MATH 16100 41 - Honors Calculus I - Instructor(s): Andreas Stavrou

Project Title: **College Course Feedback - Autumn 2023**

Number Enrolled: **25**
Number of Responses: **19**

Report Comments

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

Creation Date: **Friday, February 2, 2024**

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

Comments
Proof writing ability and mathematical thinking.
This course goes over the fundamentals of proof based math, and serves as a sort of introduction to mathematical analysis. It works by building up and proving from scratch fundamental concepts in mathematics. While these are areas I was familiar with from prior coursework I have completed, this provided a very strong in–depth coverage of these topics.
Unfortunately, the delta–epsilon definition. It caused me so much pain. General proof writing, using proof by contradiction, and induction. These are very fundamental to writing proofs. One thing you need to do is take a bunch of notes and learn how to apply what you've learned. It sounds simple, but there is so much to apply (this isn't exclusive to notes in class, but really helps to remember the proofs you've done on psets) and it feels overwhelming sometimes.
How to write proofs and think through proof–based problems.
Constructing R, writing proofs.
I gained a newfound understanding and appreciation for the mathematics behind limits, derivatives, and functions.
How to write proofs and how calculus works on a fundamental level.
How to write proofs, particularly the delta–epsilon proofs for limits.
This was my first proper introduction to proof–writing, and I also learned a lot about thinking outside of the box instead of purely computational math.
_Mathematical rigor to learn how to write proofs _A new perspective about maths
Learned how to read and digest proofs, and began to develop proof–writing skills. This course built a critical foundation for a future in mathematics.
We began by constructing the real numbers, developed the rules of functions, and introduced differentiation, ending with select topics on inverse functions. The course is really about making the calculus you learned in high school rigorous; Professor Stavrou said the course should really be called "Intro to Analysis."
I mostly learned how to form proofs and self–advocate and collaborate with others on hard problems. Additionally, this class requires a lot of resiliency in the learning process, especially for those who don't have previous proofs experience.
Proof writing, and to be creative when trying new proofs
How to formalise mathematical proofs
The methods of writing proofs and some basic theorems in calculus.
The fundamental building blocks of mathematics. I learnt about the nature of numbers and their properties, and how they act as the foundation for further layers of mathematics.

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

Comments
The approach to mathematics really introduced what higher–level math was like at university.
Lectures were excellent; Dr. Stavrou is a wonderful teacher and lecturer, and he is very easy to follow and learn from. Lectures both introduced and explained concepts, as well as provided sufficient examples on how to apply these. The assignments were excellent practice for assessments as well.
Office hours helped a lot with learning. I mainly went to office hours for pest problems because some of them were super hard. Half to two thirds of the class usually goes to office hours. Don't know how the other half/third is surviving, but oh well. Lectures were good, but it was sometimes hard to understand everything and there wasn't a lot of time for asking questions. You can ask questions over email or during office hours. Not a lot of time after class.
Lectures were extremely important as well as office hours. Lectures taught you all the material and office hours helped with understanding and working through the problem sets
lectures are good, assignments are good,
The lectures of this course were very engaging and provided both the knowledge and the practices which were required to fully understand and succeed in the course. While I do certainly enjoy mathematics, even if I weren't to, the lectures would've still been engaging and interesting.
The content in the lectures was mostly useful. The instructor presented the content in a very engaging way. Every minute of class time was use scrumptiously.
In the lectures we proved the most common theorems in calculus and learned proof–writing techniques that were transferrable to the questions in exams and assignments.
This course only officially included lectures, and they were well organized and very conducive to my understanding of the material.
This course is very demanding. It deals with the basics of calculus but in a deeper and very rigorous way. The assignments (PSETS) were very challenging some weeks but the professor always guides us and gives us hints during office hours. The only problem is that the office hours are generally scheduled very early in the afternoon so many students are not able to benefit from the explanations that the professor adds outside of regular lectures.
Lectures and office hours were particularly helpful. Lectures were important for understanding core concepts and theorems, and office hours were a great discussion time to work with peers on the homework problems with guidance from the instructor.
In lectures we mainly proved sort of broad theorems that we would then apply on our homework to prove new results. I personally found office hours to be more helpful than lecture since you can ask super specific questions.
The class lectures are useful and so are office hours — seeing the types of tricks and proof techniques being shown in both settings really helped me develop some sort of understanding for proof–based math.
Lectures and office hours were great, the course is challenging but if you go to both regularly it’s manageable. Also, the professor is very nice and creates a collaborative informal environment where you work together to try to solve the problems (and have philosophical discussions on whether math is a social construct)
Office hours were very useful
Learning primarily came through the problem sets and discussion surrounding these. Additional discussion with the instructor was also very much valuable though typically orthogonal to course material.
I think the assignments help us to learn the concepts deeper and help us to prepare for the mid–terms and finals.

