

Institutional Reporting and Analysis (IRA)

Dartmouth College Course Summary Report

Report ID: CA510 v2.1.1

This report shows single course assessment questions and responses for courses with five or more enrolled.

Term 202401 - Winter Term 2024 Subject MATH-Mathematics Course 003-Calculus Section 01

COURSE ASSESSMENT SUMMARY - SINGLE COURSE

Course:	MATH 003 Calculus	Total Enrollment:	44
Section:	01	Eligible to Complete Assessment:	44
Term:	202401 - Winter Term 2024	Completed Assessment:	39
Instructor:	Sarah Frei	Did Not Complete Assessment:	5

Individual Responses Student Background

Year at Dartmouth (36 Responses)	<u>1</u> 66.7%	<u>2</u> 19.4%	<u>3</u> 11.1%	<u>4</u> 2.8%	<u>5</u> 0%	<u>B.F.</u> 0%	<u>Masters</u> 0%	<u>Ph.D.</u> 0%			
Reason(s) for taking course (37 Responses)	<u>Distributive Requirement</u> 19	<u>Major</u> 16	<u>Minor</u> 4	<u>Professor</u> 0	<u>Interest</u> 1	<u>Masters/PhD Elective</u> 0	<u>Masters/PhD Requirement</u> 0	<u>Other</u> 4			
Attendance in this course (35 Responses)	<u>< 20%</u> 5.7%	<u>20-40%</u> 2.9%	<u>40-60%</u> 8.6%	<u>60-80%</u> 22.9%	<u>80-100%</u> 60%						
Expected Grade (35 Responses)	<u>A</u> 48.6%	<u>B</u> 31.4%	<u>C</u> 17.1%	<u>D</u> 2.9%	<u>E</u> 0%	<u>NRO</u> 0%	<u>CT</u> 0%	<u>NC</u> 0%	<u>LP</u> 0%	<u>P</u> 0%	<u>HP</u> 0%
Hrs/wk spent on coursework outside class (35 Responses)	<u>≤1</u> 14.3%	<u>1-5</u> 28.6%	<u>5-10</u> 28.6%	<u>10-15</u> 20%	<u>≥15</u> 8.6%						

Individual Responses Course Design and Effectiveness

I think the overall quality of the course was (35 Responses)	<u>Median</u> 3 (Good)	<u>Mean</u> 2.8 (Good)	<u>Excellent</u> 22.9%	<u>Very Good</u> 17.1%	<u>Good</u> 34.3%	<u>Fair</u> 11.4%	<u>Poor</u> 14.3%	<u>N/A</u> 5.7%			
I learned a lot in the course. (37 Responses)	<u>Median</u> 2 (Agree)	<u>Mean</u> 2.3 (Agree)	<u>Strongly Agree</u> 24.3%	<u>Agree</u> 43.2%	<u>Neutral</u> 18.9%	<u>Disagree</u> 8.1%	<u>Strongly Disagree</u> 5.4%	<u>N/A</u> 2.7%			
I put a great deal of effort into the course. (36 Responses)	2 (Agree)	2.1 (Agree)	36.1%	33.3%	19.4%	2.8%	8.3%	8.3%			
I was intellectually engaged in the course. (35 Responses)	2 (Agree)	2.3 (Agree)	25.7%	40%	22.9%	5.7%	5.7%	5.7%			
The objectives of the course were clear to me. (37 Responses)	2 (Agree)	2.2 (Agree)	24.3%	45.9%	21.6%	5.4%	2.7%	2.7%			
I found the course to be well organized (36 Responses)	2 (Agree)	2.4 (Agree)	30.6%	33.3%	16.7%	5.6%	13.9%	5.6%			
The assignments reinforced my understanding of the course material (36 Responses)	2 (Agree)	2.5 (Neutral)	22.2%	36.1%	25%	5.6%	11.1%	2.8%			
Comment on the aspects of the course that you think were most effective: (21 Responses)	View Responses										
Comment on 1-3 aspects of the course that could be improved or enhanced: (22 Responses)	View Responses										
How did you contribute to your own learning experience? (21 Responses)	View Responses										

Individual Responses Faculty (Sarah Frei)

I think the overall effectiveness of the teaching was (34 Responses)	<u>Median</u> 2 (Very Good)	<u>Mean</u> 2.3 (Very Good)	<u>Excellent</u> 29.4%	<u>Very Good</u> 29.4%	<u>Good</u> 20.6%	<u>Fair</u> 20.6%	<u>Poor</u> 0%	<u>N/A</u> 2.9%			
The professor set high standards (33 Responses)	<u>Median</u> 2 (Agree)	<u>Mean</u> 1.9 (Agree)	<u>Strongly Agree</u> 33.3%	<u>Agree</u> 45.5%	<u>Neutral</u> 15.2%	<u>Disagree</u> 6.1%	<u>Strongly Disagree</u> 0%	<u>N/A</u> 6.1%			
The professor explained central concepts clearly (34 Responses)	2 (Agree)	2.1 (Agree)	32.4%	35.3%	20.6%	11.8%	0%	2.9%			
The professor challenged me to think critically about the course material (34 Responses)	2 (Agree)	2.1 (Agree)	29.4%	41.2%	20.6%	8.8%	0%	2.9%			
The professor was available for consultation outside of class (30 Responses)	2 (Agree)	2.2 (Agree)	30%	33.3%	23.3%	10%	3.3%	6.7%			
Comment on 1-3 things that the professor did well and should continue to do in the future: (20 Responses)	View Responses										

Comment on 1-3 things that the professor should focus on to improve their classroom effectiveness: (21 Responses)	View Responses																				
Add any specific recommendations on how the professor is assessing the course work and giving feedback to students that you believe would be useful: (14 Responses)	View Responses																				

Individual Responses Student Initiated Questions

Comment on the methods of evaluation chosen by the instructor, e.g. tests, papers and examinations and the workload expected of students: (19 Responses)	View Responses																				
Comment on the structure of the class, for example the mix between lecture and discussion: (18 Responses)	View Responses																				
How did this course influence your academic experience at Dartmouth? (15 Responses)	View Responses																				

There are no course specific question responses.

COURSE ASSESSMENT REPORTS - My Specific Faculty Comments

Course: MATH 003 Calculus
 Term: 202401 - Winter Term 2024
 Instructor: **Sarah Frei**

Question: Comment on 1-3 things that the professor did well and should continue to do in the future:

1.00	1. Clear line of communication 2. Always stopping for questions 3. Connecting with students
2.00	Being friendly with questions and answering them fairly.
3.00	Her notes on the blackboard were pretty nice and organized; very helpful and clear explanations. She was very approachable.
4.00	I think the professor did well during the lectures; what did throw me off was the fact that she left 3 weeks before the term ended. I understand the reasons for maternal leave however it set me back with the fact that we now had random subs coming in and disrupting the flow that we were learning when she was present. I think that should be taken into consideration for her course section.
5.00	Is caring and understanding
6.00	Lectures
7.00	Not sure
8.00	Plenty of time to ask questions outside of class or re-explain topics.
9.00	Prof. Frei was nice, but her lecture style was sometimes hard to follow.
10.00	Professor Frei is incredibly organized and very good at making hard concepts accessible. The way in which she structures her lectures is really helpful in understanding the material in spite of the fast pace.
11.00	Professor Frei was a very good lecturer, she made concepts clear and took care to make sure we were all keeping up.
12.00	She did a swell job of engaging with her students during class time.
13.00	She has a likeable personality that make the lectures a lot easier to sit through, she writes everything she discusses very clearly on the board without skipping steps.
14.00	Taught material good and throughout
15.00	The professor did a very good job with office hours. She also was kind and understanding, helping accommodate to her students so they could learn the most possible in their individual situations. I also liked how the professor handed out notecards for questions/interesting things for her students to take attendance.
16.00	doing multiple examples
17.00	explaining word problems well
18.00	n/a
19.00	went over material in depth

Course: MATH 003 Calculus
 Term: 202401 - Winter Term 2024
 Instructor: **Sarah Frei**

Question: Comment on 1-3 things that the professor should focus on to improve their classroom effectiveness:

1.00	1. Pace she talks (very fast)
2.00	Communication
3.00	Go over homework problems as a class.
4.00	Have more time for questions.
5.00	I think Professor Frei could use the x hours to go over some more problems, potentially.
6.00	I think the professor could talk less and facilitate more discussions between students.
7.00	I wish I could have gotten to know more about the professor and her research. I feel like a stronger personal connection would have improved her classroom effectiveness.

8.00	More paper practice problems or check in with peers
9.00	NA
10.00	No comment at this time.
11.00	Our professor left during the last couple weeks of the term, without letting us know, because her wife was having a baby. I found this to be very unprofessional, given she had prior notice. All of us would've appreciated warning, at the start of the term, that we were going to have to learn a lot of the material from substitutes, and not have our professor available for office hours.
12.00	Possibly be more engaging during class and allow time for questions while topics are being explained.
13.00	She should give more time to her advice to students when they visit her, as well as show up to her office hours when she is required to do so at the required time. In my experience in the class, her advice was very quick and not useful a good half of the time, and the other half of the time it felt like a waste to ask for her help anyway because there are so many better sources both on the internet and on campus.
14.00	Student engagement
15.00	This doesn't regard professor Frei, however I found it very difficult when the last few weeks of class did not have a consistent professor substituting. I struggled to adjust to each professor's style in lectures, and I ended the term feeling very fuzzy about integrals/integration.
16.00	add more practice to develop understanding
17.00	n/a
18.00	rather than teaching theory, teach how to do the problems right away!
19.00	sometimes I didn't understand what the professor was talking about because she almost taught it as if she was teaching it to someone who already knew the concepts and while some students in math 3 are familiar with most of these concepts, others aren't

Course: MATH 003 Calculus
 Term: 202401 - Winter Term 2024

Instructor: Sarah Frei

Question: Add any specific recommendations on how the professor is assessing the course work and giving feedback to students that you believe would be useful:

1.00	Direct, clear, and short feedback
2.00	Have graded homework.
3.00	I think the course in itself was assessed pretty well!
4.00	I think we should have gotten partial credit on the final. No partial credit on a math final seems unfair
5.00	I would like if the teacher could grade major assignments on a scale larger than 10 so that it would be possible to get in between a 100% and 90%.
6.00	Implement a method for homework to be checked by the professor to keep on track.
7.00	N/A
8.00	NA
9.00	No comment at this time.
10.00	She does not assess any coursework nor does she give feedback. There is no opportunity during the entire class in which she ever observes the work her students do other than their grades. She does not offer personalized feedback, nor does she ever go over problem areas from recently taken exams. She should do those things.
11.00	it was fine
12.00	n/a

COURSE ASSESSMENT REPORTS - Student Initiated Comments

Course: MATH 003 Calculus
 Term: 202401 - Winter Term 2024

Instructor: Sarah Frei

Question: Comment on the methods of evaluation chosen by the instructor, e.g. tests, papers and examinations and the workload expected of students:

1.00	2 midterms, weekly quizzes, ungraded weekly homework
2.00	2 online midterms and a final, weekly quizzes
3.00	Good - made sense given course.
4.00	Good workload and quizzes
5.00	I believe that the quizzes were helpful for the examinations and it was helpful that the format of the assessments was generally consistent.
6.00	I liked the methods of evaluation chosen by the instructor. I thought the creativity the professor permitted allowed for more interesting projects. I thought the workload varied a lot whether or not we had assignments on top of readings, and I think it would be better if the workload could be more evenly distributed.
7.00	Loved the Canvas exams. No homeworks, though I actually wish homeworks factored into our grades
8.00	No multiple choice exams, students need to be able to show that they know how to do the work and thats what should be graded.
9.00	Quizzes and tests were fine
10.00	Similar to what I said before, partial credit should have been available
11.00	The quizzes and tests were great but would've like some more online homework so I could get a few extra points and didnt feel so much pressure when it came to the test
12.00	The workload expected (homework) was too much at times, but then again, it was not required, so that was good. Concerning the examinations, on one hand, I like the fact that they were multiple-choice because that meant less uncertainty of the correctness of your answer when solving an exercise, on the

	other hand, there was no partial credit, meaning that if you had the correct problem-solving process, but for whatever reason ultimately marked the correct answer, you would sadly get 0 points. A middle point between these two would be nice.
13.00	The workload was reasonable and the grading was fair.
14.00	They were acceptable, though the complete lack of instructor feedback and support rendered the useful aspects of these methods irrelevant.
15.00	Very reasonable
16.00	it was manually graded online
17.00	n/a
18.00	two midterms and a final. light workload

Course: MATH 003 Calculus
 Term: 202401 - Winter Term 2024
 Instructor: Sarah Frei

Question: Comment on the structure of the class, for example the mix between lecture and discussion:

1.00	100% lecture
2.00	All lecture
3.00	Good considering it was a math class.
4.00	Good structure and mix
5.00	I liked that all of the homework was in the book and the answers with also in the book. The lecture style was a lot but was needed to get through all the content.
6.00	I thought there could be more lecturing in the class, with more quality facilitated discussion between students.
7.00	It was almost only lecturing.
8.00	It was fine
9.00	It's a math class
10.00	N/A
11.00	The class was naturally lecture based, which was good in terms of the subject matter.
12.00	The lecture style worked well for me, although there is no other kind of class structure. I feel that it would be beneficial for students to have some involvement in the class, as opposed to sitting in silence 3 days a week for 10 weeks listening to a lecture. There is no other form of engagement with the course material used that would be beneficial for the student's journey to truly learning and understanding it, and this is very detrimental.
13.00	The only discussion we ever had was when sometimes the professor would tell us to discuss a problem with our partner, which is less discussion than I would have liked to see.
14.00	The structure made sense, and it worked for me
15.00	all lecture, but they are necessary
16.00	lecture but was open to questions if anyone had them
17.00	n/a

Course: MATH 003 Calculus
 Term: 202401 - Winter Term 2024
 Instructor: Sarah Frei

Question: How did this course influence your academic experience at Dartmouth?

