



PRIVATE and CONFIDENTIAL

Student Evaluation of Teaching Results - Spring 2019

Thomas W Mattman,

Enclosed you will find the results of the Spring 2019 Student Evaluation of Teaching (SET) for your course:

3040_MATH_635_301_01 - Math Topics: Discrete Math - Seminar

The SET form administered was SETForm_U.

An overall indicator is listed first. It consists of an average of the following scales:

- Part B

The overall indicator is followed by the individual average values of the scales mentioned above. In the second part of the analysis the average values of all individual questions are listed. Written comments (if any) will follow the individual question analysis.

If you have any further questions do not hesitate to contact the Office of Institutional Research.

Lynn Abbiati
Institutional Research
labbiati@csuchico.edu
530-898-5621

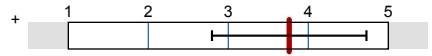


Thomas W Mattman

Math Topics: Discrete Math - Seminar (3040_MATH_635_301_01) Spring 2019
 No. of responses = 12

Overall indicators

3. **Part B** ($\alpha = 0.81$)

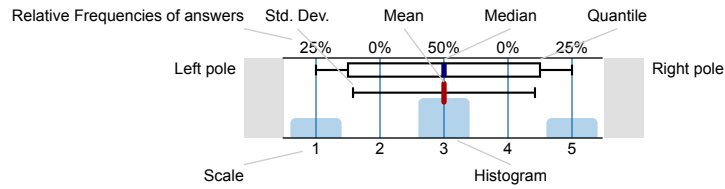


av.=3.76
dev.=0.97

Survey Results

Legend

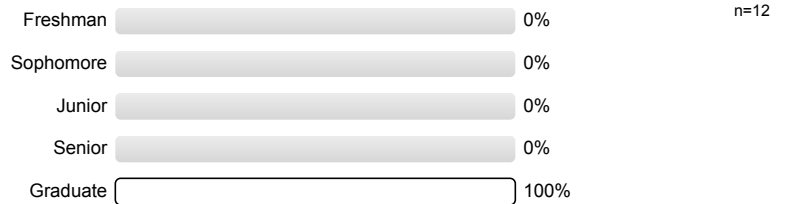
Question text



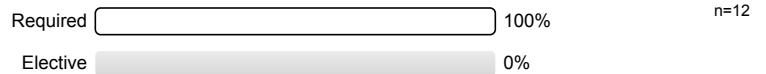
n=No. of responses
 av.=Mean
 md=Median
 dev.=Std. Dev.
 ab.=Abstention

1. General Information

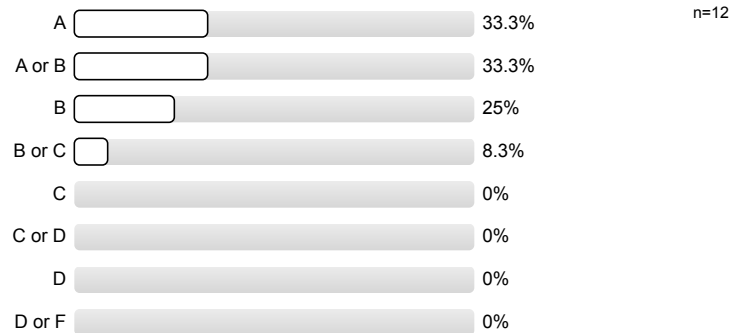
1.1) **You are a:**



1.2) **Is this course:**

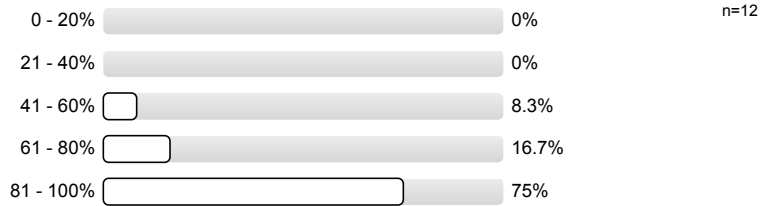


1.3) **Expected Grade:**



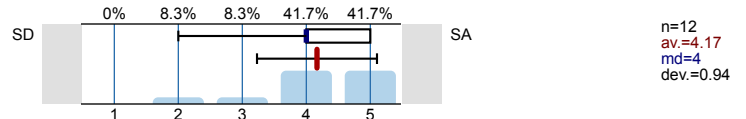
2. Part A Mark the answer that best applies.

