### MATH 204: Elementary Linear Algebra (CRN 13088)

### Survey response 1

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#### Western Course Evaluation

#### What aspects of the teaching or content of this course do you feel were especially good?

The class was organized superbly. Like really. Lectures always have a clear flow and structure to them. I really like how theorems, definitions, examples, and other notes are identified clearly, either using color or some other structure. Being open to questions at all times is also especially helpful, even if nobody asks questions; just knowing that I can interrupt if I have a question is nice. I think the tests and quizzes in this class were especially fair. I have had classes before where the lectures and homework did not prepare for / translate well to the tests, and this is not one of them. 24 hour or 48 hour windows for tests are very nice, as they reduce stress and also allow me to do my best work. Office hour availability was super nice. Recording the lectures was also really handy, as there were a few times I realized my notes were incomplete / confusing, and I was able to go back and clarify it myself.

#### What changes could be made to improve the teaching or the content of this course?

You sometimes have a tendency to "put words in my mouth", or assume that I know something / know a step without actually letting me figure it out or answering. It wasn't a super big deal, as I was usually able to figure out what was happening a few minutes later, but I know other people might really struggle with this. I think a good rule of thumb might be, ESPECIALLY early on in the course when we are learning Spans, linear (in)dependence, and linear transformations, to assume that if a student has a question, assume they know nothing along the way to that question, and ask them more questions. For example, if I have a question about X, and to understand X you need to know Y, ask me what Y means before assuming I know Y, and using Y to explain X.

#### Other comments:

Overall, this has been my favorite class online, and probably top 3 favorite class at WWU. So, thanks for that

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#### Western Course Evaluation

#### What aspects of the teaching or content of this course do you feel were especially good?

I appreciated the extensions on the exams and quizzes - that was really helpful for me in actually taking my time and understanding the concept. I also thought the examples and how open Hans was about getting students to ask questions was helpful. The concept itself was really hard for me to understand, but Hans was very lenient and understanding which encouraged me to keep up with the class.

#### What changes could be made to improve the teaching or the content of this course?

Obviously, the learning environment right now isn't the best situation so getting to know the students and professor is harder, but it would have been nice if we had group projects or something where we could reach out to others and collaborate. Other than that, the concept itself is hard so many some visual examples - such as comparing vectors, subspaces etc to something a little easier to grasp.

#### Other comments:

Hans was a good professor and I will be taking another course with him:)

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#### Western Course Evaluation

#### What aspects of the teaching or content of this course do you feel were especially good?

I really appreciated the overall structure and delivery of this course. Online classes have been difficult to keep up with and keep organized, but Hans' structure really enabled me to be much more successful than I thought I would be. The reading quizzes kept me honest and were good check-ins, and I think having a quiz or exam each week was great. Feedback on the quizzes and tests was really useful too, and Hans clearly wanted us students to learn the material. Grades were regularly posted so I knew I how I was doing throughout the course. Hans was really great at emailing and questions as well!

#### What changes could be made to improve the teaching or the content of this course?

I think the switch mid-course to have a bit more time for quizzes was the right call. It was tough to turn around the quizzes and exams so quickly in less than 24 hours.

#### Other comments:

Best math class I've ever taken. Hans is a great prof!!

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### Western Course Evaluation

What aspects of the teaching or content of this course do you feel were especially good?

Lectures were useful and went over good examples

What changes could be made to improve the teaching or the content of this course?

It's hard to get used to terminology, especially at first. Would be nice to have a study guide before exams to practice and make sure important concepts are understood.

Other comments:	

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#### Western Course Evaluation

#### What aspects of the teaching or content of this course do you feel were especially good?

I felt like this course was really enjoyable. The enthusiasm for this course was readily apparent whenever he was teaching, which made me enjoy the course significantly more. Even though I'm not the best at math, concepts were explained pretty clearly, and I felt for the first time in my life, that math wasn't hard.

#### What changes could be made to improve the teaching or the content of this course?

I think the entire pace of this course was a little bit too quick. Some chapters could've used less time to explain and some chapters could've used more time.

#### Other comments:

This was one of my favorite courses this winter quarter! If I ever have a chance to take another course with Hans, I will definitely do it!

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#### Western Course Evaluation

#### What aspects of the teaching or content of this course do you feel were especially good?

Availability, office hours, and emails

Responses in quizzes and exams where the student went wrong and how they can correct their mistakes in the future. explanations in answer keys are straightforward.

It never felt like I was missing a concept, but missing a string to connect the concepts we learned whenever I messed something up in a quiz. This was usually cleared up in the answer key.

What changes could be made to improve the teaching or the content of this course?

I think everything was fine. I think it would have just gone more smoothly in person.

Other comments:

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Other comments:

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### Western Course Evaluation

What aspects of the teaching or content of this course do you feel were especially good?

I think that the course was well taught and appreciated that not only were the meetings were recorded but also a pdf file of the notes were posted.

What changes could be made to improve the teaching or the content of this course?

I felt that a question or two on the first two exams were not represented well in terms of the homework and sometimes confusing in the way they were worded.

