UF | **Stephen Summers**
Department *of* Mathematics

Search Stephen Summers

MAS 4105 – Linear Algebra 1

Credit hours: 4
Textbook: Stephen H. Friedberg, Arnold J. Insel and Lawrence E. Spence, *Linear Algebra* , Fourth Edition, Prentice-Hall, 2003.

Prerequisites: MAC 2313 or MAC 3474, **and** MAS 3300 or MHF 3202, both with minimum grades of C.

Grading System :
Exams: 2 midterms (20% each) – after Chapters 2 and 3, respectively; 1 final (40%) – cumulative

Weekly quizzes based on the homework assignments (20%) – lowest quiz score dropped

The (nearly weekly) homework assignments are not graded, but it is essential that you do them thoroughly in order to be in a position to do well on the quizzes and exams.

Grading Scheme: A: 90-100, B: 80-89, C: 65-79, D: 50-64, E: 0-49
Minus grades will not be used in this course.

Office hours: MTWF, fourth period (or by appointment)
See Home Page for contact information (and more).

Brief Course Description

The purpose of this course is to introduce the student to the theory and application of the field of mathematics called *linear algebra* . This will involve the study of the abstract structures called (real) vector spaces, which occur throughout mathematics and its modern application to the natural sciences. It will also involve the development of the student's ability to recognize these structures in concrete instances. Some important topics of linear algebra we shall cover are solving systems of linear equations in several unknowns, spectral theory and linear transformation theory. We shall see examples of applications of linear algebra to physics, engineering, computer science, economics, biology and animal husbandry.

The course serves both as a transition for mathematics majors from a study of computational techniques into more abstract mathematics (which is the real source of the power and utility of mathematics) and as a coherent foundation in linear algebra for engineering and science
majors who wish to have sufficient grasp of the conceptual structure of the material to be able to utilize linear algebra in contexts for which they do not have templates.

The student will be expected to develop the ability to reason through and coherently and correctly write proofs of theorems, as well as to develop relevant computational skills. An emphasis will be placed upon clarity of thought and expression.

This course will cover Chapters 1-6 of the above-mentioned textbook.

No calculators will be allowed in examinations and quizzes, so you should not get into the habit of using them for the homework.

Current Assignment

– This assignment is due on Tuesday, January ?. (No assignment yet.) You do not hand in homework to be graded. We are currently covering Section 1.2 of the text. The course meets fifth period, Monday, Tuesday, Wednesday, Friday, in Matherly 113.

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Previous Homework Assignments

■ Assignment NONE: (HERE)

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University Honor Code: "UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class."

My policy on class attendance: I do not take a roll call, but it is inadvisable to miss class because I do not merely repeat nor do I examine only what is in the text. If you miss a class, it is your responsibility to find out what happened in class.

My policy on make-up work: There is no opportunity for make-up work afforded to you, unless your absence is an excused one according to the current definition of "excused absence" made by the university. If the latter definition applies to the situation, then you will come to me and we will work out a mutually convenient arrangement. Except in the case of a documented medical emergency, this must be done in advance.

University policy on the accomodation for disabled students:

"Students requesting classroom accomodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accomodation."

An accomodation will then be worked out within the bounds of the possible with the aim of assuring that the disabled student will be able to benefit fully from the course.