2.1) How well are you keeping up with the assignments and reading for this course? (Give a percentage estimate)

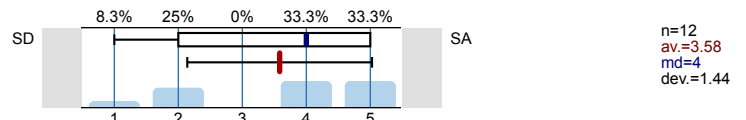


3. Part B

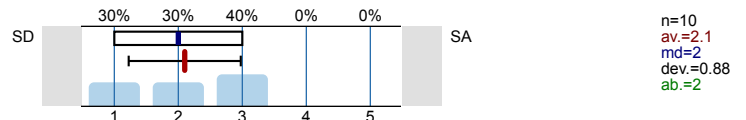
3.1) The syllabus explains course requirements.



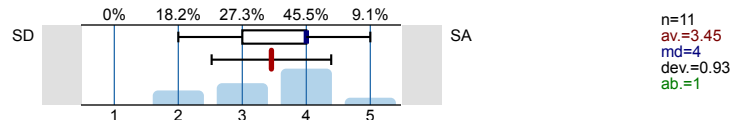
3.2) My overall knowledge of the subject matter has increased due to the instruction of this course.



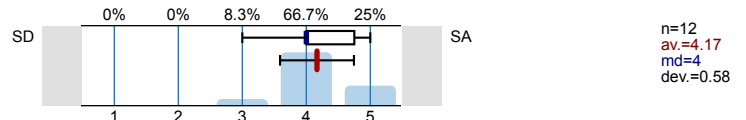
3.3) The instructor presents the material in an understandable way.



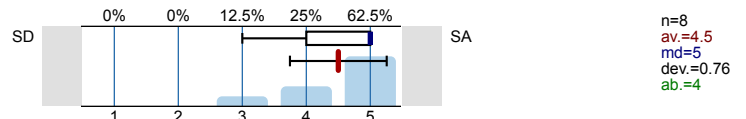
3.4) The instructor is well prepared for class.



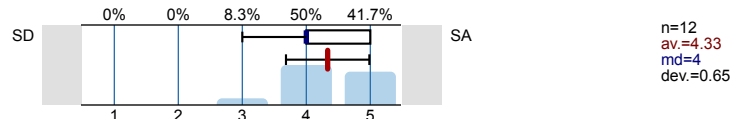
3.5) The instructor follows the course syllabus.



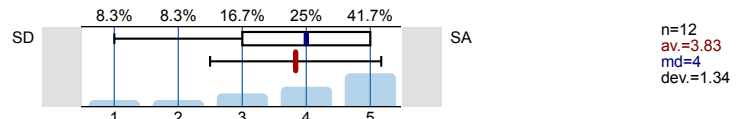
3.6) The instructor is available during office hours.



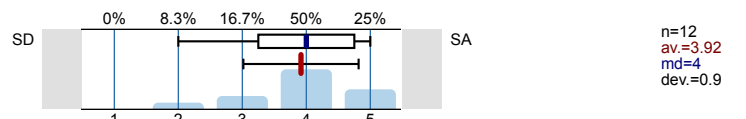
3.7) The course assignments contribute to learning.



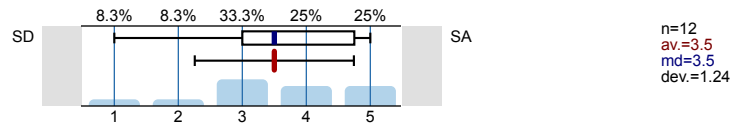
3.8) The instructor gives appropriate feedback.