1.00	Fine
2.00	Helped for econ
3.00	I don't particularly enjoy math but the class was solid.
4.00	I was able to take this course and do well in a subject that i have always struggled in
5.00	I was extremely disappointed with the quality of this course, and it negatively colored what was otherwise a very nice view of the education I was receiving here. I genuinely think that I would have gotten a better calculus education at most other colleges for a sliver of the price, and that has affected both my experience here and how I feel about the College as a whole.
6.00	Improved it
7.00	It helped me to become a more well-rounded person.
8.00	It made me not want to take a math course again
9.00	It provided a segue into research opportunities.
10.00	It stressed me out, but I'm glad I got the credit
11.00	This course was really helpful in cementing the mathematical understanding necessary for my major!
12.00	Was necessary for my major
13.00	gave a different outlook to courses I might encounter to the future
14.00	n/a

COURSE ASSESSMENT REPORTS - Non-Faculty Specific Comments

Course: MATH 003 Calculus
 Term: 202401 - Winter Term 2024
 Instructor: Sarah Frei

Question Section **Course Design and Effectiveness**

Comment on the aspects of the Question: course that you think were most effective:

1.00	Good structure and material
2.00	Homework problems
3.00	I liked how the teacher explained
4.00	I liked the flexibility of assignments and the level of discussion.
5.00	I think having weekly quizzes were good ways to check out knowledge throughout the course.
6.00	I think the fact that we often went over problems during class solidified what needed to be done on a step-by-step basis.
7.00	I think the lectures when the prof was there were effective
8.00	I think the use of a blackboard, contrary to slides, was very useful and made for much more organized, concise class notes.
9.00	I thought that the homework assignments paired with the quizzes were really effective in providing constant opportunity for practice.
10.00	Lectures were engaging and useful
11.00	The Canvas, multiple exams were great. They prepared me well for the final and make me feel more ready for future Math classes.
12.00	The course was well organized, evenly paced
13.00	The lecturing was strong.
14.00	The tutors for the course were well selected and very effective. The lecture style would work well, provided more competent educators.
15.00	The weekly quizzes kept me on track and the homework kept me organized with the topics and practicing the recent topics.
16.00	n/a
17.00	quizzes related to material well
18.00	the TAs did a great job and weekly quizzes were helpful
19.00	the textbook and lectures were helpful. The TA Luke was great
20.00	the weekly quizzes were helpful

Course: MATH 003 Calculus
 Term: 202401 - Winter Term 2024
 Instructor: Sarah Frei

Question Section **Course Design and Effectiveness**

Comment on 1-3 aspects of the Question: course that could be improved or enhanced:

1.00	1. more graded work 2. more examples worked out in class rather than lecturing the whole time
2.00	1. this class spent 90% of the time dancing around how to actually complete problems and instead teaching theory. It was VERY unclear how the professor wanted us to complete problems other than the word problems. Myself and many other people spent way too much time in TA hours and on Khan academy trying to figure out how to do basic problems that weren't explained in class. 2. Math 3 is a prereq for many majors. that being said I believe that making this class NRO eligible would be very helpful. 3. It was also very clear to me that the course coordinator and the professors were not in good communication. I know its a standardized large course, but Professor Frei didn't seem to know when weekly quizzes or midterms were going out, as well as what was going to be on them. I'm guessing this is more a course coordinator issue and not Professor Frei, but I think that is a bare minimum thing to communicate to students.
3.00	Better student engagement
4.00	Bring back webworks or graded homeworks so that the only grades don't come from exams
5.00	Having more time for questions.
6.00	I think having the assigned problems with a step-by-step solution could have been helpful at times.
7.00	I think online exams are a no-go. I would suggest you go back to in-person exams. The difference in midterms' means and the final's mean backs this up.
8.00	I think the structure of tests and quizzes all being taken at home until the final exam was very odd. I also think it would have been helpful to have graded homework—even if it were graded for completion.
9.00	I think the way the class is structured on canvas, we dont have the book linked on there like in previous classes, the practice problems were things we had to find on our own apart from the book, and the structure of the learning objective just wasn't there. I would have preferred if the practice problems had been added to the canvas so we could keep track of them. The past courses also had the option of the little practice problem being online and untimed, which helped alot but wasnt there this term.
10.00	I thought the workload varied a lot whether or not we had assignments on top of readings, and I think it would be better if the workload could be more evenly distributed. I also think it would be better if the teacher graded major assignments on a scale larger than 10 so that it would be possible to get in between a 100% and 90%, which can be a big difference in your grade.
11.00	I thought there was too much content to cover. I would've preferred doing a deeper dive into core concepts. I also thought the homework problems weren't reflective of the midterms, which I felt underprepared for.
12.00	More example problems in class.
13.00	No comment at this time.
14.00	Organization and communication from professors. We had our final be moved to in person half way through the class, which really could've interfered with my travel plans to go home and such.
15.00	Pace was incredibly fast - if possible, slow down pace to allow time for concepts to sink in.

16.00	Teacher communication was incredibly subpar, many aspects of the course were incorrectly reported and severely mismanaged by who I think was Professor van Erp (such as incorrectly telling students on several occasions what material would be on the tests, not releasing assignments at their states times on several occasions, moving due dates and deadlines without informing the students, etc). It made the course much more difficult to learn and succeed in, through no fault of the students, and this was a sentiment that was shared not only by myself but nearly every other math 3 student that I worked with in both of my tutoring groups.
17.00	There should never be a multiple choice exam in math. There was no partial credit so even if you knew how to do the problem but couldn't get the final answer you were not rewarded for the work you put in. I hated this class, it was frustrating and everyone cheated which made me more upset about the final being multiple choice because I couldn't get graded on what I knew. Sadly my worst class at Dartmouth thus far and many students in the class with me had the same experience.
18.00	include more assignments to help practice the material more
19.00	it seemed like the professors didn't communicate effectively as they were often not all on the same page on things such as how many questions would be on a midterm or when a quiz would be released
20.00	n/a

Course: MATH 003 Calculus
 Term: 202401 - Winter Term 2024
 Instructor: Sarah Frei
 Question Section: **Course Design and Effectiveness**

Question: How did you contribute to your own learning experience?

1.00	1. I used Kahn academy to understand some of the heavier topics and went through all the ungraded homework .
2.00	Attended lectures and actively took notes
3.00	Completed all homework and quizzes outside of class time to hold myself accountable for my own learning and reinforcement of topics.
4.00	Extra homework problems outside of class.
5.00	I always completed the homework problems although submission was not necessary and attended the lectures.
6.00	I attended two different tutoring groups with Luke Askew and Mark (can't remember his last name), which gave me a tutoring group to attend every single day except for Saturday, although I did not often attend the Sunday tutoring sessions. I also spent a great deal of time watching and learning calculus from a YouTuber named Organic Chemistry Tutor, which was more effective at teaching me than the class in about a third of the time.
7.00	I practiced homework problems
8.00	I solved many integrals outside of class, which I found on the internet.
9.00	I solved the weekly homework and thought critically about what I did right and wrong.
10.00	I spent many hours outside of class studying.
11.00	I went to Office hours and did videos on my own. Did all the homework and went to group tutoring multiple times a week.
12.00	I went to office hours and participated in discussions. I also focused on making sure my assignments were high quality.
13.00	Independent, group, and tutor studying
14.00	Learned calc for econ
15.00	Studied
16.00	Study and focus on quizzes and tests
17.00	TA hours, Khan academy, I studied very hard for the 2 midterms giving me a good grade buffer going into the final exam.
18.00	by going to office hours every week
19.00	doing practice problems on my own
20.00	n/a

Institutional Reporting and Analysis (IRA)

Dartmouth College Course Summary Report

Report ID: CA510 v2.1.1

This report shows single course assessment questions and responses for courses with five or more enrolled.

Term 202401 - Winter Term 2024 Subject MATH-Mathematics Course 022-Linear Algebra w/Applicatns Section 01

COURSE ASSESSMENT SUMMARY - SINGLE COURSE

Course:	MATH 022 Linear Algebra w/Applicatns	Total Enrollment:	37
Section:	01	Eligible to Complete Assessment:	37
Term:	202401 - Winter Term 2024	Completed Assessment:	34
Instructor:	Sarah Frei	Did Not Complete Assessment:	3

Individual Responses Student Background

Year at Dartmouth (33 Responses)	<u>1</u> 33.3%	<u>2</u> 48.5%	<u>3</u> 12.1%	<u>4</u> 6.1%	<u>5</u> 0%	<u>B.F.</u> 0%	<u>Masters</u> 0%	<u>Ph.D.</u> 0%			
Reason(s) for taking course (30 Responses)	<u>Distributive Requirement</u> 1	<u>Major</u> 23	<u>Minor</u> 3	<u>Professor</u> 1	<u>Interest</u> 8	<u>Masters/PhD Elective</u> 1	<u>Masters/PhD Requirement</u> 0	<u>Other</u> 3			
Attendance in this course (31 Responses)	<u>< 20%</u> 9.7%	<u>20-40%</u> 0%	<u>40-60%</u> 6.5%	<u>60-80%</u> 16.1%	<u>80-100%</u> 67.7%						
Expected Grade (31 Responses)	<u>A</u> 58.1%	<u>B</u> 35.5%	<u>C</u> 6.5%	<u>D</u> 0%	<u>E</u> 0%	<u>NRO</u> 0%	<u>CT</u> 0%	<u>NC</u> 0%	<u>LP</u> 0%	<u>P</u> 0%	<u>HP</u> 0%
Hrs/wk spent on coursework outside class (31 Responses)	<u>≤1</u> 0%	<u>1-5</u> 19.4%	<u>5-10</u> 38.7%	<u>10-15</u> 35.5%	<u>≥15</u> 6.5%						