Please respond to the following:

	Mean	Median	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
This course challenged me intellectually.	4.61	5.00	0.00%	0.00%	5.56%	27.78%	66.67%
I understood the purpose of this course and what I was expected to gain from it.	4.78	5.00	0.00%	0.00%	5.56%	11.11%	83.33%
I understood the standards for success on assignments.	4.33	4.00	0.00%	0.00%	11.11%	44.44%	44.44%
Class time enhanced my ability to succeed in graded assignments.	4.72	5.00	0.00%	0.00%	0.00%	27.78%	72.22%
I received feedback on my performance that helped me improve my subsequent work.	4.28	4.50	0.00%	5.56%	11.11%	33.33%	50.00%
My work was evaluated fairly.	4.56	5.00	0.00%	0.00%	5.56%	33.33%	61.11%
I felt respected in this class.	4.78	5.00	0.00%	0.00%	0.00%	22.22%	77.78%
Overall, this was an excellent course.	4.83	5.00	0.00%	0.00%	0.00%	16.67%	83.33%

Additional comments about the course:

Comments
This is probably one of, if not the best math course I've had the fortune of taking in my life; Dr. Stavrou is probably one the best instructors I've ever had. I really loved this class; it's reminded me why I like math.
The best math course I've ever taken in my life.
The professor is very demanding in his Psets, but the satisfaction at the end is immense.
It is helpful to come into 16100 with some basic knowledge about proofs and proof writing. If you are considering taking this course, it may be worthwhile to spend a week or two looking over some of the early Spivak chapters (available online as a PDF) or find other helpful resources.
The grading is a bit harsh with how many points are taken off, but the letter grades on tests are more lenient.
Dr. Stavrou is a great instructor! It would be nice having a slightly slower pace in certain sections with a lot of material to cover but overall it was a manageable pace.
It would be very helpful if the professor could share the lecture notes, but it is a very good course in general.

I would recommend this course to:

	No	Yes
Highly-motivated and well-prepared students	0.00%	100.00%
Anyone interested in the topic	22.22%	77.78%

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

Comments
Really clear at explaining and clear writing on the board.
Dr. Stavrou is very good at explaining concepts in an easy–to–follow way; I think this made the lectures easy to follow and learn from.
Examples. If I never had example for math, I wouldn't be a math major lol.
I think his lectures were very well–structured and clear. I had almost no trouble understanding the lectures and frequently went back to my notes when working on the problem sets.
I think one great thing was including examples and giving demonstrations of theorems and how we would go about proving each of them in each topic.
Professor Stavrou's lectures were very engaging and taught at the perfect pace. I didn't feel overwhelmed nor bored in the lectures.
His intelligence and openness to discuss topics and methods from outside the textbook.
The instructor was clear and well organized in his lecturing, and very helpful and open to questions outside of class as well.
Office hours
Discussions during office hours probably contributed the most to my learning. Aside from talking about ways to approach the homework problems, we also discussed what our future paths in mathematics might look like and interesting questions about the nature of math in general. Professor Stavrou made a point to ensure that every person who came into office hours was able to ask a question, was open and encouraging, and is singularly responsible for my continual interest in this course and mathematics in general.
Laying out theorems in class was a good introduction to topics that we then went into greater depths with on our own.
Office hours were really helpful! The problem sets have very difficult problems and Dr. Stavrou is always willing to help start to see a potential way to approach the problems. Often times, students are also allowed to get up on the board during office hours, which is in contrast to the lecture–based class style, which also helped me understand where my proof strengths and weaknesses were.
Office hours and he was always open and available to answer questions or curiosities.
How he broke down proofs
The intelligent selection of problems and seriousness of discussion of material.
The instructor is proactive and willing to answer questions and explain what the students do not understand.

What could the instructor modify to help you learn more?

