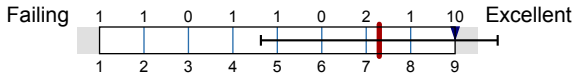
M.J. ANDREWS
Evaluation of Instruction Program Report
181: MATH 95 LEC 1: TRANSITN-UPPR DIVSN
No. of responses = 17
Enrollment = 22
Response Rate = 77.27%

Survey Results

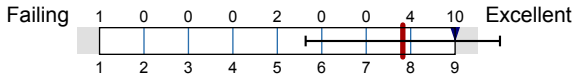
1. UCLA Department of Mathematics:

1.1) How would you rate your instructor as an effective teacher?



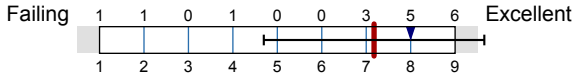
n=17
av.=7.29
md=9
dev.=2.66

1.2) How would you rate the availability and helpfulness of your instructor outside of the classroom?



n=17
av.=7.82
md=9
dev.=2.19

1.3) What is your rating of this course independent of the effectiveness of the instructor?



n=17
av.=7.18
md=8
dev.=2.48

Profile

Subunit: MATH
Name of the instructor: M.J. ANDREWS
Name of the course: (Name of the survey) 181: MATH 95 LEC 1: TRANSITN-UPPR DIVSN

Values used in the profile line: Mean

1. UCLA Department of Mathematics:

1.1)	How would you rate your instructor as an effective teacher?	Failing		Excellent	n=17 av.=7.29
1.2)	How would you rate the availability and helpfulness of your instructor outside of the classroom?	Failing		Excellent	n=17 av.=7.82
1.3)	What is your rating of this course independent of the effectiveness of the instructor?	Failing		Excellent	n=17 av.=7.18

Comments Report

2. Comments:

2.1) Please use the space provided for any comments you wish to make which are pertinent to the educational process. These may include all aspects of the course: teaching, examinations, grading, textbook, etc.

- Overall I felt the course was managed very well, professor Andrews maintained the utmost transparency with his students throughout the quarter and made himself available to answer my questions when I encountered confusion. 10/10 Would recommend to a friend

- A good teacher with patience and humor.
  Design a well class teaching method.
  Sometimes speak a bit too fast.

- I have never had a professor who cares about his student's success as much Professor Andrews does. He is very approachable, and he is an excellent instructor. I personally believe his teaching strategy for the first half of the class was very effective, and I felt like I was learning a lot because of it. Although Professor Andrews changed up the teaching strategy because of the low midterm results, I don't think the teaching strategy was ineffective. I just think that it was the first UCLA test for most of the class, and we were all a bit nervous.

- I think the lecture is quite good and helpful, and professor explain almost everyting properly. I think maybe adding more knowledge to this course will make it more helpful. And it may benefit if the math language system is displayed at the beginning of the course. And discussion offers a great opportunity for us to conform whether we have a good grasp such that we can express what we think explicitly(if we just think we understand a thing but actually not, we will not be able to explain to our partners), but sometimes I find I'm just trying to say something rather than learning something if the discussion lasts a long time. I appreciate the time we were given to communicate directly to professor and TA.

- I think this class is great for transitioning into upper math. The class has definitely taught me the proper way of writing proofs. Although I thought the professor was very knowledgeable and does a great job in getting the students to understand the material, I think there could be some improvements to help us learn better. Grading based on participation is great; I don't normally ask questions in class, but this way of grading has forced me to do otherwise, and so I feel that I learn better by asking questions. But writing proofs in the beginning in class in front of anyone seems to only benefit the person who is writing the proof. In other words, I only feel that I benefitted if I was the one who presented, and not if someone else presented. This is because I have a hard time trying to understand other people's proofs. They have a different approach to making a proof, so trying to understand their way of thinking makes me not really pay too much attention to what they did.

  I actually liked how the class was taught later on in the course when the professor went around and helped students individually with the problems they are working on. This gives me a chance to have my work be checked so that I can make sure that I am understanding everything. It would have been nice though if the professor also lectured a bit in the beginning of class, because just reading the material without having any actual lectures just wasn't quite enough for me.

  Finally, I think quizzes would have been nice to have for the class. The homework was good, but sometimes I don't really bother too much with reading the comments for my homework. For quizzes, I would have thought about my mistakes more than mistakes from homework problems.

- I wasn't the most enthusiastic about the "flipped classroom" approach and that 35% of the grade for the class was for participation, because I honestly feel that interacting with your classmates is a very mixed bag, because some of them are gifted, some of them read, and some are the most clueless idiots who miss the material entirely. This will no doubt give away who I am, but I've always been enthusiastic

about math; I've been a member of math clubs for as long as I can remember, I taught myself calculus in the 10th grade with some books my sister had lying around, and I've always found joy in solving problems and reading math. I was honestly expecting this class to be a breeze and that I would sleep my way through some of these proofs. Thanks to Michael, it would be an understatement to say that my preconceptions regarding my own ability and this class have been challenged. This class was very challenging for me, because my strengths have always been in seeing problems and analyzing systems; making a model or solving it with numbers. I always took proofs to be something you could just get by turning the algebra or calculus crank, but unfortunately, that could not be further from what math really is. Math is really about being thorough and contains a good amount of subtlety, which I think is what makes it so appealing. I had covered quantifiers many times before, but there was a moment in office hours where you described how to actually use quantifiers to get proofs, and I think it was at that exact moment when I began to truly see the beauty in what you could do with them. I liked mathematicians like Fourier and Gauss because even without the rigor, they accomplished so much within their lifetimes, and I was honestly very skeptical about Cantor. But I think you've taught me that without the actual logic, sets, and rigor, trying to teach someone math is like pouring sand into their hands.

