particularly effective for improving my understanding, as well as completing the problem sets.

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?

This course & instructor stimulated my thinking because real analysis is a mathematical concept which explains why a lot of other math I have already done works. I really liked that the whole year we were working towards proving the fundamental theorem of calculus (which we did on the last day), because it made a subject which can seem really theoretical seem more concretely applicable.

The most significant skills I gained from this course are about the level of detail needed for a complete proof. Additionally, I developed a solid understanding of the basics of real analysis, which was interesting as it explains a lot of other math, such as calculus, I had learned about before but did not know how it worked.

# 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 liked the overall design of the course. Information was presented quickly and efficiently, yet I never felt like I lost out on understanding because of it (this seemed especially impressive having just shifted from 4 days a week to 3 days a week). Additionally, I thought that the weekly problem sets were an appropriate length and difficulty and provided an accurate overview of the core topics in each unit. I think the midterms were also very fair in length and material (though maybe I would have appreciated having the last midterm a week earlier as it was on top of finals.

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 incredibly engaged with the course and his students. He always made himself available outside of class to meet, and is extremely quick to answer emails. Additionally, he encourages all student participation in class, but recognizes that students can be actively participating without raising their hand for every question.

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

#### 8. Additional comments:

The only thing I think could have been improved about the course would be to have posted homework solutions after the problem sets were due and graded. It is difficult to learn from mistakes if you never see a correct alternative. Of course, you can go in and ask about specific questions, but it is not reasonable (for student or professor) to ask about small improvements for every question.

# **EVALUATION:** #13 (of 15)

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.

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

1. How often did you:

•	Prepare for class	often
•	Attend class	always
•	Participate in class	rarely
•	Complete assignments	often
•	Meet with professor outside of class	often

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

Going to the office hours was very helpful. I tried to get as much as I could during the office hours in both material and by engaging with Professor Alvarado. I went to his hours most weeks and I not only got a lot of help on my homeworks but also got to build a better relationship by having the exposure to talk to him.

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 animated and has a lot of energy during his lectures. I feel that this energy really shows his passion for teaching and for math, which in turn made me really appreciate what we were learning.

I got better at my problem solving skills. I got better at my proofs in both the rigorous sense and the conciseness sense.

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 the material was presented clearly throughout the course. It was also clear what was needed to be done and how to do it. I think that lectures were a bit fast paced. I felt it was difficult to keep going during the lectures at times. There was a lot of material every lecture. I feel that that is just the nature of how much is being presented during the course though. I think the pace of the overall course was nice 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.

Professor Alvarado was very good at answering everyone's questions clearly during class. During office hours he was really good at engaging with us about how the material connected to future classes and/or other classes. The only thing I wish was better was that there was some more leniency on deadlines. I often felt burdened trying to get my assignments done. I think adding another late homework would have helped in giving me a breather.

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

8. Additional comments:

Not answered

# **EVALUATION: #14 (of 15)**

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.

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

1. How often did you:

•	Prepare for class	often
•	Attend class	often
•	Participate in class	always
•	Complete assignments	always
•	Meet with professor outside of class	often

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

The Theorem/Definition Sheets and the HW were incredibly helpful; they prepared me well for the exams. Doing the HW on time, and engaging with problems on my own and with the TA and Q fellow was incredibly helpful. Attending every class was also important.

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 lectures were very well structured and helped me connect topics all over the semester. The visuals helped me develop the skill of looking at the same topic form different perspectives in Mathematics.

I learnt a lot about Analysis. I also learnt a lot about rigorous proof writing. I also developed proficiency in LaTeX and just, in general, learnt skills to learn and research about 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?

The pace was great; it was just fast enough that it was challenging and fun. The lectures were amazing, and the format where the instructor's notes are accessible after class was great. The expectations were made very clear, which I appreciate, especially since it was built on mutual respect for the class, the content and our roles as teachers and students. The assignments were great, helped build on material from class and served as material for future classes.

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 interaction with my instructor was nice. I always felt comfortable asking questions not just about math but regarding college and life as a mathematician. The environment was always super inclusive.

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

#### 8. Additional comments:

This was my favourite class until this point at Amherst. The lectures and the assignments were incredibly well-structured. Even though I had not a lot of experience with proof writing, I believe I was able to develop it in this course.

# **EVALUATION:** #15 (of 15)

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.

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

1. How often did you:

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

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

The most effective learning strategies for me in 355 were keeping up on the theorem definition sheets and regularly attending office hours (both Professor Alvarado's and at the Q Center).

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?

This course challenged me to think about concepts that I've learned and used in math throughout the years in a new, more complex and intricate way. Professor Alvarado pushed us to think outside of our comfort zones and challenge ourselves to provide rigorous, clear proofs.

The most significant skills that I developed in this course were argumentative, problem-solving, and proof-writing skills. I became better at making convincing, clear, concise arguments and articulating my thoughts throughout 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 that Professor Alvarado was very clear in his expectations for his students and he was very accessible to us, both by answering questions in class and making himself available for regular office hours. He does a very good job of making the course material clear and understandable, though the class does move at a very quick pace. I also think that he has been very fair in his grading of exams.

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 always very engaged with the class and it is clear that he truly cares about his students and their success. He is very passionate about what he teaches. He challenges us through assignments and exams but provides the support that we need to be successful in the class. He has cultivated a very inclusive, comfortable learning environment, has always been very available when I need help, and has provided constructive feedback on my work.

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

#### 8. Additional comments:

This course has been very educational and enjoyable. Thank you, Professor Alvarado, for a great semester!

# **EVALUATION:** #16 (of 15)

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.

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

1. How often did you:

•	Prepare for class	always
•	Attend class	always
•	Participate in class	rarely
•	Complete assignments	always
•	Meet with professor outside of class	often

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

Office hours every week

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?

challenging problem sets required extra effort

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

training my mind to problem solve... how to work to find solutions to challenging problems and explain clearly (proofs) how to solve them

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?

Challenging but good pace

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 passionate, kept the class in a good mood, office hours were very fun and he was always available

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

8. Additional comments:

Despite the challenging material / pace at times, the he is very passionate about this course and does a great job of being flexible with his students and ensuring no one falls behind in the material

# **EVALUATION:** #17 (of 15)

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.

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

1. How often did you:

Prepare for class often
 Attend class often
 Participate in class always
 Complete assignments always
 Meet with professor outside of class sometimes

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

I found rereading the professor's proofs to be the most helpful for doing the HW or understanding how to write rigorous proofs.

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?

Prof. Alvarado always made an effort to discuss the history or applications of theorems that we studied in class, which enhanced my understanding of the theorems and made it more meaningful in my head.

I have become much better at reasoning through a problem logically and writing about math in a rigorous way.

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, maybe slightly too fast at the end. The professor always made his expectations very clear. Assignments were time consuming but reasonable, and helped with 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.

I found Prof. Alvarado to be very accessible in and outside of class. He responds to inquiries over email very fast and is often available to chat/answer questions after class.

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

8. Additional comments:

Prof. Alvarado is great! Would like to take more classes with him.