Comments
Honestly, I think the course is perfect as–is.
Release correct answers for psets and make expectations clearer.
I would have liked a little more time to ask questions during class.
Nothing, this man is amazing.
N/A
Office hours at the end of the day: 4:00/5:00/6:00 pm instead of 1–2 pm for students who have classes.
A link to some LaTeX how–to videos may have been helpful for me and saved time at the outset of this course.
Sometimes, we go pretty fast through lecture since there's so much content to cover. Having lectures notes available for anything you missed would be helpful.
Having a bit more time to answer questions in class or to have students come up to the board to solve proofs would be helpful, but the nature and pacing of the class may make that difficult to implement.
Post p–set solutions after we've turned them in to be able to view the "ideal" way to solve each problem
Go slower in class
Nothing really comes to mind.
It would be very helpful if he could share his lecture notes before/ after the classes. This will greatly help students who cannot concentrate on lectures while taking down the notes. Although they can take photos, the photo quality cannot be as good as scanned lecture notes.

The Instructor . . .

	Mean	Median	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
Organized the course clearly.	4.67	5.00	0.00%	0.00%	0.00%	33.33%	66.67%	0.00%
Presented lectures that enhanced your understanding.	4.83	5.00	0.00%	0.00%	5.56%	5.56%	88.89%	0.00%
Facilitated discussions that were engaging and useful.	4.79	5.00	0.00%	0.00%	0.00%	16.67%	61.11%	22.22%
Stimulated your interest in the core ideas of the course.	4.78	5.00	0.00%	0.00%	11.11%	0.00%	88.89%	0.00%
Challenged you to learn.	5.00	5.00	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
Helped you gain significant learning from the course content.	4.82	5.00	0.00%	0.00%	0.00%	17.65%	82.35%	0.00%
Was available and helpful outside of class.	5.00	5.00	0.00%	0.00%	0.00%	0.00%	94.44%	5.56%
Motivated you to think independently.	4.76	5.00	0.00%	0.00%	5.56%	11.11%	77.78%	5.56%
Worked to create an inclusive and welcoming learning environment.	4.89	5.00	0.00%	0.00%	0.00%	11.11%	88.89%	0.00%
Overall, this instructor made a significant contribution to your learning.	4.94	5.00	0.00%	0.00%	0.00%	5.56%	94.44%	0.00%

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

Comments
He should be more detailed when he corrects psets. It would also be more helpful if we have a sheet at the end with the expected answers/proofs.

The TA/CA or Intern. . .

	Mean	Median	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
Facilitated discussions that supported your learning.	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Gave you useful feedback on your work.	3.00	3.00	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%
Stimulated your interest in the core ideas of the class.	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Challenged you to learn.	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Helped you succeed in the class.	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Was available and helpful outside of class.	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Overall, this individual made a significant contribution to your learning.	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%

Is this class a requirement of some sort?