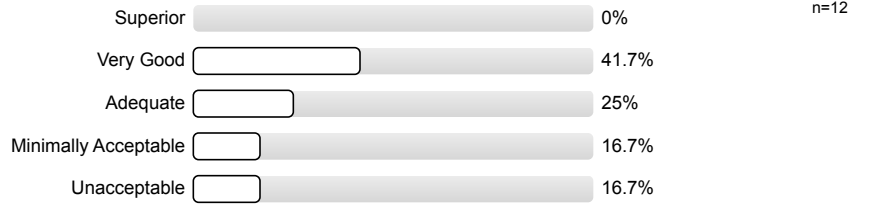
3.9) The instructor communicates high expectations for student achievement.



3.10) The instructor monitors student learning throughout the course.

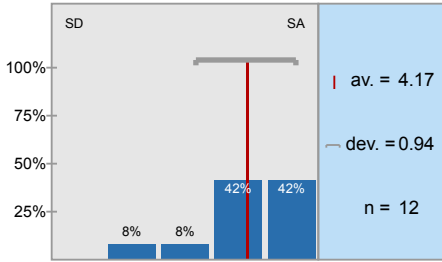


3.13) How do you rate the overall quality of teaching in this class?

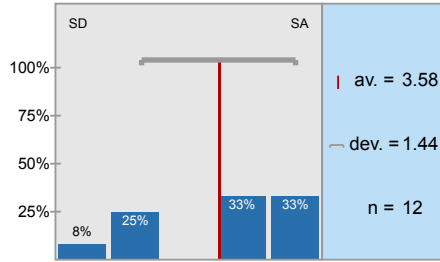


Histogram for scaled questions

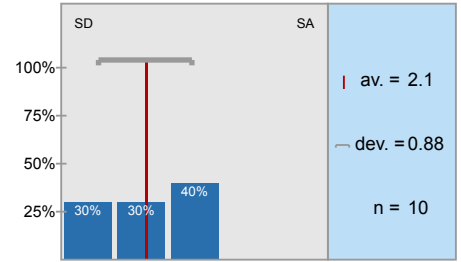
The syllabus explains course requirements.



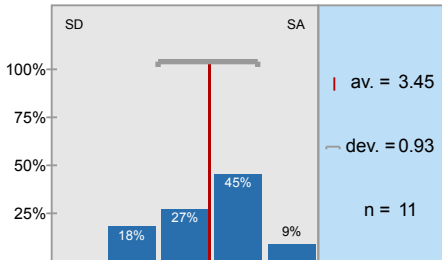
My overall knowledge of the subject matter has increased due to the instruction of this course.



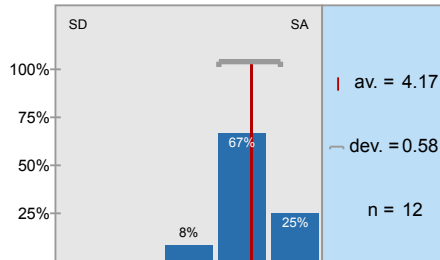
The instructor presents the material in an understandable way.



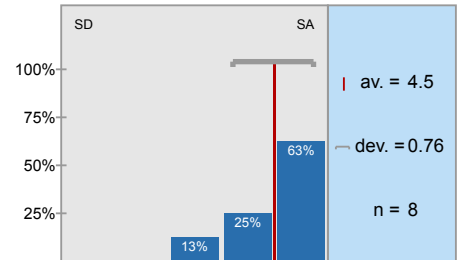
The instructor is well prepared for class.



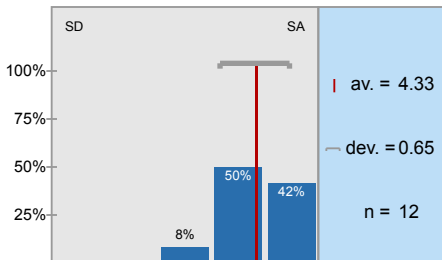
The instructor follows the course syllabus.