I still remember all of the series formulas from calculus, along with all the tests for convergence, derivatives and integrals. I loved complex analysis because of the powerful integrals you could perform on closed contours or pie slices, and I was so enchanted by residues and the fact that information on the exterior gave you information about the whole function on some disk, etc. People in the math club at my school make fun of me for liking calculus so much, and I think I've just begun to understand why that is. I've approached math my entire life like a computer, and it has honestly been very frightening to discover that my understanding of math is limited even in the subjects that I had thought I mastered and had received an 'A' in. If I was sent back to the Dark Ages, I would not be able to rebuild any math I've learned from the ground up (yet).

I've always believed that it is at our low points we have the potential to learn the most. That being said, this class was a serious wake up call; I think the most important thing I will be taking away is to always verify things for yourself before just blindly accepting them to be true and memorizing them.

But I think that I've gone on enough about my learning experience, there were alot of administrative matters which really checked a lot of boxes for me which you guys had done. Firstly, you were very enthusiastic about the material. I feel like far too often I've found myself in 100-person lecture halls where the professor comes in day-in and day-out unenthusiastically gave unmotivated theorems and problems to solve. So good on you for that, my favorite teachers have always been the ones who saw the material and immediately had their faces illuminate. Next, you basically wrote a book for this class, which I honestly felt was very helpful for unpacking things that I didn't understand in lecture. I feel like this and the comments for our homeworks really emphasize how much effort you and Kevin put into this thing. Lastly, you and Kevin held very frequent office hours, and it was very clear when you worked with students that you were flexible in that regard. I think all of the above qualities made me really want to be open-minded about the approach you guys took towards teaching this class; and I'm glad you guys stuck to your guns, because I think in any other way this class would have lost certain things in translation had you just sat in front of the board and lectured for 2 hours.

All that said, I think this course kind of fails in the 6-week period which it's taught. I feel like the reason that the midterm was such a slaughter was because the time to absorb the material just felt much shorter. While I would normally agree that it doesn't take that long to learn new math material if you're familiar enough with the machinery, I would disagree because for this class, we were expected to fully integrate ENTIRELY NEW MACHINERY, e.g. "why is this true" vs. "oh, this is probably true, now how do I use this to compute such and such?" Everything in my math experience up to

- Overall, I thought Professor Andrews ran the class very well.

  Things I like/would not change:

  1. The proof/homework assignments given at the end of class:

It seems like the proofs and questions were chosen with care and thought. Each question felt like it was relevant to what was taught in class, but also not too "hand holdy".

2. The first hour of part 1 and all of part 2:
I liked seeing other people's ideas from part 1 and the sort of independent/collaborative study with guided help from part 2. The notes read exactly like how professor Andrews would lecture, so those can just be read at home.

3. The writing tips for proofs:
I think Professor Andrews provided many tip/pointer on how a proof ought to be written so it could be clear to the reader what is happening, but also clear up the writer's mind.

I don't really have anything I dislike. Things I would change/add:

1. Make the proofs given at the end of each class mandatory:
There is a big difference in understanding a proof by reading it, and actually coming up with your own ideas to try to prove it. I dont really have much evidence to say this, but it seems like maybe a reason why the midterm went so poorly was because the majority of students did not actually attempt the proofs, but instead just took pictures of some of the ones presented/read examples from the notes. I'm not saying that's a bad thing to do, in fact I think its quite helpful, but if that is all that's done, then I think it can be a bit harmful. I say this because these students are coming in feeling like they will do well since they understand the logic of the proofs they've read, but have not gone through the experience of coming up with their own ideas, so when the occasion arises, they do poorly. Of couse, this is all speculation. I don't actually know what all the other students are doing, so take this with a grain of salt.

2. Something about reflecting:
(You can feel free to ignore this one) Personally, after I've done a proof that I'm happy with, I start to reflect on why certain things felt hard, why I made certain errors, why did a certain idea take so long to form in my head, or why some ideas came very easily to me (the good and the bad ones). I just usually do this since apparently I have nothing else better to do with my life, but I think it has helped me greatly with this class. I feel like this lets me better understand how I think and form ideas which, I think, is a big part in coming up with proofs. I sort of feel like maybe the other students could benefit from this too, but the problem with making this type of thing mandatory is that it's really susceptible to bullshit. Maybe a potential fix to this would be to make them share these thoughts in a group so they have the looming fear of not wanting too look like they're full of shit in front of their peers.

3. Emphasize sharing ideas:
This sort of already happens with the presentations, but I feel like after doing/attempting to make their own proof, having the students share how they have approached the proof will possibly expose everyone to a lot of different ideas. Again, this sort of already happens with the presentations, but with this, a lot more ideas get shared than just 2 or 3.

- The teaching was almost non-existent in this class. The structure of the class felt very sloppy and unorganized. There was no real benchmark for what we were working on nor what to expect. There was very little focus on the material and too much focus on expectations by the professor. I felt like I was expected to know certain things and was not given an explanation for concepts that were not previously introduced.

- the second part of the course was helpful.