Math 244: Linear Algebra
Fall 2018
Professor Levandosky

Course Web Page. http://mathcs.holycross.edu/~slevando/244/

Contact Information.

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Office Hours: MWF 1:00pm-1:50pm, TR 11:00am-11:50am

Class Meetings. MWF 12:00pm-12:50pm.

Required Text. *A Course in Linear Algebra*, by Damiano and Little. We will cover material from chapters 1 through 4.

Prerequisite. MATH 243 (Mathematical Structures) It is expected that you have experience writing mathematical proofs, and have seen techniques such as proof by contradiction and proof by mathematical induction.

Course Description. This is an introductory course in linear algebra. The course will focus on vector spaces and linear transformations between vector spaces. A vector space is just a set that is closed under addition and scalar multiplication, meaning that elements of the set can be added and multiplied by scalars to produce new elements of the set. The simplest examples are the set of all real numbers, $\mathbf{R}$, the set of vectors in the plane, $\mathbf{R}^2$, and more generally n-dimensional Euclidean space $\mathbf{R}^n$. Other important examples include sets of functions, such as the set $C(\mathbf{R})$ of all functions $f : \mathbf{R} \to \mathbf{R}$ that are continuous everywhere. Spaces of functions are central in the theory of differential equations. A linear transformation is a function that maps one vector space into another in a linear way, meaning essentially that the transformation "commutes" with the operations of addition and scalar multiplication. In this course we will study properties of vector spaces and linear transformations.

Homework. There will be weekly homework assignments. Assignments should be handed in at the beginning of class on the due date. Assignments should be neatly written and stapled. You may discuss the homework problems with each other. However, anything you hand in should be written in your own words. Please write the names of students you worked with on the front page of your assignment.

Exams. There will be three midterm exams and a final exam. The midterm exams will be held from 5:30pm to 7:00pm. Please let me know as soon as possible if you have a conflict with any of the exam times.

Exam 1: Thursday, September 27
Exam 2: Thursday, November 1
Exam 3: Thursday, November 29
Final Exam: to be announced

Grades. Grades will be calculated using the following system. Midterms will each be worth 20% each, homework will be worth 10%, and the final exam will be worth 30%.