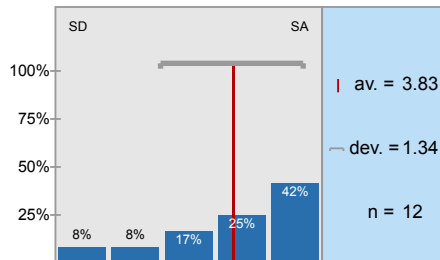
The instructor is available during office hours.



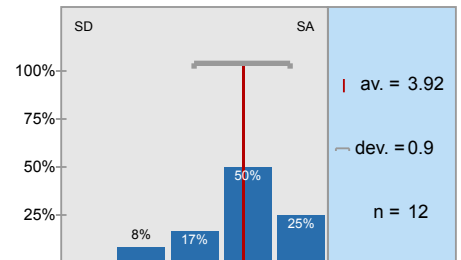
The course assignments contribute to learning.



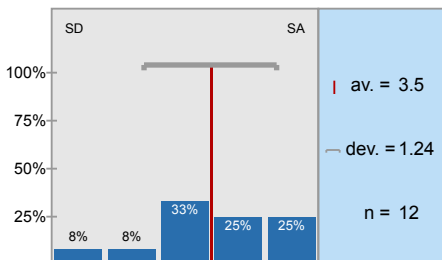
The instructor gives appropriate feedback.



The instructor communicates high expectations for student achievement.



The instructor monitors student learning throughout the course.

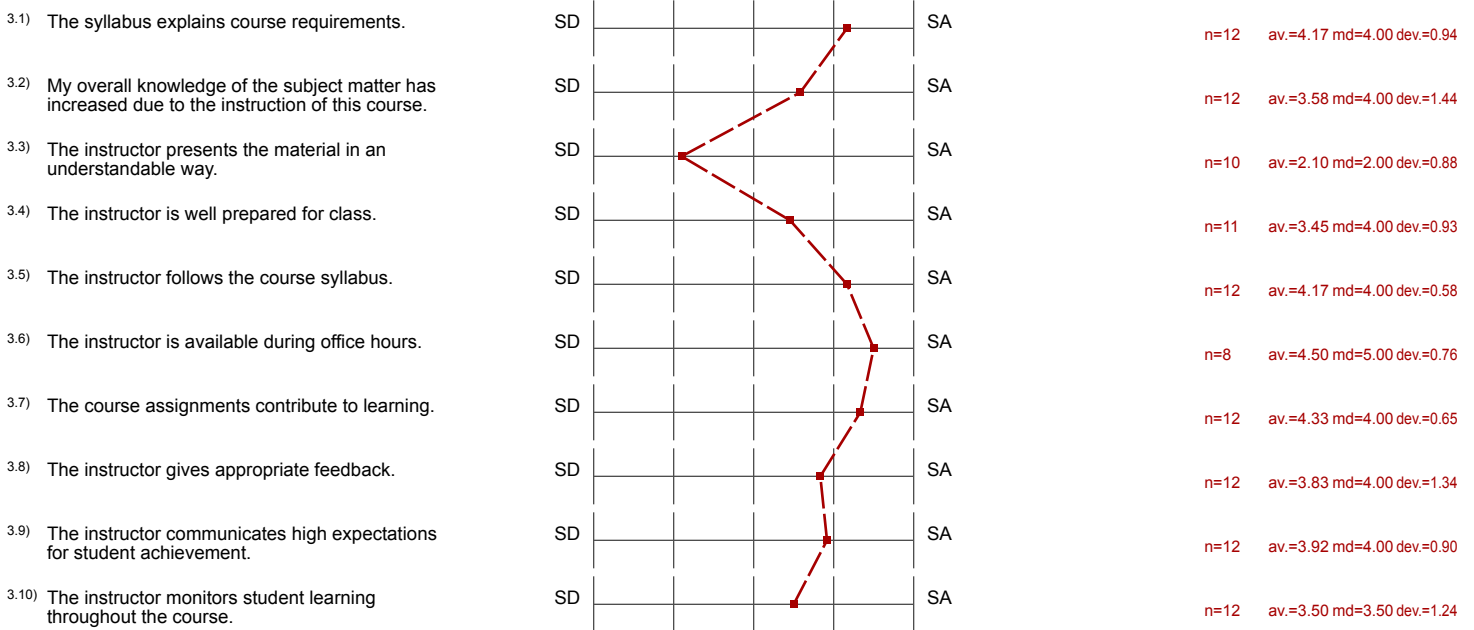


Profile

Subunit: NSC - Mathematics and Statistics
 Name of the instructor: Thomas W Mattman
 Name of the course: Math Topics: Discrete Math - Seminar
 (Name of the survey)

Values used in the profile line: Mean

3. Part B



Comments Report

3. Part B

3.11) What did your Instructor do to make this class a good learning experience for you?

