

Introduction to Linear Algebra

SPRING 2010

Instructor: Professor Eugene Speer*Office:* Hill Center 520*Telephone:* 732-445-2390, extension 1313*Email:* speer at math.rutgers.edu*Web:* <http://www.math.rutgers.edu/courses/25077/250C-s10/speer/>**Office hours:** Monday and Wednesday 10:20–11:40 A.M., Hill 520

Or by appointment or chance in Hill 520

Text: L. E. Spence, A. J. Insel, and S. H. Friedberg, *Elementary Linear algebra: A Matrix Approach, 2nd Edition*; ISBN: 978-0-13-187141-0. Prentice-Hall, Upper Saddle River, NJ 07458.**General:** We will cover a lot of material; we start fast and it is important not to fall behind. Remember that the way to learn mathematics is to do problems: you should be able to do all the suggested problems on the list posted on the web site. **If you have trouble with these, I urge you to come in during my office hours, or at some other time, and discuss them.****Quizzes and homework:** Homework will not be collected. There will be one short written quiz each Wednesday (except for the weeks of midterm exams), covering the work of the previous two lectures and the corresponding homework problems.**Computer labs:** There will be six computer assignments, all based on the MATLAB software package. For each assignment you are asked to carry out linear algebra calculations, to create a printed writeup of your MATLAB session, and to hand this in for grading. Links to these assignments, as well as MATLAB tutorials and related web sites, can be found on the course web page. **No previous programming knowledge of MATLAB is required.**

The low score on the six MATLAB assignments will be dropped in computing the final lab average. MATLAB assignments are due at the beginning of the class period, and late labs are not accepted. There is a loophole for this policy, which you may use at most once in the term: If you have completed a lab but cannot attend the lecture due to an emergency, you may email the lab to me (as an attachment). The email must be sent by the beginning of the lecture at which the lab is due, and you must turn in a printed copy which is the same as the lab you emailed within twenty-four hours (put it under my door if I am not in my office).

The MATLAB software package is installed on PC's in all the Rutgers public computer labs (in ARC, Loree, College Avenue, Livingston). If you want to install MATLAB on your personal computer, the Student Edition (for Windows, Linux or Macintosh) can be purchased directly from the publisher, The MathWorks, Inc., by going to their website: www.mathworks.com. **Note:** Some of the MATLAB assignments use the *symbolic toolbox*, which is not installed in the computers in the engineering school running MATLAB. The MATLAB program is not available on MacIntosh computers in the Rutgers public computer labs.**Exams:** There will be two in-class exams, on **February 24** and **April 7**; the final exam is on **May 12**, from 12:00 to 3:00. Make-up exams will be given only in the case of well-documented illness or major emergency or (only with permission in advance) of a major outside commitment.**Grading:** Grading will be based on a weighted average, computed as follows:

Computer labs	low lab dropped	18%
Quizzes		9%
Class exams	18% each	36%
Final exam		37%