



STAT 24300 1, STAT 30750 1 - Numerical Linear Algebra - Instructor(s): Alexander Strang

Project Title: **College Course Feedback - Autumn 2021**

Number Enrolled: **65**

Number of Responses: **30**

Report Comments

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

Creation Date: **Tuesday, April 19, 2022**



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

Comments
How to use matrices
I didn't really learn anything new in this class.
I did not learn anything new in this class.
Row-Reduction based algorithms, Projections, Spectral Linear Algebra. Applications
methods of solving systems, approaching problems/applications like they're linear
Linear systems, least squared problems, SVD
Theoretical basis of linear algebra and its actual applications
Fundamentals of Linear Algebra; this is a really vague statement but we learned a lot about matrix decomposition methods and subspaces.
Basic concepts of linear algebra, various matrix decompositions, applications of linear algebra
linear algebra and its applications
Linear Algebra and its applications
I learned all about vector spaces and different things you can do/learn from them. Some key concepts include rank-nullity theorem, eigenvalues and eigenvectors, and SVD decomposition.
Linear algebra, how to solve linear systems and its applications
Basics of Linear Algebra, Rank-Nullity Theorem, Fundamental Subspaces, etc
Linear algebra with a numerical (applications focus) Most useful and interesting class I've taken at UChicago. The applications focus is great
Eigenvalues, SVD
eigenvectors, row reduction, and other linear algebra content. Professor Strang also taught us real-life linear algebra applications which were really helpful in understanding how we can apply what we learned to actual models.
Learned the basics of performing calculations involving linear algebra, applications of linear algebra concepts, and topics concerning spectral linear algebra.
The basics of linear algebra, including row reduction, fundamental subspaces, eigenvalues/eigenvectors, different types of matrix decomposition, etc.
Linear algebra

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

Comments
HWs were very helpful
Anything I did learn through this class, was through lecture. Quite frankly, assignments in this class were abysmal and were extremely tedious with very little educational value.
The projects were extremely long and tedious with little benefit. The applications were interesting, but all value when the problems were to reduce large matrices by hand.
Lectures were the most useful.
Office hours were helpful Projects were pretty fun Coding aspect was interesting
Lectures were fantastic, projects were very very good to learn about actual usea of linear algebra
Lectures were the primary method of covering new material.
lectures were well organized and explained the course material well. projects showed us real world applications and were super interesting
2 lectures a week, taught the material
Homeworks and projects heavily reinforced the material.
Lecture and lecture notes were very helpful and organized. Assignments also really helped me learn the concepts and computations
Lectures were very very nice and easy to understand. Projects were hard but improve your understanding
Lectures are amazing. When he lectures by writing notes on his iPad, that makes the writing very clear. Please continue doing that. Office hours and review sessions are helpful Projects are very cool
Lectures were excellent, textbook didn't get a ton of use and didn't always align perfectly with the material. PSETs and exams were very reasonable (until the end), and the projects (there were 3) were long but added a ton of value to the course.
Projects were helpful learning applications and lectures helped us understand key content
The homework assignments provided substantial opportunity to practice weekly learned new concepts, and the projects provided ample opportunity to apply these concepts within the framework of such things as thermodynamics, population growth models, and ranking chess engines.
Lectures were the main source of learning for this class, with weekly problem sets and biweekly projects to help reinforce the concepts.

Please respond to the following:

	Mean	Median	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
This course challenged me intellectually.	4.19	4.00	7.41%	0.00%	7.41%	37.04%	48.15%
I understood the purpose of this course and what I was expected to gain from it.	4.50	5.00	0.00%	0.00%	7.69%	34.62%	57.69%
I understood the standards for success on assignments.	4.26	5.00	7.41%	0.00%	3.70%	37.04%	51.85%
Class time enhanced my ability to succeed in graded assignments.	4.44	5.00	0.00%	0.00%	11.11%	33.33%	55.56%
I received feedback on my performance that helped me improve my subsequent work.	4.15	4.00	0.00%	7.41%	7.41%	48.15%	37.04%
My work was evaluated fairly.	4.31	5.00	3.85%	0.00%	11.54%	30.77%	53.85%
I felt respected in this class.	4.41	5.00	3.70%	0.00%	3.70%	37.04%	55.56%
Overall, this was an excellent course.	4.19	5.00	3.70%	7.41%	11.11%	22.22%	55.56%

Additional comments about the course:

Comments
Moved very slowly, especially initially
N/A
I enjoyed it
This is tied with Self, for the best course I have ever taken. Strang is a great lecturer and puts in the effort to make the course great too. Projects were particularly interesting, even reading about the questions i didnt have to do. Give this man a raise. Highly recommend to all STEM students.
N/A
I loved this class
Keep the applications focus of the class Lectures were WAY too fast in the last 2 weeks. This needs to be fixed. You could condense the first 4 lectures into 3 and then get an extra lecture to talk about the SVD and its applications. Since the material in the first two weeks is much easier than the material in the last two weeks, I think this change makes sense, and students can always come during office hours to reinforce the early material. You could also skip over some of the less important points scattered in the different lectures to save time.
The best-taught math/stat course that I have taken at UChicago! Great lecturing, mostly reasonable pace and assignments, focus on applications and intuition
This is a course which challenges you. It will cover the basics but will also cover many things beyond. I highly recommend this course for those in STEM majors, particularly statistics and economics, or for those who have too much free time on their hands.
Professor Strang is a wonderful lecturer and very helpful outside of class. He creates beautiful and clear diagrams that use color and labels to make difficult concepts understandable. Highly recommend.

I would recommend this course to:

	No	Yes
Highly-motivated and well-prepared students	3.85%	96.15%
Anyone interested in the topic	19.23%	80.77%

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

Comments
Office hours
Ipad
the notes posted on canvas were better than the lecture
His style of explaining and emphasizing, clear notes and goals for each class, and meeting outside of class for additional help were all super helpful. Professor Strang actually cared about whether you understood something and gave useful advice for succeeding in this class. He explains a concept in different ways, so you can actually think about the relationships between them. I'm so glad I had him as a professor.
The instructor was very organized during the lectures with neat, detailed notes and pictures
AS above, lectures were basically perfect, great explanations, great answers to students questions.
Professor Strang was very thorough and clear with his lectures. I was able to understand the material very quickly.
Professor Strang's lectures were incredibly well done
Prof. Strang was a great professor who made adjustments as needed based on student feedback.
Professor Strang was hands down the best instructor I've ever had. I'm not exaggerating when I say that no one else could have explained as well as he did. He was very friendly, encouraged questions and always took the time to answer each student thoroughly. I've gained more from this class than any other I've ever taken. The pacing was perfect, the workload was perfect, the difficulty level of this course was perfect. Overall, this was a fantastic course with a fantastic instructor! I hope I get to take more of his classes in the future!
Professor Strang expressed unparalleled enthusiasm for linear algebra. His passion is so contagious that even someone not remotely interested in the subject at first, after hearing Strang speak, would most likely be invested. As someone interested in the topic prior to the course, I was absolutely captivated by Strang's high-energy lectures, and I am leaving the class feeling as if linear algebra is the most important topic in the universe (which to Strang it most definitely is!). Overall, Strang is truly a gem of a linear algebra professor. Not once did he "phone it in," which is an aspect of his teaching style that I admire and respect. While I am sad that the course has come to a conclusion, I feel lucky that I was taught by Professor Strang, and I am jealous of his next set of students. Thank you, professor.
assignments and projects are super helpful
very helpful in office hours and patient with explaining
Office Hours helped significantly
Strang is an amazing lecturer very very clear 100% recommend
Prof Strang was a really high-quality lecturer and instructor. He was quite responsive and engaging, and I was able to follow his lectures closely. PSETs and projects were made very thoughtfully, sometimes to a fault (he would write a ton of background, which was fun, if long!)
The projects were not an insignificant addition to the course on top of regular psets, but I think they added a lot.
He was very available for office hours, which I should have taken more advantage of
Prof Strang was very approachable and helpful in office hours
His lecture notes were super clear and because he wrote all of his explanations down and highlighted important things to note, it was really easy to understand what was going on.
Alexander Strang has quite an apparent passion for linear algebra, both in teaching it and in performing it for his work. This manifests itself in a wonderful and engaging sort of energy in his lectures, even if the lecture is about matrix decomposition into an orthonormal basis.
Diagrams in the lectures.
Professor Strang was one of the best professors, if not the best professor, I've had at this school. His love for the subject shines through lectures, and the command he has over the subject of linear algebra is amazing. His project prompts are unbelievable complex and detailed (and yet was able to explain them simply enough for us to understand), and I could really tell that he loves doing his job. I would highly recommend anyone at this school, regardless of whether or not you're interested in linear algebra, to take this course.
Prof Strang is very passionate about the topic and tries his best to help students.