Individual Responses Course Design and Effectiveness

I think the overall quality of the course was (32 Responses)	<u>Median</u> 3 (Good)	<u>Mean</u> 3 (Good)	<u>Excellent</u> 21.9%	<u>Very Good</u> 12.5%	<u>Good</u> 28.1%	<u>Fair</u> 18.8%	<u>Poor</u> 18.8%	<u>N/A</u> 0%			
I learned a lot in the course. (31 Responses)	<u>Median</u> 2 (Agree)	<u>Mean</u> 2.1 (Agree)	<u>Strongly Agree</u> 32.3%	<u>Agree</u> 41.9%	<u>Neutral</u> 12.9%	<u>Disagree</u> 9.7%	<u>Strongly Disagree</u> 3.2%	<u>N/A</u> 0%			
I put a great deal of effort into the course. (31 Responses)	<u>1</u> (Strongly Agree)	1.7 (Agree)	54.8%	29%	9.7%	3.2%	3.2%	0%			
I was intellectually engaged in the course. (31 Responses)	<u>2</u> (Agree)	2.1 (Agree)	38.7%	35.5%	12.9%	6.5%	6.5%	0%			
The objectives of the course were clear to me. (32 Responses)	<u>2</u> (Agree)	1.9 (Agree)	37.5%	43.8%	9.4%	6.3%	3.1%	0%			
I found the course to be well organized (31 Responses)	<u>2</u> (Agree)	2.3 (Agree)	35.5%	32.3%	12.9%	9.7%	9.7%	0%			
The assignments reinforced my understanding of the course material (30 Responses)	<u>2</u> (Agree)	2 (Agree)	36.7%	43.3%	13.3%	0%	6.7%	0%			
Comment on the aspects of the course that you think were most effective: (19 Responses)	View Responses										
Comment on 1-3 aspects of the course that could be improved or enhanced: (16 Responses)	View Responses										
How did you contribute to your own learning experience? (12 Responses)	View Responses										

Individual Responses Faculty (Sarah Frei)

I think the overall effectiveness of the teaching was (29 Responses)	<u>Median</u> 2 (Very Good)	<u>Mean</u> 2.3 (Very Good)	<u>Excellent</u> 41.4%	<u>Very Good</u> 20.7%	<u>Good</u> 13.8%	<u>Fair</u> 13.8%	<u>Poor</u> 10.3%	<u>N/A</u> 3.4%			
The professor set high standards (29 Responses)	<u>Median</u> 2 (Agree)	<u>Mean</u> 1.9 (Agree)	<u>Strongly Agree</u> 34.5%	<u>Agree</u> 51.7%	<u>Neutral</u> 10.3%	<u>Disagree</u> 0%	<u>Strongly Disagree</u> 3.4%	<u>N/A</u> 3.4%			
The professor explained central concepts clearly (29 Responses)	<u>2</u> (Agree)	2.1 (Agree)	37.9%	34.5%	17.2%	3.4%	6.9%	3.4%			
The professor challenged me to think critically about the course material (29 Responses)	<u>2</u> (Agree)	2.2 (Agree)	34.5%	34.5%	20.7%	0%	10.3%	3.4%			
The professor was available for consultation outside of class (27 Responses)	<u>2</u> (Agree)	1.8 (Agree)	48.1%	37%	7.4%	0%	7.4%	7.4%			

Comment on 1-3 things that the professor did well and should continue to do in the future: (17 Responses)	View Responses																		
Comment on 1-3 things that the professor should focus on to improve their classroom effectiveness: (16 Responses)	View Responses																		
Add any specific recommendations on how the professor is assessing the course work and giving feedback to students that you believe would be useful: (7 Responses)	View Responses																		

Individual Responses Student Initiated Questions

Comment on the methods of evaluation chosen by the instructor, e.g. tests, papers and examinations and the workload expected of students: (15 Responses)	View Responses																		
Comment on the structure of the class, for example the mix between lecture and discussion: (11 Responses)	View Responses																		
How did this course influence your academic experience at Dartmouth? (11 Responses)	View Responses																		

There are no course specific question responses.

COURSE ASSESSMENT REPORTS - My Specific Faculty Comments

Course: MATH 022 Linear Algebra w/Applicatns
 Term: 202401 - Winter Term 2024
 Instructor: Sarah Frei

Question: Comment on 1-3 things that the professor did well and should continue to do in the future:

1.00	- Received and responded to questions very well in class. Encouraged questions - Very organized teaching method
2.00	1. Professor Frei was easily accessible after class; 2. She promptly responded to emails and genuinely wanted her students to learn
3.00	1. the professor did a really good job of being available for questions outside of class time. 2. the professor was very accommodating and kind, which was much appreciated.
4.00	At the start of class, Prof. Frei always went through previous learned concepts that led up to the current class. This helped lay a foundation for what she was going to teach that day. That was great.
5.00	Engaging lectures
6.00	Good lectures, good assistance when needed
7.00	Great lecturer and always extremely helpful to students.
8.00	Helpful in office hours
9.00	Overall just a great class. Lectures were explained well and office hours were very helpful.
10.00	Professor Frei is very kind and understanding. She truly tries to understand her students. She also helps explain things in different ways if one method of learning doesn't work for you.
11.00	Sarah is excellent. She explains concepts really well, her notes and examples are organized, and she is really willing to help in office hours. She cares about students and hopes we do well.
12.00	She stopped and asked for questions often, faced the classroom and projected her voice and clearly explained the concepts
13.00	She was amazing, always available for help
14.00	Taught well; clear teaching with good engagement and asking to make sure people are caught up
15.00	The biggest prop that I have to give to Professor Frei is that her lectures were easy to understand and keep up with. She always highlights each theorems, bullet points, and examples that she thinks are crucial to remember and I believe she always wants to make sure her students understand the concepts and materials taught in the lecture.
16.00	she answered questions well during class
17.00	she was willing to give extensions and help with questions, including finding times outside of her regular office hours

Course: MATH 022 Linear Algebra w/Applicatns
 Term: 202401 - Winter Term 2024
 Instructor: Sarah Frei

Question: Comment on 1-3 things that the professor should focus on to improve their classroom effectiveness:

1.00	- More mentions within class time of the applications of what we are learning instead of just the canvas discussions
2.00	1. During lectures it felt more like the professor was just writing textbook pages on the board rather than explaining.
3.00	1. Teach what is on the exam and spend more time on proofs; 2. Spend a little more time reviewing past material that was confusing; 3. Being clearer on some concepts and explaining their applications (the "applications" part of 'Linear Algebra and Applications' was not touched on).
4.00	Did not like Professor Temkin, couldn't understand him
5.00	Get the class more engaged
6.00	Great overall, but maybe gauge speed of teaching at times.

7.00	I appreciate Professor Frei's enthusiasm in her class genuinely and I really got motivated learning in her class. She always stays after lectures to answer questions and concerns from students regarding the lectures' materials until they understand those clearly. However, one thing I think is beneficial for her to add is to dedicate a lecture (perhaps an x-hour) before each midterms and final for students to revise the theorems and go through different types of problems.
8.00	I think that this class felt very rushed. In class I feel like I was just getting the same information that I would get from the textbook. Usually, for math classes I prefer that the professor teach the concepts in the book in a different ways than the textbook explains it so that I can have a more extensive knowledge. However, since classes were so rushed, it just felt like we didn't have time to really absorb the material in class and just spent most of the time copying off the board.
9.00	Lecture slides could help for highlighting key points of a class
10.00	N/A
11.00	N/a I just wish she could've been present the whole term
12.00	Not had to leave near the end of the term :(
13.00	Prof. Frei was an amazing lecturer but she read directly off the textbook and class felt like more of a reading session.
14.00	Sometimes the terminology of linear algebra got a bit confusing and overwhelming and so the concepts would get lost in translation with the language.
15.00	Tended not to focus all the time on the key concepts, and (not really a negative but at least damaged my learning experience) she was on maternity leave for the last 3 weeks of the course which interfered with my learning at the end of the course.
16.00	The prof left for the final two weeks (family matter, very understandable), but the other prof who taught the end of the class was not as good

Course: MATH 022 Linear Algebra w/Applicatns

Term: 202401 - Winter Term 2024

Instructor: Sarah Frei

Question: Add any specific recommendations on how the professor is assessing the course work and giving feedback to students that you believe would be useful:

1.00	I am using this box to talk about Prof Temkin, who took us for the last 2.5 weeks of class. Prof Temkin was difficult to understand and did not explain things clearly. His handwriting was also very difficult to read, and subscripts were often confused. I had to teach myself much of the material in the last two weeks. He seems lovely but needs to work on his explanations and speaking clearly.
2.00	I think having the webwork and written hw due at 9am is a bit early. I think 5pm or later would be a better time.
3.00	Less proof question on the exam and more computational ones
4.00	N/a
5.00	Overall, great! No critiques.
6.00	Overall, the course was structured nicely and the Canvas site was easy to navigate in terms of assignments, exam informations, and learning materials which were extremely helpful for me especially during midterms and final exam periods. Professors also post announcements prior to each midterm to provide practice problems and overviews. Professor Frei was also willing to discuss on exam problems and was able to solve every concerns of mine which showcases her passion and dedication for linear algebra and her students.
7.00	The course should be assessed on what we learn. I felt like we never went over how to solve proofs, and I never had any past experiences doing so. I then had to figure out how to solve them on my own during exams, which I felt was unfair because I was never taught how to do so.

COURSE ASSESSMENT REPORTS - Student Initiated Comments

Course: MATH 022 Linear Algebra w/Applicatns

Term: 202401 - Winter Term 2024

Instructor: Sarah Frei

Question: Comment on the methods of evaluation chosen by the instructor, e.g. tests, papers and examinations and the workload expected of students:

1.00	2 midterms and 1 finals
2.00	Exams were fair
3.00	Exams were really hard, definitely harder than previous MATH22s. I put in a lot of effort everyday. The workload is quite huge, daily webworks, weekly homeworks, 2 midterms, 1 final, and even short responses every week.
4.00	Good amount of tests
5.00	Good, always stuff to do, but reasonable and good practice
6.00	Grades were very fair
7.00	I am not a great exam-taker, exams come with anxiety and I often succumb to the pressure to perform and even though I do understand the material it often feels like I do not know it. Now, when exams cover more than 85% of my grade I am doomed. The fact that webworks, which consumed most of my study time, contribute disparagingly less than 10% of my grade, it is just unfortunate. I would highly suggest cutting down the exam contribution to the final grade... make them all have at most 60% of the grade, 20% each, then increase the webwork and homework.
8.00	I feel that there was plenty of work and practice available for us to get ready for exams.
9.00	Tests and homework focused too much on proofs, which I'm sure is interesting for math majors, but I think a lot of engineers take this class and historically it has been branded as one of the more accessible courses but with the proof focus this is less true.
10.00	Tests felt very different from practice and I didn't really feel fully prepared.
11.00	The exams and workload was very fair.
12.00	The workload was doable. The Professors were lenient when it comes to giving extensions and grading exams and I think they did great in helping students trying to manage all the work and tasks from different classes in the term. However, in the exams, sometimes the wording in the questions were hard to comprehend, especially for international students, which lead to misinterpretation and ultimately results in "wrong answers" in different perspectives on that problem.
13.00	The workload was fair. The WebWorks and Homework effectively covered the material that we learned in class. The exams, however, had proofs on them that we were never taught how to do in class. We were assessed on problems that we were not taught how to do. I had to learn most of the material on the exams from the textbook, and the course did not fully prepare students for the exams.

14.00	Was a good fair structure. Weekly quizzes and homeworks to reinforce concepts and 2 cumulative midterms + a final. I think the discussions were quite vague and maybe there could be a better way to teach us about more applications of linear algebra within the real world.
15.00	examinations were too proof based considering how little practice we had with them. the course load otherwise was fair.

Course: MATH 022 Linear Algebra w/Applicatns
 Term: 202401 - Winter Term 2024
 Instructor: Sarah Frei

Question: Comment on the structure of the class, for example the mix between lecture and discussion:

1.00	Fine
2.00	Good mix
3.00	Good structure
4.00	I liked the structure of the class a lot.
5.00	I really enjoyed the lecture style structure.
6.00	Lecture
7.00	Lectures were good
8.00	Mostly lecture, but like, it made sense for this class
9.00	The class was all lecture with chances to ask questions. This was effective as it allowed students to take notes and then clarify what they did not understand. It would be helpful to review material from prior class periods at the beginning of every class to reinforce material.
10.00	The class was entirely lecture based. However, Professor Frei always stopped after each theorems and/or examples for students to ask questions and vice versa which I think was helpful in not only making us better understand the concepts and materials taught in class but also engaging students in learning linear algebra.
11.00	The lectures goes really fast. You need to spend time outside of classroom reviewing the concepts and problems. Make sure you do not fall behind.

