Advanced linear algebra   MATH 467 – 01

Location. TTh 12:30 pm - 01:45 pm in 036 Burruss Hall.

Text. *Linear algebra*, by Stephen Friedberg, Arnold Insel, and Lawrence Spence. (4th edition).

Professor. Leonard Van Wyk (rhymes with "bike"), 127 Burruss Hall, ×8-2514, `vanwyk@math.jmu.edu` or `vanwykla@jmu.edu`.

Office Hours. MW 01:25 pm – 02:15 pm, TTh 11:00 am - 12:15 pm, and by appointment.

Course Web Page. `www.math.jmu.edu/~vanwyk/courses/467/` contains announcements, concepts, homework problems, etc.

Material. We will cover as much of this book as we can.

Goals. Here is what I want you to be able to do:

- Learn to read a mathematics textbook.
- Master basic linear algebra concepts.
- Write proofs with clarity and style.
- Be very familiar with this particular textbook.

Oral quizzes. At the beginning of each class, I will ask particular questions to particular students (chosen at random). These questions will usually be definitions and/or examples of definitions. I will grade you on the spot, and keep a running total of your grades. The maximum total number of oral quiz points will be approximately 50.

Homework. I will collect two homework problems per section. These will be carefully graded out of five points maximum per problem. The maximum total number of homework points will be approximately 250.

Exams. There will be exactly one exam, the cumulative final. It will be graded out of 200 points. The final exam will be given Thursday, May 4, 08:00 am - 10:00 am in 036 Burruss.

Grading. At the end of the semester, I will total everyone's points from the homework, the oral quizzes, and the final exam, plot them on a graph, and determine the grades from that distribution.

Cheating. Don't do it. If I catch you cheating, I will hand any evidence I have to the Honors Council and let them deal with you.

I DO want you to work together, however. The rules of correspondence are: FOR THE COLLECTED HOMEWORK PROBLEMS, NO WRITTEN INFORMATION MAY BE EXCHANGED BETWEEN STUDENTS. YOU MAY DISCUSS STRATEGIES WITH EACH OTHER, BUT ONLY IF NO PENS, PENCILS, CHALK, CRAYONS, ETC. ARE USED.

Class structure. I will lecture as little as possible. I plan on running this class more like a seminar, with each section having a three-day cycle as follows:

Class *n*.
- Collect section $i - 1$ homework problems.
- Discuss section i (including oral quizzes).
- Preview section $i + 1$.

Class $n + 1$.
- Collect section i homework problems.
- Discuss section $i + 1$ (including oral quizzes).
- Preview section $i + 2$.

Class $n + 2$.
- Collect section $i + 1$ homework problems.
- Discuss section $i + 2$ (including oral quizzes).
- Preview section $i + 3$.

I will tell you which two homework problems I want you to hand in after that section's discussion day.

LaTeX. For those of you who want to learn to use the typesetting program LaTeX(that real mathematicians use to typeset nice-looking papers containing snappy mathematics symbols like $\pi : G \times H \to \mathbb{Z}^m$), I will teach you.

Comments. The material in this course is good to know.

Feel free to visit my office with questions.