What could the instructor modify to help you learn more?

Comments
more office hours and shorter assignments
Pretty much everything, but especially the projects. The projects were a huge waste of time and they were extremely long and boring. Solving large matrices by hand doesn't really help teach us anything other than that we should be thankful that we live in the modern era of computers.
Keep posting notes on canvas.
Nothing! He's an amazing professor.
Not much he was really good
The middle of the course drags a bit.
N/A – Strang is the best! For all that is good, him if you can.
Pace the course better so that we do not have to rush through some lectures towards the end of the course
Pacing of the class at first was fine, but towards the end it felt like we were being rushed. It would have been better to have crammed more material in the beginning because the concepts were easier than towards the end.
Although Strang was an amazing and brilliant professor, he went quite overboard with the workload, at times. For instance, he assigned a very long homework assignment, for which he did give double the usual time to complete, but half of that time was over Thanksgiving break. In addition, assigning two project problems instead of one (for the first two projects) turned out to result in an extremely time consuming task—one which was expected to be completed not in place of, but alongside of, the weekly homeworks. Perhaps the workload is a side effect of Strang's passion for the course; however, if the two necessarily go together, I would take that option over no Strang in a heartbeat.
midterm and final are a bit too long and intense
Personally thought the midterm and projects were too long
This course was extremely well balanced, organized, and easy to follow until the last 2 weeks. The final pset took (not speaking hyperbolically) 4–5x longer than any other pset we had, and took me more time than any of the projects. The lectures were quite rushed (we only kind of finished the last topic), which was especially agonizing, considering the subjects were what the professor himself said were the single most important takeaways of the course (and what I took the course for). The beginning could have definitely been compressed, most of the material for the midterm was doing the same row–reduction and different looks at range and null spaces.
Perhaps the order of topics discussed could be modified to help understanding. For example, the idea of matrices as transformations of space is a topic covered in the second half of the course, but one which could be particularly useful for understanding topics earlier on, such as Rank–Nullity Theorem.
He could cut down on some of the content—it felt overambitious to cover everything especially at times like when we had an extra 30 minute recorded lecture because the midterm was only 60 minutes of our 90 minute class time

The Instructor . . .

	Mean	Median	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
Organized the course clearly.	4.62	5.00	0.00%	0.00%	0.00%	38.46%	61.54%	0.00%
Presented lectures that enhanced your understanding.	4.54	5.00	0.00%	0.00%	11.54%	23.08%	65.38%	0.00%
Facilitated discussions that were engaging and useful.	4.75	5.00	0.00%	0.00%	0.00%	16.67%	50.00%	33.33%
Stimulated your interest in the core ideas of the course.	4.46	5.00	0.00%	7.69%	0.00%	30.77%	61.54%	0.00%
Challenged you to learn.	4.50	5.00	0.00%	3.85%	7.69%	23.08%	65.38%	0.00%
Helped you gain significant learning from the course content.	4.46	5.00	3.85%	0.00%	7.69%	23.08%	65.38%	0.00%
Was available and helpful outside of class.	4.68	5.00	0.00%	0.00%	7.69%	15.38%	73.08%	3.85%
Motivated you to think independently.	4.42	5.00	0.00%	3.85%	11.54%	23.08%	61.54%	0.00%
Worked to create an inclusive and welcoming learning environment.	4.50	5.00	0.00%	0.00%	7.69%	34.62%	57.69%	0.00%
Overall, this instructor made a significant contribution to your learning.	4.58	5.00	0.00%	3.85%	7.69%	15.38%	73.08%	0.00%

What aspects of the TA's teaching contributed most to your learning?

Comments
help with understanding problems
Office Hours
Hwanwoo was available to answer questions

What could the TA modify to help you learn more?

Comments
explaining even if it's a easy/silly question
NA
Go less into theory and provide clearer answers to questions

The TA/CA or Intern. . .