Course: MATH 022 Linear Algebra w/Applicatns
 Term: 202401 - Winter Term 2024
 Instructor: Sarah Frei

Question: How did this course influence your academic experience at Dartmouth?

1.00	Decided to drop my minor after this
2.00	Gave me a greater knowledge of the field of Mathematics and its applications in the real world. Reinforced my interest in Mathematics and my desire to major in it at Dartmouth.
3.00	Getting me ready for math
4.00	I realized I could do a course without going to class.
5.00	I really enjoyed the material and think Professor Frei is kind
6.00	I think it helped me develop my math skills and interested me in taking at least one more math class later in my career at Dartmouth.
7.00	I was a little disappointed in this course, especially after Professor Frei left. I thought that Professor Temkin's lectures were confusing and hard to understand. I was excited to be a math major, but felt like I learned most of the content through the textbook rather than through the professor in the course. I now am leaning toward more discussion based majors, as I learned from the textbook for most of the time and did not feel like I got value from the course.
8.00	It made me want to continue onto more math classes.
9.00	Math 22: Linear Algebra and Applications by Professor Frei played a crucial role in shaping my academic experience at Dartmouth. Her teaching style, expertise, and dedication to the subject inspired me to delve deeper into the complexities of linear algebra. The course provided me with a solid foundation in mathematical concepts and problem-solving skills that I have applied across various disciplines. Through Professor Frei's guidance, I gained a deeper appreciation for the beauty and practicality of linear algebra in real-world applications. Furthermore, Math 22 challenged me to think critically, approach problems analytically, and collaborate with peers to tackle complex mathematical problems. The knowledge and skills I acquired in Professor Frei's class not only enhanced my academic performance but also strengthened my overall confidence in approaching challenging tasks. I am truly grateful for the transformative experience and valuable insights gained from this course specifically. I am grateful for the opportunity to learn from Professor Frei and for the invaluable lessons and skills I have acquired through Math 22.
10.00	Not greatly, solid class, but not gonna think back to it much
11.00	This class taught me well, but was pretty boring.

COURSE ASSESSMENT REPORTS - Non-Faculty Specific Comments

Course: MATH 022 Linear Algebra w/Applicatns
 Term: 202401 - Winter Term 2024
 Instructor: Sarah Frei

Question Section: **Course Design and Effectiveness**

Comment on the aspects of the Question: course that you think were most effective:

1.00	- Use of regular webworks organized by day of class. Reinforced content well - Teaching by Sara Frei was very organized and very effective. She was extremely knowledgable and would always take questions during class
2.00	Good overview sheet of exams.
3.00	Homework were really helpful in grasping key concepts and practicing for exams.
4.00	I felt like the opportunities to reinforce concepts (webworks plus problem sets) offered a lot of opportunities to figure out what concepts I understood and what I did not
5.00	I think Professor Frei's lectures were effective and she explained material well. I also think that the exam review sheets were helpful because they clarified what the study.

6.00	I think the webworks were really helpful. However, I felt like the final exam was incredibly unfair and I think it did not make sense for the final to be significantly proof based. We never really learned how to do proofs in class, and it was unfair to expect this of us. Previous classes of Math 22 that friends took were all calculation based.
7.00	I think throughout the course of the term, the webwork problems and written homework assignments did really well in helping me revising the concepts and material learned in class. The writing response on linear algebra's application in real life further showed us its importance and visibility across different industries and academic fields.
8.00	I think we got a lot of practice problems and explanations that helped throughout the course.
9.00	I thought that the discussion posts were a nice way to include some qualitative skills with quantitative skills.
10.00	Lecture
11.00	Lectures with Professor Frei were great, homework helped reinforce topics.
12.00	Sarah was an amazing teacher
13.00	The webwork and gradescope were very applicable to the content of the course and good reinforcement
14.00	Tutorials were kind of helpful but couldn't not attend most of them.
15.00	Web work and exams were good
16.00	WebWorks were very helpful in solidifying concepts.
17.00	Webworks
18.00	Webworks were helpful
19.00	f

Course: MATH 022 Linear Algebra w/Applicatns
 Term: 202401 - Winter Term 2024
 Instructor: Sarah Frei

Question Section **Course Design and Effectiveness**

Comment on 1-3 aspects of the Question: course that could be improved or enhanced:

1.00	- More teaching of how to prove linear algebra concepts. A lot of the homework and midterm questions involved difficult proofs, and I feel a lot of students weren't equip with the right tools to know how to write proofs
2.00	1. Lectures could be better organized and concepts could be explained more clearly; 2. More time could be spent reviewing past topics, especially when a lot of the class does not understand them; 3. More time could be spent going over proofs, especially because they were on the exam but we never worked on how to do them during class
3.00	Better organization of content during lectures. Textbook seemed more concise and straightforward. Also could not read the other prof's handwriting when he took over for Sarah Frei at the end of the term.
4.00	Exam was hard--probably more practice and review sessions before exam would help.
5.00	I am under the impression that this term the course was changed to involve more proofs. As an engineer I was not interested in these and did not think they were needed. Also the way math classes seem to be taught by just writing on the blackboard for 75 mins is difficult because if you fall behind you are playing catch up all lecture and you have to rely on your own notes and the textbook. Lecture slides would be useful. Also there was very little focus on applications for a course labeled lin alg and applications
6.00	I think that this term of the course varied significantly with how it was taught in previous terms. There was a significant focus on proofs which many of us didn't expect because we thought that this would be more applications based since math 24 is the proof version of this course.
7.00	I wish there was some lecture or problem set that could be used to help teach us how to approach proof problems.
8.00	Lectures with Professor Temkin were much harder to follow.
9.00	More alignment between what was on the homework and what was on the test. More practice exams for the tests.
10.00	Professor Temkin was not as good as a sub Found the proof hard
11.00	Teaching proofs could be improved Maybe recorded lectures or lecture notes to go over after class
12.00	The class overall was engaging and helpful for me. However, I think Professor Frei should hold more office hours to go through problems and concepts taught in lectures for revision and practice purposes due to the crazy demand especially around midterms and final.
13.00	The lectures were not always very effective, and it was not always clear what needed to be known from the textbook
14.00	WebWork questions can be a little disorganized at times, so better quality daily questions.
15.00	When Misha took over he was not a good teacher
16.00	With that said, discussion surrounding key concepts and ways of thinking for the course were often lacking, and so I never felt like I knew really what to expect or how exactly to prepare. For example, many of our examples were very application based, but then the exams primarily centered around proofs.

Course: MATH 022 Linear Algebra w/Applicatns
 Term: 202401 - Winter Term 2024
 Instructor: Sarah Frei

Question Section **Course Design and Effectiveness**

Question: How did you contribute to your own learning experience?

1.00	- Made sure to stay on top of the work. Reading the textbook before class, going to TA hours to seek extra help.
2.00	Did a lot of self learning for classes I missed or getting ahead on the PSets
3.00	I had to watch all the videos the Professor Orellano posted to out stream. This was the onyl way I learned anything.

4.00	I put in a lot of time going to TA or office hours to better understand the material
5.00	I spend a significant amount of time, mostly by myself, working on the computational and proof-based problems from the textbook and in homework assignments as well as revising on the materials and concepts learned in lectures to get a good grip of the knowledge taught. I often go to TAs and Professors office hours to discuss the solutions and ask questions because I think the most effective way to learn and understand things is through engaging and communicating with others.
6.00	Learned outside of class and came prepared with questions to ask Professor Frei.
7.00	Learning on my own through textbooks and homework.
8.00	Read the textbook and did practice problems.
9.00	Spent a lot of time doing practice problems outside of class to understand the material.
10.00	Studied lots outside of class
11.00	Studying a lot
12.00	When Professor Frei lectured, I would read over my notes after class and make sure that I understood the different concept. However, once Professor Frei left, I read the textbook a lot, especially for the exam, because I did not understand Professor Temkin's lectures. They were not well organized and difficult to understand.

Institutional Reporting and Analysis (IRA)

Dartmouth College Course Summary Report

This report shows single course assessment questions and responses for courses with five or more enrolled.

Term 202306 - Summer Term 2023 Subject MATH-Mathematics Course 031-Topics in Algebra Section 01

COURSE ASSESSMENT SUMMARY - SINGLE COURSE

Course:	MATH 031 Topics in Algebra	Total Enrollment:	11
Section:	01	Eligible to Complete Assessment:	11
Term:	202306 - Summer Term 2023	Completed Assessment:	10
Instructor:	Sarah Frei	Did Not Complete Assessment:	1

Individual Responses Student Background

Year at Dartmouth (9 Responses)	<u>1</u> 0%	<u>2</u> 44.4%	<u>3</u> 55.6%	<u>4</u> 0%	<u>5</u> 0%	<u>B.F.</u> 0%	<u>Masters</u> 0%	<u>Ph.D.</u> 0%			
Reason(s) for taking course (10 Responses)	<u>Distributive Requirement</u> 0	<u>Major</u> 9	<u>Minor</u> 1	<u>Professor</u> 0	<u>Interest</u> 0	<u>Masters/PhD Elective</u> 0	<u>Masters/PhD Requirement</u> 0	<u>Other</u> 0			
Attendance in this course (10 Responses)	<u>< 20%</u> 0%	<u>20-40%</u> 0%	<u>40-60%</u> 10%	<u>60-80%</u> 20%	<u>80-100%</u> 70%						
Expected Grade (10 Responses)	<u>A</u> 50%	<u>B</u> 50%	<u>C</u> 0%	<u>D</u> 0%	<u>E</u> 0%	<u>NRO</u> 0%	<u>CT</u> 0%	<u>NC</u> 0%	<u>LP</u> 0%	<u>P</u> 0%	<u>HP</u> 0%
Hrs/wk spent on coursework outside class (10 Responses)	<u>≤1</u> 0%	<u>1-5</u> 0%	<u>5-10</u> 70%	<u>10-15</u> 30%	<u>≥15</u> 0%						

Individual Responses Course Design and Effectiveness

I think the overall quality of the course was (10 Responses)	<u>Median</u> 1 (Excellent)	<u>Mean</u> 1.2 (Excellent)	<u>Excellent</u> 80%	<u>Very Good</u> 20%	<u>Good</u> 0%	<u>Fair</u> 0%	<u>Poor</u> 0%	<u>N/A</u> 0%			
I learned a lot in the course. (9 Responses)	<u>Median</u> 1 (Strongly Agree)	<u>Mean</u> 1.2 (Strongly Agree)	<u>Strongly Agree</u> 77.8%	<u>Agree</u> 22.2%	<u>Neutral</u> 0%	<u>Disagree</u> 0%	<u>Strongly Disagree</u> 0%	<u>N/A</u> 0%			
I put a great deal of effort into the course. (9 Responses)	1 (Strongly Agree)	1.2 (Strongly Agree)	77.8%	22.2%	0%	0%	0%	0%			
I was intellectually engaged in the course. (8 Responses)	1 (Strongly Agree)	1.3 (Strongly Agree)	75%	25%	0%	0%	0%	0%			
The objectives of the course were clear to me. (8 Responses)	1 (Strongly Agree)	1.4 (Strongly Agree)	75%	12.5%	12.5%	0%	0%	0%			
I found the course to be well organized (8 Responses)	1 (Strongly Agree)	1.1 (Strongly Agree)	87.5%	12.5%	0%	0%	0%	0%			
The assignments reinforced my understanding of the course material (8 Responses)	1 (Strongly Agree)	1.3 (Strongly Agree)	75%	25%	0%	0%	0%	0%			
Comment on the aspects of the course that you think were most effective: (8 Responses)	View Responses										
Comment on 1-3 aspects of the course that could be improved or enhanced: (8 Responses)	View Responses										
How did you contribute to your own learning experience? (7 Responses)	View Responses										

Individual Responses Faculty (Sarah Frei)

I think the overall effectiveness of the teaching was (9 Responses)	<u>Median</u> 1 (Excellent)	<u>Mean</u> 1.1 (Excellent)	<u>Excellent</u> 88.9%	<u>Very Good</u> 11.1%	<u>Good</u> 0%	<u>Fair</u> 0%	<u>Poor</u> 0%	<u>N/A</u> 0%			
The professor set high standards (8 Responses)	<u>Median</u> 1 (Strongly Agree)	<u>Mean</u> 1.3 (Strongly Agree)	<u>Strongly Agree</u> 75%	<u>Agree</u> 25%	<u>Neutral</u> 0%	<u>Disagree</u> 0%	<u>Strongly Disagree</u> 0%	<u>N/A</u> 0%			
The professor explained central concepts clearly (7 Responses)	1 (Strongly Agree)	1.3 (Strongly Agree)	71.4%	28.6%	0%	0%	0%	0%			
The professor challenged me to think critically about the course material (7 Responses)	1 (Strongly Agree)	1.1 (Strongly Agree)	85.7%	14.3%	0%	0%	0%	0%			

The professor was available for consultation outside of class (7 Responses)	1 (Strongly Agree)	1.1 (Strongly Agree)	85.7%	14.3%	0%	0%	0%	0%			
Comment on 1-3 things that the professor did well and should continue to do in the future: (7 Responses)	View Responses										
Comment on 1-3 things that the professor should focus on to improve their classroom effectiveness: (7 Responses)	View Responses										
Add any specific recommendations on how the professor is assessing the course work and giving feedback to students that you believe would be useful: (5 Responses)	View Responses										

Individual Responses Student Initiated Questions

Comment on the methods of evaluation chosen by the instructor, e.g. tests, papers and examinations and the workload expected of students: (6 Responses)	View Responses										
Comment on the structure of the class, for example the mix between lecture and discussion: (6 Responses)	View Responses										
How did this course influence your academic experience at Dartmouth? (5 Responses)	View Responses										

There are no course specific question responses.