- Allowed for discussion. Also, online assignments and sharing was promoted with points. Good feedback before due date. And flexible with late work when need arose.
- Allowed me to work with peers of my choosing. Allowed different options for presenting.
- He picked a good curriculum.
- I found that letting us (the students) work together in and out of the classroom was really helpful. I would have not gotten nearly as far without bouncing ideas off of another student. Dr Mattman made himself very accessible by both email (prompt replies) and office hours, as well as giving us the option to go to his study session if we were local and time allowed. The feedback on the assignments was useful and instructive and so I feel my proof writing has gotten much better.
- It was my classmates that helped me with a good learning experience. When I would ask Dr. Mattman for guidance during class, he never responded in a way that was ever helpful to me. I spent more time watching videos and talking to others to gain a better understanding.
- Learning through self-discovery and self-teaching taught me to be a better student.
- My instructor provided good feedback on assignments. This class was a new experience for me. I had been used to having professors teach all class time however in this class students were the ones presenting their ideas during class time. This type of learning environment forced me to do lots of research and studying on my own and also lots of help from my classmates. I think this is a skill we need in the 21 st century, collaboration and communication with others. This is one class I can say I was asked to do both of these oh and really critically think as well. I think that others in class might disagree and but I adapt easily. I like change and this was a good change of learning environment.
- Overall, this teaching style was not my favorite as a student. With that being said his style did helped my proof writing skills sunstantially.
- The choice of books to use in the course as well as the weekly assignments from the books have contributed to my understanding of the content. I feel like I have learned a lot based on the problem-based learning format of the class. One thing that I really took advantage of was Dr. Mattman's offer to give feedback before the due date of the assignments as well as being able to work on homework and submit it as a group (win-win for professor and students).

Homework was due on Monday mornings, so our group started submitting complete assignments (or trying to) on Thursdays for feedback, then revising them for a final submission on Mondays at the time it was due. I liked that he was flexible if we needed to turn them in late, but there is a flip side to that coin (more on that below). Without this opportunity for feedback and revision, my rating would have been "minimally acceptable" rather than "very good." This is where the bulk of the learning happened for me.

I wonder if he would consider formalizing this structure or strongly encouraging it since this strategy seemed rather stumbled upon by the students. He was super critical on the first assignment, we all were upset, and then came to this conclusion. Ultimately, the strategy of grading us very harshly and critically on the first assignment communicated high expectations, and it seems like we rose to them. I can only conclude that while we had negative feelings about it, this was a super effective educator move for the population and level of this course.

I know a lot of students craved direct instruction, but I don't necessarily agree with their complaints. I think to truly learn mathematics, this method of forming our own understanding and coming to agreements as a mathematics community is more reflective of the field. I feel like a true graduate student. I don't need to be spoon-fed content. I think his structure prepares us better for whatever we decide to do with our futures, elicits creativity of thought and understanding of mathematics potentially preparing us to actually contribute to the field, and communicates high expectations and confidence in the students. Frankly, I feel that students who depend on direct instruction are not adequately prepared for a graduate-level course in mathematics, or perhaps just need to adapt to the change. I also think that while the students complain about the lack of direct instruction, I think the true underlying reason for this is the structure of the grading – students don't want to take risks being wrong when their grade will be lowered while we are in the learning process. I agree that it does not make sense to do this. Yet it does seem that he is leveraging student obsession with grades to get the learning results he wants. Does the end justify the means? In this case, I would say an enthusiastic "Yes!" without reservation.