	Mean	Median	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
Facilitated discussions that supported your learning.	4.00	4.00	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%
Gave you useful feedback on your work.	4.00	4.00	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%
Stimulated your interest in the core ideas of the class.	3.50	3.50	0.00%	0.00%	33.33%	33.33%	0.00%	33.33%
Challenged you to learn.	4.00	4.00	0.00%	0.00%	0.00%	66.67%	0.00%	33.33%
Helped you succeed in the class.	4.00	4.00	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%
Was available and helpful outside of class.	4.33	4.00	0.00%	0.00%	0.00%	66.67%	33.33%	0.00%
Overall, this individual made a significant contribution to your learning.	4.00	4.00	0.00%	0.00%	33.33%	33.33%	33.33%	0.00%

Additional feedback to the TA/CA/Intern:

Comments
N/A

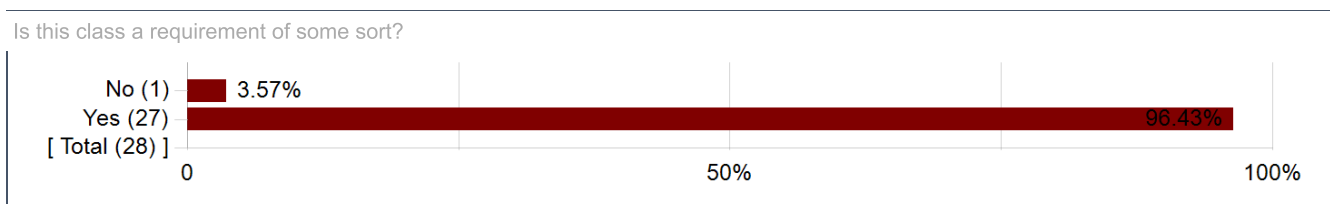
How much did the following elements of the course contribute to your learning gains?

	Mean	Median	No Gain	A Little Gain	Moderate Gain	Good Gain	Great Gain	N/A
Laboratory Experience	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Field Trips	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Library Sessions	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Review Sessions	4.00	4.00	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%
Writing Seminars	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%

Other course elements not mentioned above:

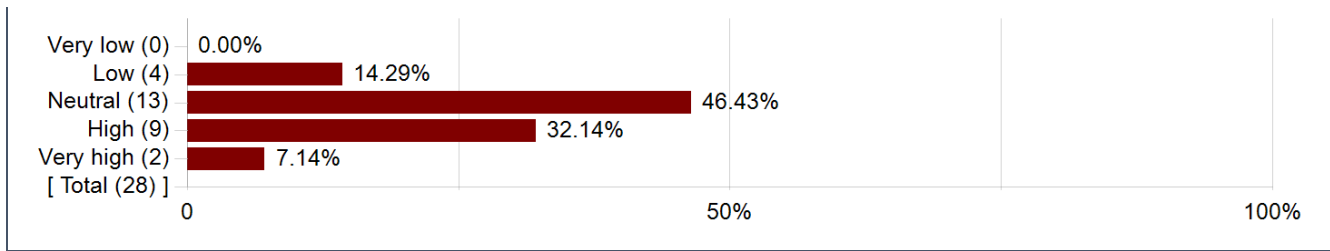
Comments
Alexander Strang hosted weekly problem sessions to practice course material.

Is this class a requirement of some sort?



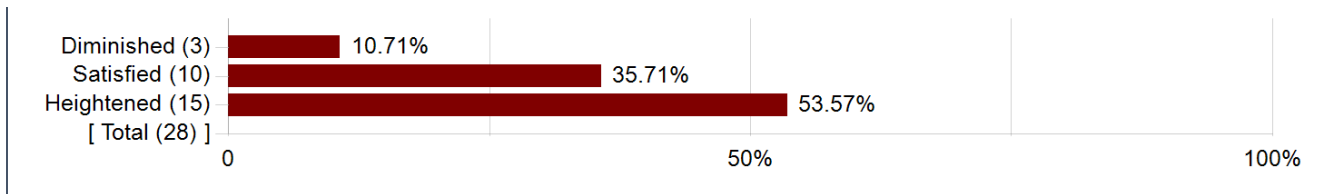
Prior to starting this class, your interest level was?

Prior to starting this class, your interest level was?