COURSE ASSESSMENT REPORTS - My Specific Faculty Comments

Course: MATH 031 Topics in Algebra
 Term: 202306 - Summer Term 2023
 Instructor: Sarah Frei

Question: Comment on 1-3 things that the professor did well and should continue to do in the future:

1.00	Being available for office hours was always really helpful
2.00	Good lecturing. Good teaching. Very available via email. Very understanding.
3.00	Office hours were great to talk about solutions
4.00	Professor was flexible and understanding.
5.00	The lectures were very well organized and enjoyable!
6.00	Very accommodating to me in taking exams and open in general to help students
7.00	available for office hours, quick response time for emails

Course: MATH 031 Topics in Algebra
 Term: 202306 - Summer Term 2023
 Instructor: Sarah Frei

Question: Comment on 1-3 things that the professor should focus on to improve their classroom effectiveness:

1.00	.
2.00	Do in class exercises together, just gets overlooked at the end of class
3.00	I don't have any notable comments here, Professor Frei was awesome.
4.00	I don't know if it would be possible but there was almost never time at the end of class to do the in class exercises.
5.00	N/a
6.00	Spend more time going through actual problems. Or maybe – give a problem for us to solve for five minutes and then talk about it after
7.00	n/a

Course: MATH 031 Topics in Algebra
 Term: 202306 - Summer Term 2023
 Instructor: Sarah Frei

Question: Add any specific recommendations on how the professor is assessing the course work and giving feedback to students that you believe would be useful:

1.00	Assessing was fair and timely for most part so no recommendations from me
2.00	Assessment of the homework is extremely exacting.
3.00	Not really, Professor Frei provided helpful feedback on all of our homework/exams.
4.00	Pretty detailed with the homework corrections, would like to see midterm answers but not a big deal.
5.00	n/a

COURSE ASSESSMENT REPORTS - Student Initiated Comments

Course: MATH 031 Topics in Algebra
 Term: 202306 - Summer Term 2023
 Instructor: Sarah Frei

Question: Comment on the methods of evaluation chosen by the instructor, e.g. tests, papers and examinations and the workload expected of students:

1.00	All the work was hard. Tests and all. I think the prof could be more transparent about what will be tested on the midterms .
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2.00	Fair and honest.
3.00	Maybe a final project would've been better as a final instead of a test
4.00	Pretty standard weekly assignments with two midterms and a final. The workload was pretty reasonable.
5.00	Weekly pset, 2 midterms and final
6.00	homework and exams, fair workload

Course: MATH 031 Topics in Algebra
 Term: 202306 - Summer Term 2023
 Instructor: Sarah Frei

Question: Comment on the structure of the class, for example the mix between lecture and discussion:

1.00	100% lecture
2.00	Good for a math class.
3.00	I like how we always did problems at the end of class
4.00	Mostly lecture
5.00	The first half to 3/4 of the class was a typical lecture, and Professor Frei did a good job of keeping students engaged throughout. The final part of class was for exercises, which were helpful for understanding the material.
6.00	mostly lecture, with time for group work on in-class exercises at the end of class

Course: MATH 031 Topics in Algebra
 Term: 202306 - Summer Term 2023
 Instructor: Sarah Frei

Question: How did this course influence your academic experience at Dartmouth?

1.00	I took this for the math major, and I really enjoyed it!
2.00	I will take more math classes. I like abstract algebra
3.00	Positively influenced my experience. I liked this course.
4.00	Try to take classes that start later in day
5.00	now a math minor

COURSE ASSESSMENT REPORTS - Non-Faculty Specific Comments

Course: MATH 031 Topics in Algebra
 Term: 202306 - Summer Term 2023
 Instructor: Sarah Frei

Question Section: **Course Design and Effectiveness**

Question: Comment on the aspects of the course that you think were most effective:

1.00	Lecture was really strong
2.00	Lecture was very clear, homeworks enforced concepts from class, exams assessed knowledge of course material
3.00	Posted answers helpful in learning especially if you are unsure what the answer should be
4.00	Practice problems were good, never had seen that before in a math class at Dartmouth.
5.00	Sarah Frei is a very effective lecturer. The lectures and the homeworks are good for the course
6.00	The period at the end where we worked on problems was pretty useful
7.00	This was the first math class I've had that did any kind of in-class exercises, and I found it very helpful! I also really appreciated that the solutions were posted.
8.00	frei was amazin

Course: MATH 031 Topics in Algebra
 Term: 202306 - Summer Term 2023
 Instructor: Sarah Frei

Question Section: **Course Design and Effectiveness**

Question: Comment on 1-3 aspects of the course that could be improved or enhanced:

1.00	I don't have many comments here, the course was great!
2.00	In class exercises should be done together
3.00	Maybe more time looking at the material from a broader perspective? There were many times where we learned a lot of theorems but didn't use most of them and it was hard to know what was useful and what wasn't
4.00	Not much to say here, well-organized.
5.00	Slightly faster but then again we get through a lot so IDK
6.00	The prof is very available and I think we could all benefit from more office hours.
7.00	i wish the homework was not due right before our midterms
8.00	n/a

Course: MATH 031 Topics in Algebra
 Term: 202306 - Summer Term 2023
 Instructor: Sarah Frei

Question Section: **Course Design and Effectiveness**

Question: How did you contribute to your own learning experience?

1.00	Doing homework, going to office hours, asking questions in class
2.00	Doing the class exercises, along with homework of course, was really helpful study tool.
3.00	I did practice problems and reviewed the homeworks.
4.00	Lots of reading through forums and practice problems.
5.00	Office hours regularly
6.00	Read the textbook and look over class problems
7.00	worked hard on homeworks and did in-class exercises

Institutional Reporting and Analysis (IRA) Dartmouth College Course Summary Report

This report shows single course assessment questions and responses for courses with five or more enrolled.

Term 202301 - Winter Term 2023 Subject MATH-Mathematics Course 125-Current Prob Number Theory Section 01

COURSE ASSESSMENT SUMMARY - SINGLE COURSE

Course:	MATH 125 Current Prob Number Theory	Total Enrollment:	7
Section:	01	Eligible to Complete Assessment:	7
Term:	202301 - Winter Term 2023	Completed Assessment:	5
Instructor:	Sarah Frei	Did Not Complete Assessment:	2

Individual Responses Student Background

Year at Dartmouth (5 Responses)	<u>1</u> 0%	<u>2</u> 20%	<u>3</u> 0%	<u>4</u> 0%	<u>5</u> 0%	<u>B.E.</u> 0%	<u>Masters</u> 0%	<u>Ph.D.</u> 80%			
Reason(s) for taking course (5 Responses)	<u>Distributive Requirement</u> 0	<u>Major</u> 0	<u>Minor</u> 0	<u>Professor</u> 1	<u>Interest</u> 2	<u>Masters/PhD Elective</u> 3	<u>Masters/PhD Requirement</u> 3	<u>Other</u> 1			
Attendance in this course (5 Responses)	<u>< 20%</u> 0%	<u>20-40%</u> 0%	<u>40-60%</u> 0%	<u>60-80%</u> 0%	<u>80-100%</u> 100%						
Expected Grade (5 Responses)	<u>A</u> 0%	<u>B</u> 0%	<u>C</u> 0%	<u>D</u> 0%	<u>E</u> 0%	<u>NRO</u> 0%	<u>CT</u> 0%	<u>NC</u> 0%	<u>LP</u> 0%	<u>P</u> 100%	<u>HP</u> 0%
Hrs/wk spent on coursework outside class (5 Responses)	<u>≤1</u> 0%	<u>1-5</u> 20%	<u>5-10</u> 40%	<u>10-15</u> 40%	<u>≥15</u> 0%						

Individual Responses Course Design and Effectiveness

I think the overall quality of the course was (5 Responses)	<u>Median</u> 1 (Excellent)	<u>Mean</u> 1 (Excellent)	<u>Excellent</u> 100%	<u>Very Good</u> 0%	<u>Good</u> 0%	<u>Fair</u> 0%	<u>Poor</u> 0%	<u>N/A</u> 0%			
I learned a lot in the course. (5 Responses)	<u>Median</u> 1 (Strongly Agree)	<u>Mean</u> 1 (Strongly Agree)	<u>Strongly Agree</u> 100%	<u>Agree</u> 0%	<u>Neutral</u> 0%	<u>Disagree</u> 0%	<u>Strongly Disagree</u> 0%	<u>N/A</u> 0%			
I put a great deal of effort into the course. (5 Responses)	1 (Strongly Agree)	1.6 (Agree)	60%	20%	20%	0%	0%	0%			
I was intellectually engaged in the course. (5 Responses)	1 (Strongly Agree)	1 (Strongly Agree)	100%	0%	0%	0%	0%	0%			
The objectives of the course were clear to me. (5 Responses)	1 (Strongly Agree)	1 (Strongly Agree)	100%	0%	0%	0%	0%	0%			
I found the course to be well organized (4 Responses)	1 (Strongly Agree)	1 (Strongly Agree)	100%	0%	0%	0%	0%	25%			
The assignments reinforced my understanding of the course material (4 Responses)	1 (Strongly Agree)	1.3 (Strongly Agree)	75%	25%	0%	0%	0%	25%			
Comment on the aspects of the course that you think were most effective: (2 Responses)	View Responses										
Comment on 1-3 aspects of the course that could be improved or enhanced: (1 Responses)	View Responses										
How did you contribute to your own learning experience? (2 Responses)	View Responses										

Individual Responses Faculty (Sarah Frei)

I think the overall effectiveness of the teaching was (5 Responses)	<u>Median</u> 1 (Excellent)	<u>Mean</u> 1 (Excellent)	<u>Excellent</u> 100%	<u>Very Good</u> 0%	<u>Good</u> 0%	<u>Fair</u> 0%	<u>Poor</u> 0%	<u>N/A</u> 0%			
The professor set high standards (5 Responses)	<u>Median</u> 1 (Strongly Agree)	<u>Mean</u> 1.4 (Strongly Agree)	<u>Strongly Agree</u> 60%	<u>Agree</u> 40%	<u>Neutral</u> 0%	<u>Disagree</u> 0%	<u>Strongly Disagree</u> 0%	<u>N/A</u> 0%			
The professor explained central concepts clearly (5 Responses)	1 (Strongly Agree)	1.2 (Strongly Agree)	80%	20%	0%	0%	0%	0%			
The professor challenged me to think critically about the course material (5 Responses)	1 (Strongly Agree)	1 (Strongly Agree)	100%	0%	0%	0%	0%	0%			

The professor was available for consultation outside of class (5 Responses)	1 (Strongly Agree)	1 (Strongly Agree)	100%	0%	0%	0%	0%	0%				
Comment on 1-3 things that the professor did well and should continue to do in the future: (3 Responses)	View Responses											
Comment on 1-3 things that the professor should focus on to improve their classroom effectiveness: (2 Responses)	View Responses											
Add any specific recommendations on how the professor is assessing the course work and giving feedback to students that you believe would be useful: (1 Responses)	View Responses											

Individual Responses Student Initiated Questions

Comment on the methods of evaluation chosen by the instructor, e.g. tests, papers and examinations and the workload expected of students: (2 Responses)	View Responses											
Comment on the structure of the class, for example the mix between lecture and discussion: (2 Responses)	View Responses											
How did this course influence your academic experience at Dartmouth? (2 Responses)	View Responses											

There are no course specific question responses.