- The instructor clearly understands the material.
- The instructor really did not help make this a good learning experience, it was a very stressful experience where I had to find videos that would explain the concepts because in my opinion there was no actual teaching of material. I feel that the instructor only provided what textbook to use and even the textbook did not explain the concepts they were just definitions, theorems, and work problems. I feel that if I did not search out the concepts online and help from my cohort I would have failed this class.
- We are not an easy group, nor is the hybrid approach conducive to the Moore method of teaching. With the time constraints of the face to face meetings, a deep fleshing out of topics is difficult. I was usually left with more questions than answers.

3.12) What could your instructor do in the future to make this a better class?

- During students' presentation give a bit of feedback on his thoughts.
- For as progressive and research-based as the class was structured for learning, I found the two tests to be completely useless and lacking in terms of a learning standpoint. Yet they were worth 60% of our final grade. It should be reversed with the homework. Tests should be worth 20% and homework should be worth 60%. Homework is where the bulk of the learning and understanding was shown. Tests should basically be used to make sure that students earning A's truly earned that A and that we aren't just handing A's to everyone.

Also, to make the tests closed book does not really make sense considering the structure of the rest of the class. I do understand the need to hold students individually accountable, and I don't really have a solution per se, but the tests just seemed antiquated to me - memorization-based and pump-and-dump style assessing. One suggestion that I have is to be firm on a time limit, but allow open-notes. Or compromise with a one-page sheet of notes or similar. That way the professor is able to get the accountability he needs. He can determine that we have studied and understand the content, ensuring that we don't simply pump-and-dump, but also ensuring that students are not simply doing nothing for the majority of the course and figuring everything out on the tests or not feeling the need or urgency to learn the content.

I also found the presentation problems to be very point-grabby in structure. I understand the necessity of them as something to do and discuss during class that is student-centered rather than dependent on the professor. I do think the structure of this should be examined to make them more productive.

- Give better instructions and be clear with what is expected from the class.
The amount of homework was unreasonable.
Giving feedback would've been helpful and giving us correct information to be able to study.
- He had multiple texts that had conflicting definitions. The course is about graph theory, yet the 2 books have different definitions for graphs. Pretty confusing at times.

He could do more direct instruction. During class time, it is completely student lead. We present on homework questions we figured out ourselves. The only instruction he gave was writing definitions from the book. He never modeled how to work through questions, outline proofs, etc. At the beginning of the course, the class as a whole received lower than expected homework scores. His response was that we would adapt to his (unstated) expectations. When asked how much time we should spend on homework, he stated he had not thought about it. Our cohort is designed to allow us to remain full time teachers; this should be taken into consideration when the courses are designed / implemented.

I did badly on 2/10 homework assignments. I got an A on the first exam, however even with 100% on the final, I still would be at a B grade, which I do not believe reflects my capability. I simply haven't been able to find the time to dedicate to the homework (10 questions, mostly proofs in 7 days is hard enough without a job). The percentage breakdown of the course needs adapting in my opinion.

- He is an expert in graph theory. I was paying to be taught by an expert. I really wanted him to teach us, lecture us, let his knowledge flow. However, he never gave us real feedback until AFTER an assignment was graded or after a test, and by then, it was too late to demonstrate our learning. When a student would present and ask for feedback, he would never give approval or verify if it was right or wrong.
- I really struggled with the teaching style. I would have benefited from either more direct instruction or this being a summer course where we meet more often.

I would have preferred to stay all in one book. The second book had the same ideas but different vocabulary and so I struggled as a novice at graph theory to navigate between the two.

I have mixed feelings about the presentation problems. I liked that I got to choose which ones I was interested in working on. However, I felt very protective of the findings I came up with and didn't want to share with anyone until I got my point. Basically made the class feel more competitive than I believe was intended.