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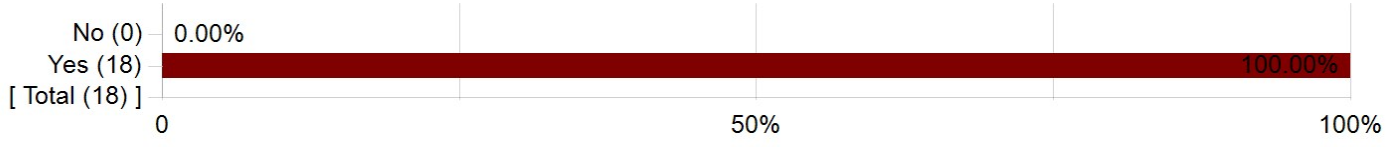
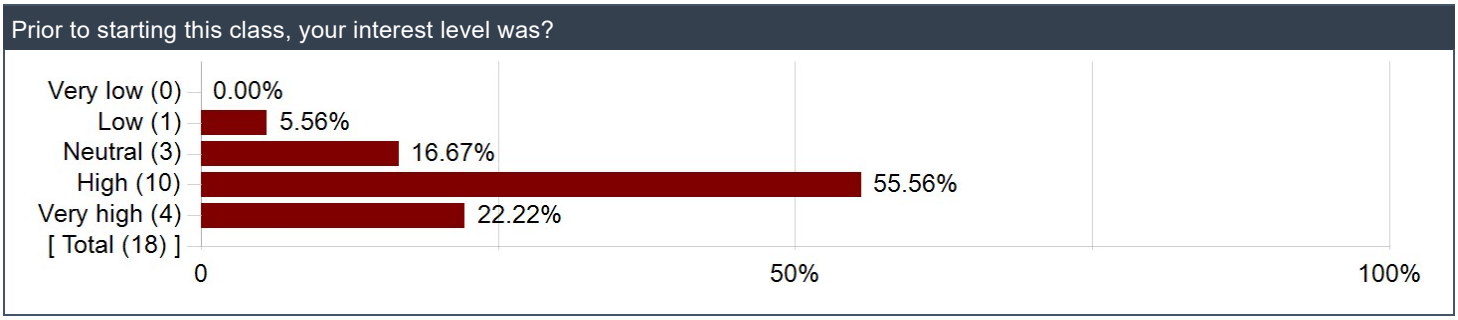
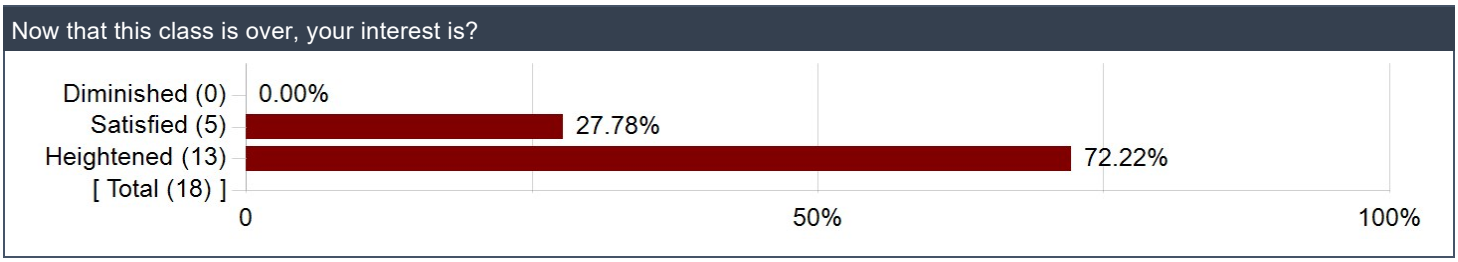


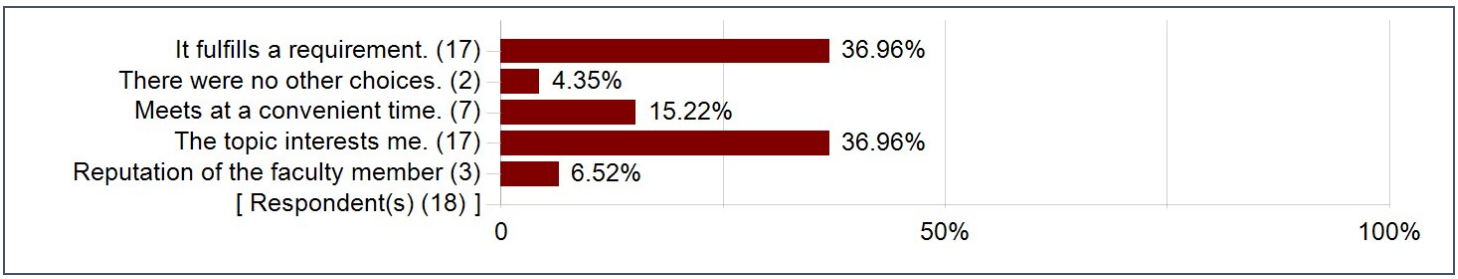
Prior to starting this class, your interest level was?