COURSE ASSESSMENT REPORTS - My Specific Faculty Comments

Course: MATH 125 Current Prob Number Theory
 Term: 202301 - Winter Term 2023
 Instructor: Sarah Frei

Question: Comment on 1-3 things that the professor did well and should continue to do in the future:

1.00	Classes were engaging and clear. Everyone was welcome to ask questions and the professor would give very complete answers. It was really nice to see some actual examples, even of these advanced topics.
2.00	You've dethroned Rachel Pries for having taught my favorite math course. This was a fantastic class!
3.00	having really helpful office hours, encouraging comments during lecture, having good organization about where the course was going

Course: MATH 125 Current Prob Number Theory
 Term: 202301 - Winter Term 2023
 Instructor: Sarah Frei

Question: Comment on 1-3 things that the professor should focus on to improve their classroom effectiveness:

1.00	Some people got used to answering questions before the professor had a chance to speak and I did not think that was appropriate.
2.00	maybe have slightly slower pace

Course: MATH 125 Current Prob Number Theory
 Term: 202301 - Winter Term 2023
 Instructor: Sarah Frei

Question: Add any specific recommendations on how the professor is assessing the course work and giving feedback to students that you believe would be useful:

1.00	I think the feedback was very useful
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COURSE ASSESSMENT REPORTS - Student Initiated Comments

Course: MATH 125 Current Prob Number Theory
 Term: 202301 - Winter Term 2023
 Instructor: Sarah Frei

Question: Comment on the methods of evaluation chosen by the instructor, e.g. tests, papers and examinations and the workload expected of students:

1.00	Homework and help with writing the class notes.
2.00	homework every other week, no exams

Course: MATH 125 Current Prob Number Theory
 Term: 202301 - Winter Term 2023
 Instructor: Sarah Frei

Question: Comment on the structure of the class, for example the mix between lecture and discussion:

1.00	Lecture.
2.00	three lectures per week except some weeks had an x hour lecture to make up for missed classes

Course: MATH 125 Current Prob Number Theory
 Term: 202301 - Winter Term 2023
 Instructor: Sarah Frei

Question: How did this course influence your academic experience at Dartmouth?

1.00	This was a great class to take and it was about a topic that I was very interested on learning, but there was no class on it until now.
2.00	this course made me very excited to learn more about algebraic geometry!

COURSE ASSESSMENT REPORTS - Non-Faculty Specific Comments

Course: MATH 125 Current Prob Number Theory
 Term: 202301 - Winter Term 2023
 Instructor: Sarah Frei

Question Section **Course Design and Effectiveness**

Comment on the aspects of the Question: course that you think were most effective:

- 1.00 The classes were engaging and organized. The goal of the class was clear and the balance between background and new topics was very good. It was really nice to have the class notes written collaboratively.
- 2.00 the organization of the lectures and providing additional sources to read was really helpful

Course: MATH 125 Current Prob Number Theory
Term: 202301 - Winter Term 2023
Instructor: Sarah Frei

Question Section **Course Design and Effectiveness**

Comment on 1-3 aspects of the Question: course that could be improved or enhanced:

- 1.00 can't think of anything

Course: MATH 125 Current Prob Number Theory
Term: 202301 - Winter Term 2023
Instructor: Sarah Frei

Question Section **Course Design and Effectiveness**

Question: How did you contribute to your own learning experience?

- 1.00 Active engagement in class.
- 2.00 reading and review outside of class to try to better understand advanced concepts, and going to office hours and working through homework

Institutional Reporting and Analysis (IRA) Dartmouth College Course Summary Report

This report shows single course assessment questions and responses for courses with five or more enrolled.

Term 202209 - Fall Term 2022 Subject MATH-Mathematics Course 031-Topics in Algebra Section 01

COURSE ASSESSMENT SUMMARY - SINGLE COURSE

Course:	MATH 031 Topics in Algebra	Total Enrollment:	20
Section:	01	Eligible to Complete Assessment:	20
Term:	202209 - Fall Term 2022	Completed Assessment:	18
Instructor:	Sarah Frei	Did Not Complete Assessment:	2

Individual Responses Student Background

Year at Dartmouth (18 Responses)	<u>1</u> 5.6%	<u>2</u> 11.1%	<u>3</u> 22.2%	<u>4</u> 61.1%	<u>5</u> 0%	<u>B.F.</u> 0%	<u>Masters</u> 0%	<u>Ph.D.</u> 0%			
Reason(s) for taking course (18 Responses)	<u>Distributive Requirement</u> 0	<u>Major</u> 13	<u>Minor</u> 5	<u>Professor</u> 0	<u>Interest</u> 2	<u>Masters/PhD Elective</u> 0	<u>Masters/PhD Requirement</u> 0	<u>Other</u> 0			
Attendance in this course (18 Responses)	<u>< 20%</u> 0%	<u>20-40%</u> 5.6%	<u>40-60%</u> 11.1%	<u>60-80%</u> 0%	<u>80-100%</u> 83.3%						
Expected Grade (18 Responses)	<u>A</u> 44.4%	<u>B</u> 50%	<u>C</u> 5.6%	<u>D</u> 0%	<u>E</u> 0%	<u>NRO</u> 0%	<u>CT</u> 0%	<u>NC</u> 0%	<u>LP</u> 0%	<u>P</u> 0%	<u>HP</u> 0%
Hrs/wk spent on coursework outside class (17 Responses)	<u>≤1</u> 0%	<u>1-5</u> 11.8%	<u>5-10</u> 29.4%	<u>10-15</u> 41.2%	<u>≥15</u> 17.6%						

Individual Responses Course Design and Effectiveness

I think the overall quality of the course was (18 Responses)	<u>Median</u> 2 (Very Good)	<u>Mean</u> 1.9 (Very Good)	<u>Excellent</u> 44.4%	<u>Very Good</u> 27.8%	<u>Good</u> 22.2%	<u>Fair</u> 5.6%	<u>Poor</u> 0%	<u>N/A</u> 0%			
I learned a lot in the course. (18 Responses)	<u>Median</u> 1 (Strongly Agree)	<u>Mean</u> 1.5 (Agree)	<u>Strongly Agree</u> 55.6%	<u>Agree</u> 38.9%	<u>Neutral</u> 5.6%	<u>Disagree</u> 0%	<u>Strongly Disagree</u> 0%	<u>N/A</u> 0%			
I put a great deal of effort into the course. (18 Responses)	1 (Strongly Agree)	1.4 (Strongly Agree)	72.2%	16.7%	11.1%	0%	0%	0%			
I was intellectually engaged in the course. (18 Responses)	1 (Strongly Agree)	1.4 (Strongly Agree)	77.8%	5.6%	11.1%	5.6%	0%	0%			
The objectives of the course were clear to me. (18 Responses)	1 (Strongly Agree)	1.3 (Strongly Agree)	77.8%	11.1%	11.1%	0%	0%	0%			
I found the course to be well organized (18 Responses)	1 (Strongly Agree)	1.8 (Agree)	55.6%	27.8%	5.6%	5.6%	5.6%	0%			
The assignments reinforced my understanding of the course material (17 Responses)	1 (Strongly Agree)	1.5 (Agree)	70.6%	17.6%	5.9%	5.9%	0%	0%			
Comment on the aspects of the course that you think were most effective: (11 Responses)	View Responses										
Comment on 1-3 aspects of the course that could be improved or enhanced: (12 Responses)	View Responses										
How did you contribute to your own learning experience? (8 Responses)	View Responses										

Individual Responses Faculty (Sarah Frei)

I think the overall effectiveness of the teaching was (17 Responses)	<u>Median</u> 1 (Excellent)	<u>Mean</u> 1.6 (Very Good)	<u>Excellent</u> 64.7%	<u>Very Good</u> 23.5%	<u>Good</u> 5.9%	<u>Fair</u> 0%	<u>Poor</u> 5.9%	<u>N/A</u> 5.9%			
The professor set high standards (17 Responses)	<u>Median</u> 1 (Strongly Agree)	<u>Mean</u> 1.2 (Strongly Agree)	<u>Strongly Agree</u> 88.2%	<u>Agree</u> 5.9%	<u>Neutral</u> 5.9%	<u>Disagree</u> 0%	<u>Strongly Disagree</u> 0%	<u>N/A</u> 5.9%			
The professor explained central concepts clearly (16 Responses)	1 (Strongly Agree)	1.4 (Strongly Agree)	75%	18.8%	0%	6.3%	0%	6.3%			
The professor challenged me to think critically about the course material (17 Responses)	1 (Strongly Agree)	1.2 (Strongly Agree)	82.4%	11.8%	5.9%	0%	0%	5.9%			

The professor was available for consultation outside of class (17 Responses)	1 (Strongly Agree)	1.2 (Strongly Agree)	88.2%	5.9%	5.9%	0%	0%	5.9%				
Comment on 1-3 things that the professor did well and should continue to do in the future: (11 Responses)	View Responses											
Comment on 1-3 things that the professor should focus on to improve their classroom effectiveness: (7 Responses)	View Responses											
Add any specific recommendations on how the professor is assessing the course work and giving feedback to students that you believe would be useful: (7 Responses)	View Responses											

Individual Responses Student Initiated Questions

Comment on the methods of evaluation chosen by the instructor, e.g. tests, papers and examinations and the workload expected of students: (7 Responses)	View Responses											
Comment on the structure of the class, for example the mix between lecture and discussion: (6 Responses)	View Responses											
How did this course influence your academic experience at Dartmouth? (9 Responses)	View Responses											

There are no course specific question responses.

COURSE ASSESSMENT REPORTS - My Specific Faculty Comments

Course: MATH 031 Topics in Algebra
 Term: 202209 - Fall Term 2022
 Instructor: Sarah Frei

Question: Comment on 1-3 things that the professor did well and should continue to do in the future:

1.00	Asking for feedback early in the term was a great idea.
2.00	Being available for students and always willing to explain even what seemed obvious
3.00	I appreciate the availability of office hours almost every day of the week.
4.00	Lectures were great, and so was the homework/office hours.
5.00	Professor Frei gave an anonymous survey to students to help her understand how we thought the class was going and how she could help us learn better
6.00	Professor Frei is a really clear lecturer and great prof. She really cares about teaching the material and making sure the whole class is following along
7.00	She was extremely helpful in office hours and would ask the class if we needed more clarifications in class.
8.00	She was very available outside of class, which helped me a lot.
9.00	The number of office hours was very helpful.
10.00	Very responsive to homework questions over email - this was extremely helpful. Prof Frei was very organized and had a good balance in her lectures between propositions, proofs, examples, and questions from the audience. I also really liked how she ran office hours in a collaborative way.
11.00	tailored the class based on the needs of students always available and approachable

Course: MATH 031 Topics in Algebra
 Term: 202209 - Fall Term 2022
 Instructor: Sarah Frei

Question: Comment on 1-3 things that the professor should focus on to improve their classroom effectiveness:

1.00	I wish notes were posted after each lecture. That helps me a lot. I got slightly lost with the topics in the class at times.
2.00	Lectures were hard to follow: I think there should be little tasks/assignments to do before each lecture, so the lecture material is not a learning experience from scratch but building upon the basics of a certain topic.
3.00	MORE MATERIAL OUTSIDE OF CLASS!!! Class notes, videos, etc. Not only references to the book chapters. Also, more time for the midterm.
4.00	None.
5.00	Not rush to finish the textbook and taking more time to see if we really understood the material outside of the 50 minute classes
6.00	Only thing as mentioned above would be sticking to the syllabus in terms of textbook sections as laid out at the start of the term. But I understand that this needed to adapt as it was her first time teaching the course, and this was a very very minor issue.
7.00	Sometimes the proofs would get a bit unorganized I felt or it wasn't clear what the logic we were following was always.