- I think if the instructor actually explained the concepts it would help more, most of the time I did not know if I was doing the problems correctly. I would ask him if it was correct and would not get a response. But then he started giving me feedback on my assignment before submitting it so that was a plus for him.
- I would advise against switching books half-way through the semester. This only added a layer of complexity to subject matter that was already new and complex enough on its own. If you must switch between texts, please choose one where the terms are aligned more closely. Lastly, maybe avoid giving a point value to presentation problems, although I understand the points were meant to motivate us to step outside our comfort zone I feel it only made for a more competitive and hostile classroom environment. I purposely withheld information from peers so that they wouldn't get the credit for my presentation problem.
- Maybe a few more examples of proofs at the beginning (various levels of comprehension).
- Since this course is student lead, I would suggest that grading be done differently for exams. When taking any exam, feedback is not generally important to students unless they know they can gain from said feedback. It is so, that in this course students and myself are very interested in understanding the concepts not for just a grade, however, any feedback on items we may not revisit (like on an exam), will likely not be valued since it may never be in our future to need to revisit these concepts unless we teach a graph theory class. This of course would require degrees beyond the scope of this Mathematics Masters. So the route I would take would be to offer some percent back to the students, or make it a required assignment to do "missed problems" as part of the test score.
- The semester was spent learning definitions and theorems. There was no application, no problems showing the use of the theorems. Only what felt like rote memorization. Each topic seemed disjoint and separate from the rest. I was unable to find a common theme that I could

use to tie everything together.

- The topic is quite interesting to me. Dr. Mattman spends a time providing written feedback, but I also think we need some guidance with the topic. It would have been helpful to hear an explanation of the theorems and definitions, instead of just writing them on the board. While I believe he felt like he was guiding us to become learners, I often felt inadequate with my understanding and never really saw a clear direction.

3.14) **IMPORTANT:** Please give at least one reason to justify your rating.

- A new learning experience that made me a better student and 21st-century learner.
- Despite not being a fan of the teaching style, I must admit that ultimately the best measure isn't how I feel about it but rather the outcome. I am a lot more careful in my proof writing and have learned the material in a deep and connected way. I developed better communication skills when it comes to this kind of mathematics. I am more confident in my abilities to figure out new material and am more willing to go back and forth with a peer over a particular proof or idea until it is polished.
- Dr. Mattman provided a list of problems for us to do. (Which were directly from the book) Any instruction, explanation, and guidance was given by Sarada Herke (youtube).
- He didn't really teach. He facilitated learning, but there simply wasn't enough direct instruction.
- I am learning a lot from the course. Feedback could be more useful in classroom discussions though many times it is appropriate. Feedback has been absolutely great on homework. Classroom presentation problems feel a bit gimmicky since point grabbing by students often occurs. Maybe a structure that would not feel like checking boxes for points. I honestly do not think giving points for presentations are necessary especially given how much presenting we have done in previous courses (at this level) without collecting a grade. Overall, this class does give a higher level of anxiety to myself than most math courses do, but I still enjoy the course, and I am learning a lot from it and the instructor.
- I did not learn anything from class.
The class meetings were a waist of time.
I learned only from my peers and the internet.
- I feel that I really did not learn from him if it was not for online videos of other teacher explaining the concept and my cohort I would have not understood any of the concepts. All the instructor did was sit at the back and have students present their ideas on problems. We never really knew if we were correct on our thinking, did not really give any feedback. It was just a waste of our time.
- I felt he had a goal for our learning. And he adjusted to our needs, stretched the assignments to bring us from a lower level up in a rapid but doable pace. Yet, his expectations of us were still high.
- I learned a great deal about graph theory and my proof writing skills have gotten much better. I would have liked more feedback with our face to face sessions.
- I spent more time on youtube trying to learn the content then I did from the instructor. We were given opportunities to turn in assignments for feedback, which is why I gave the rating that I did.
- Our grades purely show the ability to teach ourselves and how to teach each other. There was no real teaching by him. He was only a facilitator. Also, despite getting full credit on participation and A's on all homework assignments, his grade structure makes it impossible to get an A in the class if you don't also get A's on the tests. It is hard to teach yourself a subject that you have never studied and master it if your instructor doesn't actually help teach you the material. It was one of the most frustrating experiences for me. I've never studied graph theory before - and I believed I was paying to be taught the subject.
- See items 3.11 and 3.12. I was very detailed.