## MATH 3753 Fall 2020 Vector Spaces Page 1 of 2

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Office Hours: Tentatively scheduled for Mon-Thurs 2:00-4:00, or by appt.

**Special Note:** This syllabus is written under the assumption that classes will meet face-to-face until Thanksgiving. If face-to-face classes are called off earlier then this syllabus will be appropriately revised.

Instructional Modality: This course will use a Fully Face to Face format.

**Fully Online Enrollment Option:** If you are considering trying to treat this as a fully online class, please understand that you must apply for approval to do so. The **Student COVID Consultation Request Form** is available at <u>COVID-19 Student Concerns Website</u>. The only exception to this rule is an international student who is not able to enter the country. If such an international student enrolls in this class then the Global Education Office should have already notified me about your situation.

As described below, 40% of the grade in this course comes from Face to Face in class work. Students who qualify for the fully online option will need to have that work modified to fit their accommodation. Even though you won't be attending class regularly, you need to plan to be available to do that work during a time slot consistent with the time slot given the Face to Face students. Although this is subject to change, the current plan is for graded Face to Face work to take place on alternate Fridays starting on September 11.

**Textbook**: Linear Algebra Done Right, 3<sup>rd</sup> edition, by Sheldon Axler. You can purchase a hard copy or an electronic copy. If you want to purchase direct from the publisher go to <u>Springer Books</u>. It is also available at the campus bookstore or amazon.com.

**Objectives:** This course has three main goals--one involving **Mathematics**, one involving **Communication**, and one involving **Academic/Professional Integrity**.

**Mathematically** you will attempt to understand Linear Algebra in a **mathematically rigorous** way. In addition, the central theory of linear algebra will be developed **without the use of determinants**. That will open to door for understanding Linear Algebra in infinite dimensional vector spaces.

In the area of **Communication**, you will all learn to use the **TeX** typesetting system. (Pronounced "Tech" as in "Technical College", not "Tex" as in "Texas".) In particular, we will use a dialect known as "LaTeX" (either "Lay-Tech" or "Lah-Tech"), which is widely used in academia and the scientific community. Knowledge of TeX could potentially be more broadly useful to you in your future careers than knowledge of Linear Algebra. I will help you with this, the web will be a useful resource for help with technical issues, and the other students in the class could be useful resources. I don't encourage you to be a nuisance to other faculty but you should be aware that essentially every faculty member in the College of Science, Mathematics, and Engineering has experience with TeX.

Academic/Professional Integrity is also something which needs to be taught. Except in extreme cases, I will deal with **Plagiarism** as something students learn to avoid. Ideally you will come up with solutions to homework exercises on your own, in collaboration with your instructor. With the presence of the World Wide Web and the modern emphasis on working in groups, there will be times when you arrive at a solution to a homework problem with assistance from sources other than your own cogitations. If you present a homework solution that you arrived at with outside assistance you are obligated to cite your sources. Citations do not need to be as formal at might be required in a freshman level English class, but I must be able to clearly understand who or what your sources were. Failure to cite sources could lead to loss of credit for all or part of an assignment. This loss of credit could potentially lead to a negative score on an assignment.

Prerequisite: A course in Linear Algebra; concurrent enrollment acceptable with consent of the instructor

## Grading:

- 120 Best 5 of 6 Bi-Weekly Quizzes @ 24 points each; starting on Friday September 11
- 120 Best 10 of 12 Homework assignments @12 points each
- 60 Take Home Final Exam due Monday Dec 7 at 10:00AM

Letter Grades will be computed on the usual basis, 90% for an A, 80% for a B, etc. However, poor performance on the face-to-face work could lower your course grade. You must score at least and 80% average on face-to-face work to receive a grade of A, 70% for a B, 60% for a C, and 50% for a D.

**Attendance:** Please come to class. By enrolling in this class you have made 39 Doctors appointments with Dr. Farris. If you need to miss a class, arrive late to class, or leave early from class then you give me **written** notification in a timely fashion. Written notification could be an email message or a handwritten note handed to me during class.

Expectations: I expect you to

- focus on the mathematics under discussion during class time
- use study time wisely
- ask specific, thoughtful questions
- put forth your best effort every day
- make at least a "C" in this class

**Standard Syllabus Information:** Students should refer to the current MSU Student Handbook for university policies on academic dishonesty, class attendance, student rights and activities.

Senate Bill 11 passed by the 84<sup>th</sup> Texas Legislature allows licensed handgun holders to carry concealed handguns on campus, effective August 1, 2016. Areas excluded from concealed carry are appropriately marked, in accordance with state law. For more information regarding campus carry, please refer to the University's webpage <u>Campus Carry Rules/Policies</u>.