Course: MATH 031 Topics in Algebra
 Term: 202209 - Fall Term 2022
 Instructor: Sarah Frei

Question: Add any specific recommendations on how the professor is assessing the course work and giving feedback to students that you believe would be useful:

1.00	Coursework was fairly assessed
2.00	Final paper or final exam, not both! In addition to homework we had due right before study break, that was cruel
3.00	I think the assessments were fair. They were very fair questions on the exams; I just think it was slightly too dense in material / questions for the allotted time, and students weren't learning the material really well in class. More examples, posting notes, and motivation for the material should help this.

4.00	Maybe going through homework exercises would be good for our understanding of the material.
5.00	No
6.00	Would have been helpful to get homework comments back quicker so we could see the issues in our work and focus on iterating/improving for the next assignment. I know there was an issue with the grader that could've been contributing to this which would've been outside of prof frei's control.
7.00	it will be helpful if we get homework feedback earlier before major assessments

COURSE ASSESSMENT REPORTS - Student Initiated Comments

Course: MATH 031 Topics in Algebra
 Term: 202209 - Fall Term 2022
 Instructor: Sarah Frei

Question: Comment on the methods of evaluation chosen by the instructor, e.g. tests, papers and examinations and the workload expected of students:

1.00	1 midterm exam, 1 final exam, 1 final paper, 8 weekly psets. Typical workload for a pure math class. Tests were a mix of computational problems and proofs. Would highly recommend doing the practice problems.
2.00	Evaluation was fair.
3.00	Good.
4.00	Homework was graded pretty tough compared to other math classes I've taken, but % wise everything is good.
5.00	Homeworks were challenging but not impossible. The midterm was actually impossible. The final paper was ok but the stress of prepping for the final exam, which was really hard, made it more challenging than what the professor anticipated.
6.00	I think the final paper is a huge rush and burden given we already have a final exam that is pretty difficult. Either we should have two non-cumulative midterms and a final paper, or a midterm and a final without a paper (the former makes more sense, as I think the final paper is an integral part of the process of learning how to write a mathematical paper). However, I felt like I spent an inadequate amount of time on the paper, although it was assigned 2-3 weeks prior to the deadline; because the last weeks of the term are usually busy preparing for finals and writing papers. Having two final assessments of serious importance made me pick the exam over the paper subconsciously for time management purposes, and I feel like that impacted my learning and performance.
7.00	The homeworks were very helpful, the paper was a bit confusing since it's atypical of a math course, and the exam formats were fair but they were pretty hard.

Course: MATH 031 Topics in Algebra
 Term: 202209 - Fall Term 2022
 Instructor: Sarah Frei

Question: Comment on the structure of the class, for example the mix between lecture and discussion:

1.00	All lecture with time for questions. Effective.
2.00	Good.
3.00	Only lecture, which is standard for math classes at Dartmouth.
4.00	Structure was well-defined.
5.00	The class sessions were well organized and helpful.
6.00	The structure of the class was good.

Course: MATH 031 Topics in Algebra
 Term: 202209 - Fall Term 2022
 Instructor: Sarah Frei

Question: How did this course influence your academic experience at Dartmouth?

1.00	Best pure math experience I've had at dartmouth. I wish I could've taken this class earlier, especially with Professor Frei. Rounded out my math major.
2.00	I did not enjoy the material in this class and I am unsure why it is a required course given that it has no applications to the real world or any other math class I have taken or will choose to take in the future. That being said, Professor Frei is definitely one of the best math professors I've had a Dartmouth and the course would have been exponentially harder with a worse professor, like I have seen in some of the other math classes.
3.00	I don't know if it challenged me in a way that I may appreciate later or if it just ruined my term and grades and took me away from being more engaged in other academic pursuits that I had
4.00	I have one more course until im done with the major.
5.00	I really loved this course! I also felt like I really grew as a math student and feel much more confident in my abilities. I have not tended toward pure math for most of my Dartmouth career but this class has made me regret that decision somewhat. As a senior, I only have so many more classes to take so I'm looking forward to making the most of it but I'll certainly say that this class was a highlight
6.00	I still like math a lot.
7.00	It made me remember why I did not like pure math in the first place, but I am happy that this was adequately challenging. Also, I would personally consider to take another class from Sarah Frei if she offers one, I think she is a good instructor overall.
8.00	It made me want to pursue Math more.
9.00	inspired and encouraged my interest in pure math

COURSE ASSESSMENT REPORTS - Non-Faculty Specific Comments

Course: MATH 031 Topics in Algebra
 Term: 202209 - Fall Term 2022
 Instructor: Sarah Frei
 Question Section: Course Design and Effectiveness

Question: Comment on the aspects of the course that you think were most effective:

1.00	Examples shown on the board in class ended up being more and more useful as the term went on.
2.00	Homeworks were fun

3.00	I think the weekly homework and the amount of office hours were very helpful.
4.00	I think this class was organized in a very traditional way. Don't know what to say here.
5.00	One of the most effective math courses I've taken at dartmouth. Very organized lectures, liked that we had the textbook sections that lined up with the lectures ahead of time so we could review the material before class. Prof Frei was very helpful in office hours and extremely responsive over email. Homeworks we're challenging but very fair and really reinforced my understanding of the material.
6.00	Problem sets accurately reflected the level
7.00	Professor Frei was extremely supportive throughout the course, always willing to help students with understanding the material when they were confused, including me. The assignments and examinations were fair and accurately reflected the material we were learning in the course. In addition, Professor Frei held multiple office hours a week, which was extremely useful for me.
8.00	Professor adjusting the syllabus and pace according to the feedback from the class
9.00	The homeworks helped reinforce some concepts but they were also too challenging and often felt like maybe I missed all the important concepts
10.00	The homeworks were very helpful.
11.00	lectures were great! Very interesting.

Course: MATH 031 Topics in Algebra
 Term: 202209 - Fall Term 2022
 Instructor: Sarah Frei

Question Section

Course Design and Effectiveness

Comment on 1-3 aspects of the Question: course that could be improved or enhanced:

1.00	Covering less topics — it is a dense class that makes it nearly impossible to retain the knowledge
2.00	I think more motivation for learning the material i.e. applications would be very helpful for students.
3.00	I think the pace of the course really picked up in the last two weeks of the term. I felt like it would have been better to maybe have the pace be a little bit faster through the beginning and middle so we didn't have to rush through the ring sequence so quickly. I also felt like I may not have had as good a grasp on the ring material since we only had one homework assignment with it. I understand that one homework assignment was removed so as to give extra time for the final paper, but I do think it made it more difficult to grasp the ring material. Perhaps an ungraded/supplemental homework would be a good solution here?
4.00	Lectures were hard to follow: I think there should be little tasks/assignments to do before each lecture, so the lecture material is not a learning experience from scratch but building upon the basics of a certain topic.
5.00	More material outside of class was definitely missing.
6.00	No lecture notes
7.00	Only thing that could've been improved (and this is very minor) would be staying on schedule from the beginning of the term. I would sometimes read ahead in the textbook a few lectures ahead and then the material would change. However, this is very minor and I'm sure it is hard to plan exactly how long it will take to lecture the material (especially given questions), and I imagine this will improve as prof frei teaches the class in the future.
8.00	Potentially rebalancing the time spent on each topic. I felt like we spent too much time at the beginning of the term on review material and too little on the interesting topics in weeks 7-9 (everything from subgroups and later).
9.00	Professor Frei's teaching style was a bit fast, which left me behind at certain points.
10.00	The exam and midterm need to be adjusted to allot for the time actually given. Most students ran out of time
11.00	The exams were long and very challenging.
12.00	The homework on top of the final paper was a little frustrating, but it ended up being fine.

Course: MATH 031 Topics in Algebra
 Term: 202209 - Fall Term 2022
 Instructor: Sarah Frei

Question Section

Course Design and Effectiveness

Question: How did you contribute to your own learning experience?

1.00	Doing homework with peers.
2.00	I attended every lecture, actively participated both in and outside class/office hour. Completed all assignments and clarified on anything that I struggled with
3.00	I bought the extra book to assist in my studying as recommended by the prof
4.00	I put a lot of effort into learning the material.
5.00	I studied.
6.00	I tried doing practice problems that were not assigned as part of the homeworks
7.00	I went to many office hours, I read the textbook, and went to every class and took diligent notes.
8.00	Read through textbook section ahead of each lecture. Seems like the obvious thing to do but I hadn't done this for math classes in the past and it improved my performance immensely.

Institutional Reporting and Analysis (IRA) Dartmouth College Course Summary Report

This report shows single course assessment questions and responses for courses with five or more enrolled.

Term 202209 - Fall Term 2022 Subject MATH-Mathematics Course 022-Linear Algebra w/Applicatns Section 01

COURSE ASSESSMENT SUMMARY - SINGLE COURSE

Course:	MATH 022 Linear Algebra w/Applicatns	Total Enrollment:	24
Section:	01	Eligible to Complete Assessment:	24
Term:	202209 - Fall Term 2022	Completed Assessment:	20
Instructor:	Sarah Frei	Did Not Complete Assessment:	4

Individual Responses Student Background

Year at Dartmouth (20 Responses)	<u>1</u> 15%	<u>2</u> 60%	<u>3</u> 10%	<u>4</u> 10%	<u>5</u> 5%	<u>B.F.</u> 0%	<u>Masters</u> 0%	<u>Ph.D.</u> 0%			
Reason(s) for taking course (20 Responses)	<u>Distributive Requirement</u> 1	<u>Major</u> 12	<u>Minor</u> 2	<u>Professor</u> 0	<u>Interest</u> 6	<u>Masters/PhD Elective</u> 0	<u>Masters/PhD Requirement</u> 0	<u>Other</u> 2			
Attendance in this course (20 Responses)	<u>< 20%</u> 5%	<u>20-40%</u> 5%	<u>40-60%</u> 10%	<u>60-80%</u> 15%	<u>80-100%</u> 65%						
Expected Grade (20 Responses)	<u>A</u> 60%	<u>B</u> 10%	<u>C</u> 20%	<u>D</u> 0%	<u>E</u> 5%	<u>NRO</u> 5%	<u>CT</u> 0%	<u>NC</u> 0%	<u>LP</u> 0%	<u>P</u> 0%	<u>HP</u> 0%
Hrs/wk spent on coursework outside class (19 Responses)	<u>≤1</u> 0%	<u>1-5</u> 5.3%	<u>5-10</u> 42.1%	<u>10-15</u> 47.4%	<u>≥15</u> 5.3%						

Individual Responses Course Design and Effectiveness

I think the overall quality of the course was (20 Responses)	<u>Median</u> 2.5 (Good)	<u>Mean</u> 2.4 (Very Good)	<u>Excellent</u> 30%	<u>Very Good</u> 20%	<u>Good</u> 40%	<u>Fair</u> 5%	<u>Poor</u> 5%	<u>N/A</u> 0%			
I learned a lot in the course. (20 Responses)	<u>Median</u> 2 (Agree)	<u>Mean</u> 2 (Agree)	<u>Strongly Agree</u> 35%	<u>Agree</u> 40%	<u>Neutral</u> 20%	<u>Disagree</u> 0%	<u>Strongly Disagree</u> 5%	<u>N/A</u> 0%			
I put a great deal of effort into the course. (20 Responses)	2 (Agree)	1.8 (Agree)	40%	40%	20%	0%	0%	0%			
I was intellectually engaged in the course. (20 Responses)	2 (Agree)	1.9 (Agree)	35%	40%	25%	0%	0%	0%			
The objectives of the course were clear to me. (20 Responses)	2 (Agree)	2.1 (Agree)	30%	30%	40%	0%	0%	0%			
I found the course to be well organized (20 Responses)	2 (Agree)	2 (Agree)	30%	40%	30%	0%	0%	0%			
The assignments reinforced my understanding of the course material (20 Responses)	2 (Agree)	2 (Agree)	30%	40%	30%	0%	0%	0%			
Comment on the aspects of the course that you think were most effective: (13 Responses)	View Responses										
Comment on 1-3 aspects of the course that could be improved or enhanced: (12 Responses)	View Responses										
How did you contribute to your own learning experience? (9 Responses)	View Responses										