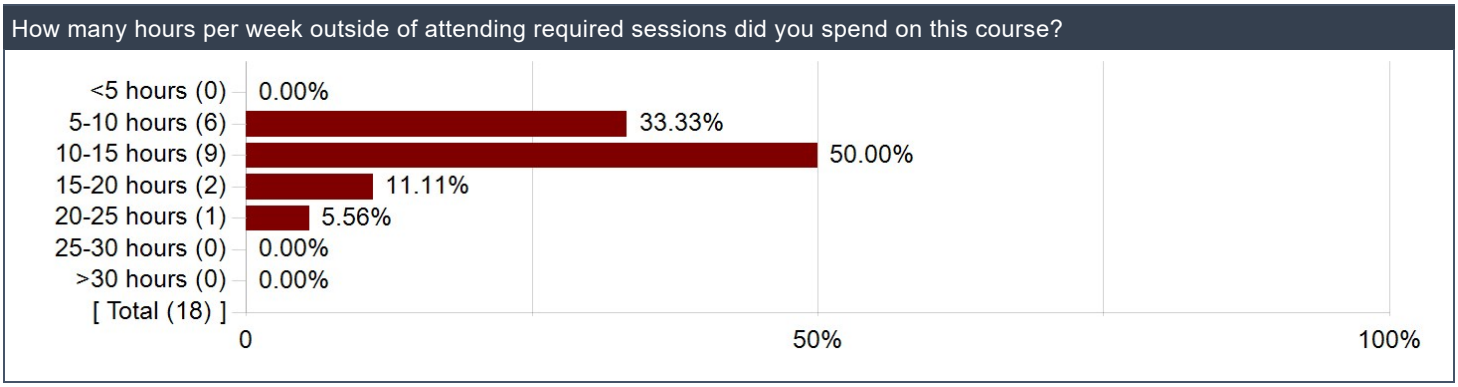
Now that this class is over, your interest is?



Why did you choose to take this course? (Select all that apply)



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



What proportion of classes did you attend?

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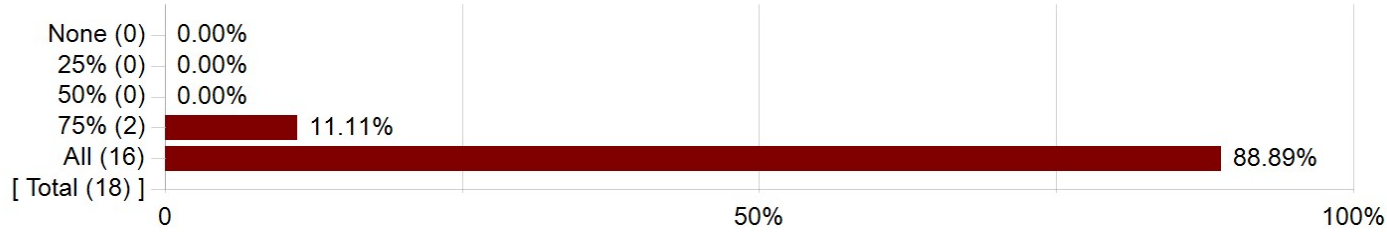

Please comment on the level of difficulty of the course relative to your background and experience.

Comments
Fairly difficult, but manageable.
This course felt well aligned with my background; I've definitely taken harder classes before. This felt appropriately challenging without feeling overwhelming.
I had some experience proof–writing for number theory and combinatorics. None of that was useful for this class lol. I also was fortunate to take 2 classes above bc calc, but those weren't useful either. This course is very different from all other math classes and you really need to focus on adapting and seeing/applying material. Having a lot of confidence in yourself and doing well on the psets is really difficult, but the midterms aren't that bad since a lot of the material comes from non–difficult problems in the psets.
I took the AP Calc BC exam but my classes had almost no proof writing. The concepts themselves were familiar (continuity, limits, derivatives, etc.) but learning to write proofs took some time. I definitely had to work hard and struggled a bit at the beginning, but got the hang of it by week 2–3.
Relative to my background and experience, it was not incredibly difficult, but still somewhat hard.
It is just difficult enough that I feel intellectually engaged but not so difficult that I would give up on myself. It is very different from the computation–heavy math I did in high school. I would recommend every one to try it out even if they do not identify as a math major before.
While I had experience with Calculus, it was mostly computational, so the proof–based assignments were daunting in the beginning and continued to be challenging, but I found it interesting and enjoyed it despite the difficulty.
Difficult at the beginning – very difficult mid–quarter – difficult but easier at the end of the quarter with derivatives
As someone with no background in proof reading or writing, this course was very difficult. I took up to BC Calculus and found that I was at around the same level as students who had taken higher level math courses (e.g. Multivariable Calculus or Linear Algebra). For me, the first few weeks of this course were the most difficult because you are expected to find your footing quickly.
Very different from AP Calc in high school. In AP you are just given results like IVT and MVT, but here you need to prove them first.
This class definitely is difficult, especially for individuals who never had proofs experience before and who have other intensive classes. The difficulty does increase after add–drop so keep that in mind when thinking about class selection.
Definitely challenging but since I was already partly used to looking at the theory in maths I found some familiar ways of working.
Not terribly difficult. As long as you stay on top of the work, nothing is too daunting.
Moderately hard