Other comments:		

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#### Western Course Evaluation

#### What aspects of the teaching or content of this course do you feel were especially good?

Weekly quizzes and tests were not overly hard but also weren't a breeze, gave worth to understanding the concepts. When students voiced issues with quiz times or something else, there was a swift reaction to assist anyone who had issues, without changing things up for those who didn't have issues, for example; when quizzes were extended through sundays.

#### What changes could be made to improve the teaching or the content of this course?

Homework worth something. I feel it would benefit the class to have required homework and appropriate feedback. Giving the option to submit made it feel like I should have a specific question rather than feedback in general. Even setting up MyMathLab questions would be appropriate.

Graded homework would also help show how accurately well you are doing with each section, weekly quizzes are a one-and-done deal and that can put a dent in grades. Also, weekly quizzes being worth just 10 points felt hard at times, a small mistake or error would result in a large % loss for the grade of that quiz.

I also had an issue with the timeline for optional homework and lectures. Optional homework would be released "due" in several days giving us plenty of time, but the lectures the same day the homework was released would be on sections far past that I felt, not always but commonly. I think releasing the homework for the sections before learning them would prevent me from having to jump back and forth between rewatching old lectures and attending the current day's lectures.

#### Other comments:

A right answer can be achieved in multiple ways. Some questions wouldn't ask for a certain method to be used to achieve the answer. In these cases, if the answer is right and the work or explanation is shown, credit shouldn't be lost because of that.

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#### Western Course Evaluation

#### What aspects of the teaching or content of this course do you feel were especially good?

I really enjoyed the lectures they were very well done and make the material easier to understand it's just that this zoom environment makes it very difficult to stay focused so sometimes I miss out on some information.

#### What changes could be made to improve the teaching or the content of this course?

maybe have more homework or quiz questions that have you justify or explain your answers that way we get more practice with using definitions or theorems to explain answers

#### Other comments:

I think it would be cool to have like a set of recomended videos for each subject incase someone doesn't understand through the lectures and they don't feel comfortable reaching out for help

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#### Western Course Evaluation

#### What aspects of the teaching or content of this course do you feel were especially good?

Professor Hans did a great job of explaining how Linear Algebra can be applied to the real world. The reading quizzes were a great, quick assessment of your knowledge on a section.

Professor Hans, in my opinion, was hilarious. Throughout the quarter, he would criticize himself out loud. In one lecture, he said, "Here's what you're thinking: You joker, can't you do x (forgot the topic mentioned)?" That phrase made my day.

#### What changes could be made to improve the teaching or the content of this course?

Because many theorems are used in this class, I think Professor Hans should start to add the corresponding number to each theorem in his notes. For example, "Theorem" to "Theorem #" would be easier to find in the textbook. On top of the optional homework, I think Professor Hans should open WebWork problems as well.

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#### Western Course Evaluation

What aspects of the teaching or content of this course do you feel were especially good?

Professor was outgoing and determined to ensure everyone understood the topics

What changes could be made to improve the teaching or the content of this course?

I feel this is difficult to ask since time is such a constraint in a class structured like this, but often times found myself forgetting why I was doing something or what I was doing it for. I thoroughly enjoyed the end of the quarter when we were shown our work being performed on real world applications, and big picture ideas. It really helped tie the whole class together.

#### Other comments:

Hope to see you around the Math department sometime

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#### Western Course Evaluation

What aspects of the teaching or content of this course do you feel were especially good?

Hans was very through and loved questions and gave very good answers and made sure the student understood his answer. Loved the course layout with the quizzes every week and 3 exams.

What changes could be made to improve the teaching or the content of this course?

Sometimes during lectures Hans would talk and write a ton down so it was hard for me to take time and understand what was actually going on. I probably needed to not write everything down he did but it all seemed important. Besides that it was awesome

#### Other comments:

Great math teacher and super good guy. Highly recommend him to anyone

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#### Western Course Evaluation

#### What aspects of the teaching or content of this course do you feel were especially good?

You definitely seemed to care a lot and to be enthusiastic about the subject which was nice. I appreciated the ability to do exam corrections, I thought that was really helpful to be able to correct where I went wonky. I also thought the applications you brought up were really interesting and more of those could be cool.

#### What changes could be made to improve the teaching or the content of this course?

I feel like you spent a very long time going over proofs that sometimes did very little to help our understanding, and sometimes just confused me. I think if you went over more problem-type examples (like ones we would see on an exam or quiz) that would be more beneficial. Also, a note on homework. As a student, I prioritize getting my assignments done that have due dates and points assigned to them over those that do not. If you want more people to be consistently doing the homework, there needs to be some motivation there. I think if you would promote that more, the marks on the exams and quizzes would have been higher and people would be asking more questions in class.

#### Other comments:

The multiple-choice parts of the first and final exams were terrible. The quiz was glitchy on canvas and overall (especially on the final) it was overwhelming and not very cool that about half the points were for one problem. I understand it's to cut down on grading but it was just really bad. I would rather have actually proved a quarter of those with actual examples and theorems than what was done. Also, those exams took me and I know they took other people a really long time. That's not entirely fair to ask of us for a 4 credit course. I'm glad you extended the time period to 48 hours because the first half of the quarter I was miserable and hardly ever got any downtime on the weekend because of that. That made me a little frustrated and angry. It also might be a nice thing to change how much our quizzes are weighed since those take quite a bit of time and are every week.