Individual Responses Faculty (Sarah Frei)

I think the overall effectiveness of the teaching was (17 Responses)	<u>Median</u> 2 (Very Good)	<u>Mean</u> 2.3 (Very Good)	<u>Excellent</u> 35.3%	<u>Very Good</u> 17.6%	<u>Good</u> 35.3%	<u>Fair</u> 5.9%	<u>Poor</u> 5.9%	<u>N/A</u> 5.9%			
The professor set high standards (17 Responses)	<u>Median</u> 2 (Agree)	<u>Mean</u> 2 (Agree)	<u>Strongly Agree</u> 41.2%	<u>Agree</u> 35.3%	<u>Neutral</u> 11.8%	<u>Disagree</u> 5.9%	<u>Strongly Disagree</u> 5.9%	<u>N/A</u> 5.9%			
The professor explained central concepts clearly (17 Responses)	2 (Agree)	2.1 (Agree)	35.3%	35.3%	17.6%	5.9%	5.9%	5.9%			
The professor challenged me to think critically about the course material (17 Responses)	2 (Agree)	2.2 (Agree)	29.4%	35.3%	23.5%	11.8%	0%	5.9%			
The professor was available for consultation outside of class (17 Responses)	1 (Strongly Agree)	1.7 (Agree)	52.9%	29.4%	11.8%	5.9%	0%	5.9%			
Comment on 1-3 things that the professor did well and should continue to do in the	View Responses										

10.00	This could be more due to the volume of the covered material, but some lectures felt as if they were very definition-heavy without much practice to truly understand the concepts. I feel that having in-class practice problems ingrained into the lectures could increase participation and understanding.
11.00	less proofs more examples ask us to guide what to do to check for understanding

Course: MATH 022 Linear Algebra w/Applicatns

Term: 202209 - Fall Term 2022

Instructor: Sarah Frei

Question: Add any specific recommendations on how the professor is assessing the course work and giving feedback to students that you believe would be useful:

1.00	A way for us to view the correct solutions to the exams we took given that sometimes we didn't understand our mistakes or we didn't know how to start a problem and some of us didn't have time for office hours to go over these exams Also i think it would be helpful to have office hours for class separate from the other classes the professor may be teaching at the same time because sometimes more focus was given to one class than the other
2.00	I think that it would be nice if we spent more time reviewing the tests in class after they were graded, as well as if there were more practice problems (outside of the textbook) leading up to the exams.
3.00	I would love to see some of the reasons why points were deducted on the written homeworks.
4.00	None
5.00	Posting midterm solutions would be really helpful! I had a busy term and lot of time conflicts with the office hours and I didn't have time to go through and ask about everything I got wrong or to try figure it out myself. I felt like sometimes the homework grading was also weirdly arbitrary - there were a couple where I got the answer correct or almost correct but lost a lot of points because previously in my work I hadn't explicitly labeled something as a free variable or a basis, even if I did the math for that part right. I would say if the graders are going to take off points for not labeling something, then making it clear in the instructions that we should label it (i.e. saying "identify free variables" instead of just "show your work").
6.00	The "proofy" exam problems were very difficult and did not feel appropriate given the amount we discussed them in lecture, practiced them in problem sets, or expected in an application-based linear algebra course.
7.00	The professor taught extremely well, taking time to answer questions and explain the material. However, I still stand by my opinion that lectures are a bad way to teach mathematical concepts. Optimal pedagogy: try to solve your pset/webwork before the lecture. Then turn to the textbook/lecture and look for the key formulas/theorems/algorithms. Take only as much time in lecture/textbook as is necessary to solve the problems. Finish your work as fast as possible.
8.00	n/a
9.00	nope@

COURSE ASSESSMENT REPORTS - Student Initiated Comments

Course: MATH 022 Linear Algebra w/Applicatns

Term: 202209 - Fall Term 2022

Instructor: Sarah Frei

Question: Comment on the methods of evaluation chosen by the instructor, e.g. tests, papers and examinations and the workload expected of students:

1.00	2 midterms, 1 final. daily webwork (take about 2 hours each) and 1/week written homework (2-4 hours). Time estimates are from someone who had a decent understanding of the material. We got two 24-hour extensions (!!!!!!!!!!!) on the written homework. It's not necessarily a light workload, but for a math class it's not bad. It also helps a TON with understanding the material and it was easy to ask for help in office hours if I needed it.
2.00	3 exams, homework, webwork, discussions. workload got better over the term but the webworks took a long time and often to get them done in a reasonable amount of time I used online calculators, i would rather have had shorter webwork that I could actually spend the full time doing each problem out for
3.00	I like the 2 midterm, 1 final format, but I did think there were a few too many webworks (or problems that were too computationally demanding) in the course. 3 10-question webworks and one long written homework per week proved to be a ton of work, and encouraged students to use online calculators to make the assignments more doable. The 10pm deadlines were also very tough, especially on Wednesdays and Fridays.
4.00	I though they were fair
5.00	Overall workload was a lot but ok. Tests are pretty standard in a math class but they could have been a little bit more reflective of what we learned in class.
6.00	The midterms were more or less fair yet challenging assessments, given the material we covered. The final did not feel appropriate given that many questions were proof-like. The webworks and written homework were very helpful in reinforcing concepts.
7.00	They were good, the discussion posts was something new but was good when we were allowed to express what we were confused on. It'd be helpful if the concept that was most confusing for students was taken into account and provided another explanation to it by the professors
8.00	Very fair. Homework should've been tougher though
9.00	Written homework and tests make up most of the class; decent workload
10.00	tests and weekly homeworks
11.00	weekly written homework, daily webworks and discussions, two midterm tests and a final exam.

Course: MATH 022 Linear Algebra w/Applicatns

Term: 202209 - Fall Term 2022

Instructor: Sarah Frei

Question: Comment on the structure of the class, for example the mix between lecture and discussion:

1.00	Good
2.00	Good mix
3.00	It was all lecture, which was perfect.
4.00	Lecture
5.00	Mostly lecture.
6.00	The discussion posts were essentially not very helpful.
7.00	The mix between the two was good with the discussion posts outside of class and lecturing while in the class
8.00	lecture

Course: MATH 022 Linear Algebra w/Applicatns
 Term: 202209 - Fall Term 2022
 Instructor: Sarah Frei

Question: How did this course influence your academic experience at Dartmouth?

1.00	Good class needed it for my qss major, definitely worthwhile.
2.00	I liked this course! I wish there had been more applications, but I feel like it gave me a solid foundation to use in future applied math courses.
3.00	I really enjoy math, so I enjoyed the class. It did, however, make me a little bit skeptical of the math department, especially since this is my first college math class.
4.00	Influenced positively
5.00	Linear algebra is so cool!! I'd take more math classes (or at least more classes with Prof. Frei) after this
6.00	This course gave me an intro on a more advanced mathematics course where its no longer about just procedures but applications too
7.00	This course increased my interest in linear algebra and math but made me hesitant in pursuing a major in math due to the difficulty of the exams.
8.00	Will continue on math track
9.00	not fun

COURSE ASSESSMENT REPORTS - Non-Faculty Specific Comments

Course: MATH 022 Linear Algebra w/Applicatns
 Term: 202209 - Fall Term 2022
 Instructor: Sarah Frei

Course Design and Effectiveness

Question Section

Comment on the aspects of the Question: course that you think were most effective:

1.00	I liked how the webworks focused on the mechanics of performing linear algebra operations and how the written homework reinforced that with more complicated problems.
2.00	I think that the discussion posts were a nice addition, and I think that for the most part, the webwork helped to reinforce my understanding.
3.00	I think the daily webwork are helpful, so were homework.
4.00	I think the written homeworks were effective in giving us problems that checked for our understanding of procedures and concepts
5.00	I thought the lectures were good
6.00	I thought the webworks and weekly assignments appropriately reinforced the concepts we learned in class.
7.00	Lots of WebWorks and written HW were tough but they actually helped me learn all the material on a daily basis.
8.00	Professor explained the lessons very clear
9.00	Professor gave some really good examples in class and was super helpful in office hours.
10.00	Textbook and TA hours
11.00	The webwork makes a HUGE difference in being able to actually do the math vs. just being able to follow on the board. Having the discussion posts where we could ask questions about things we didn't understand was nice, but I felt like those questions often didn't get answered. Maybe some mechanism to encourage students to respond to classmates' posts would help? Even though Prof. Frei's research is more theoretical math, it was cool to take an algebra class from someone who actually studies algebra.
12.00	The webworks were great practice, lectures were concise, and the written homework was of appropriate difficulty.
13.00	Webworks are goated. The single best way to learn math. Immediate feedback and tons of room for trial and error. I cannot stress how wonderful they are. Like seriously just sitting down with a couple of formulas and the Webwork is so much fun. Just pure problem solving hours on end. I solve them and become one with the math. Just me and a computer. Game of cat and mouse. Super calming. No distractions.

Course: MATH 022 Linear Algebra w/Applicatns
 Term: 202209 - Fall Term 2022
 Instructor: Sarah Frei

Course Design and Effectiveness

Question Section

Comment on 1-3 aspects of the Question: course that could be improved or enhanced:

1.00	Could have been a bit more faster paced
2.00	Grading is a bit rough though. Super tough to get an A.
3.00	I felt that some problems on the exams, especially the final exam, were unreasonable relative to the material we covered. Given that the course is fast-paced and had a focus on applications, the exam problems that were more proof-like felt unreasonable as they required a more robust understanding of definitions and theorems that I did not feel were taught or practiced in class or in practice problems.
4.00	I think having more questions similar to what we would see on the midterm/ having practice midterms would be helpful.
5.00	I think that the webwork and written homework questions could be better tailored to actually match what we were learning in class. In addition, I think that the lectures could be better organized and include more examples to reinforce understanding of how to actually put the concepts into practice.
6.00	It would be nice if the discussion posts were consistently on a specific day - it wasn't a big deal because they didn't take that long but not knowing if I had something due on Wednesday or Friday made it hard to keep track of the things I had to do that week.
7.00	More examples in lectures
8.00	One aspect that could be improved would be the way some concepts are introduced and providing more examples first and then showing how that connects to concepts

9.00	The webworks could have been a bit short or less computationally heavy. We essentially had 4 problem sets a week, each requiring 2+ hours to complete, which was quite a bit of work. I also would have appreciated midnight deadlines.
10.00	Throughout the course I was confused on how some of the concepts tied together, for example every time we learned how to easily tell some property about a SoLE or matrix based on pivots in rows or columns it would've been helpful to have some sort of chart on canvas that kept track of all such properties for easy reference.
11.00	the discussions felt entirely useless and like busy work. the webwork already were much longer than previous math courses, so discussion posts felt unnecessary. Also on webwork, there were often problems that seemed very impractical to ask us to solve by hand (like finding the inverse of a 4x4 matrix for example), and in those cases the practice isn't actually helpful because students will use calculators, and also people use calculators to solve that type of thing in real life
12.00	webworks due at 10pm were super annoying. It's better when you're given until midnight to find solutions.

Course: MATH 022 Linear Algebra w/Applicatns
 Term: 202209 - Fall Term 2022
 Instructor: Sarah Frei
 Question Section **Course Design and Effectiveness**

Question: How did you contribute to your own learning experience?

1.00	Did all the assigned work and went to office hours.
2.00	I completed every webwork and homework assignment and attended every lecture and made sure I understood every concept on the study guides.
3.00	I contributed to my own learning by going to tutorials and also reading the textbook to ground my knowledge on some of the concepts i didn't understand
4.00	I did all assignments, studies for exams, and went to office hours every week.
5.00	I went to office hours and TA office hours and worked with other students in my class.
6.00	Review textbook and notes
7.00	Studied notes outside of class
8.00	Went to all of the classes, did all the webwork and homework, read the textbook (or sometimes found videos on YouTube) if I was confused about a concept, went to office hours. I didn't go to TA tutorials (although to be fair I had conflicts with 2/3 of the times).
9.00	Youtube videos