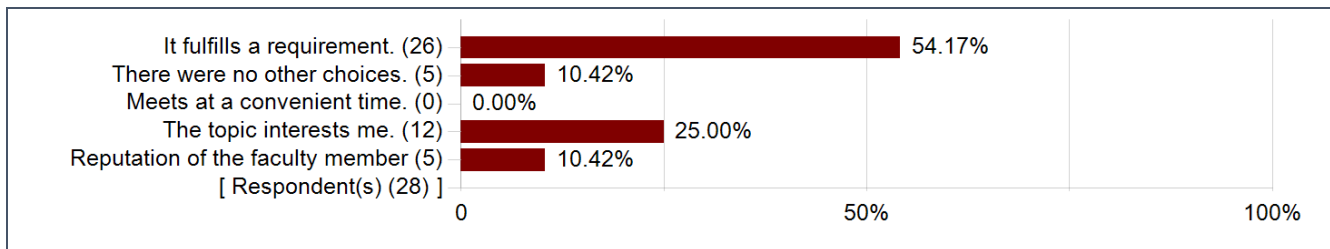


Now that this class is over, your interest is?

Now that this class is over, your interest is?

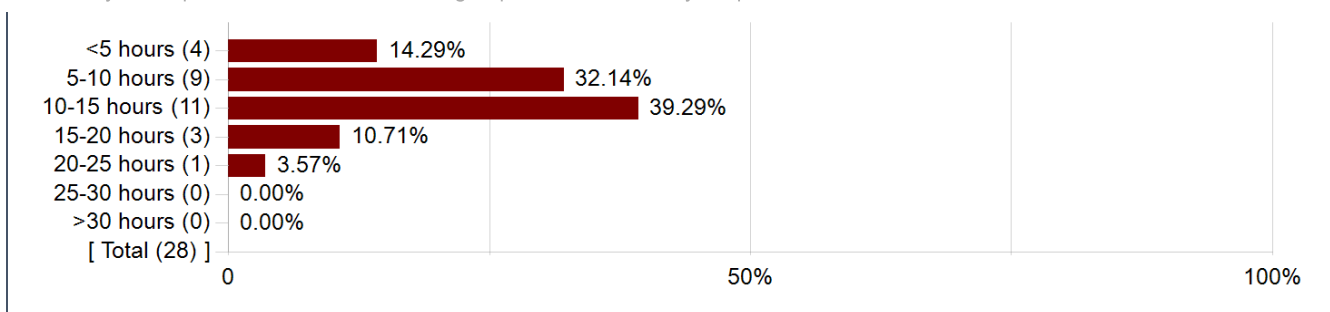


Why did you choose to take this course? (Select all that apply)



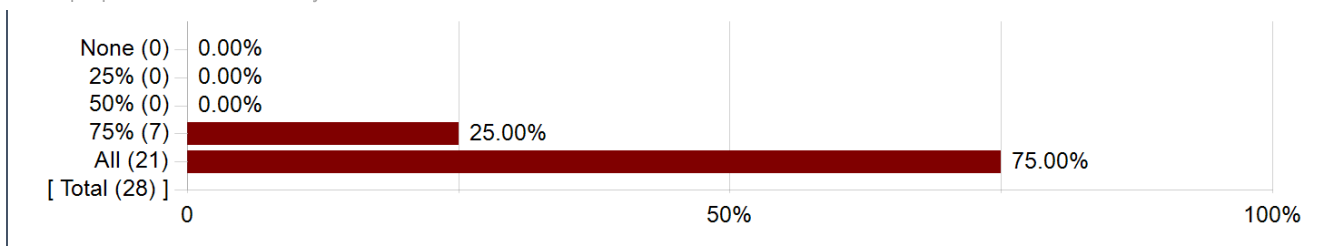
How many hours per week outside of attending required sessions did you spend on this course?

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



What proportion of classes did you attend?

What proportion of classes did you attend?



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

Comments
Level of difficulty was very low
It was not difficult. The work was very tedious.
I had self-taught a bit of linear algebra. This class made a lot of concepts click, but was not particularly difficult
challenging but doable
It was a little bit easy I thought
not hard if you do the work
For someone who had no experience in linear algebra, this class was fairly approachable.
Having no prior background in linear algebra, I had no difficulty at all in keeping up with the others.
It was difficult.
manageable level of difficulty.
I had no experience with linear algebra but it was reasonable to learn for the first time, but the workload may be tough if you slack
Not bad, but I had previously taken linear algebra
I had a good deal of background in linear algebra, this was a pretty doable course. He also taught everything much more intuitively, so I essentially re-learned it all (and it was not bad)!
Although the stuff we're learning is fairly difficult, Professor Strang teaches it so well that you can easily understand everything.
This was a difficult course for me. It was manageable, however, and very insightful, but still difficult for me, someone with experience in statistics and vector calculus.