

MATH 349-011
TR 2–3:15, EWG 207

Elementary Linear Algebra
Fall 2009

Web Page: <http://www.math.udel.edu/~edwards/download/m349/f09home.html>

Instructor: Prof. D. A. Edwards
EWG 511

Office Hours: M 9:30–10:30 W 11–12 or by appointment
x1871, edwards@math.udel.edu

Introduction

Welcome to Elementary Linear Algebra!

The text for this course is *Linear Algebra: A Modern Introduction*, 2nd ed., by Poole. **The text is required**, since you will be assigned both reading and homework problems from the book. Though we will be covering most of the material in the book, I will be presenting some of the material in a different order. In addition, I will also be lecturing from various other sources, so class attendance and participation is necessary for successful mastery of the material. If you find that the text is unclear on some point, you may wish to consult other linear algebra textbooks that we use on campus, or other texts in the library.

If you have any questions, contact me during my office hours or make an appointment. **Extra copies of handouts are available at the Web page listed above.**

Please turn off cellular phones, pagers, etc. before entering the classroom. You may bring a tape recorder with you to class, if you wish; however, unattended tape recorders will not be permitted. There will be no makeup classes for snow days.

Electronic Communication

The Web page for this course is listed on the top of the first page. There you will find copies of handouts available for downloading, as well as any important announcements (corrections to typographical errors, etc.). Also at the URL

<http://www.math.udel.edu/~edwards/download/suggest.html>

you will find an anonymous suggestion box.

Particularly important messages regarding this course may also be e-mailed to you directly. In addition, you may send me e-mail with questions regarding the course, homework assignments, etc. For more information on how to use electronic resources, contact the Help Center (x6000).

Exams

There will be four exams in the course; the dates are listed on the attached schedule. **NO MAKEUP EXAMS WILL BE GIVEN!** The first three will be 70 minutes long and will take place during a regular lecture period. The final exam will be two hours long. Attached to each examination will be a course evaluation form, so that I may receive your suggestions for how the course could be improved. These forms will be seen only by me, so if you have comments that you wish the department to hear, please contact them directly.

When the exams are returned, they will have a numerical score and a letter grade on them. The numerical score is your score for the exam; *the letter grade is your grade for the course to that point, including all homework scores.*

Homework

In most cases, homework will be distributed on Thursdays during lecture (the first assignment is attached to this introduction), and will be due at the beginning of class the following Thursday. The homework will cover material up through the day of its distribution. **ABSOLUTELY NO LATE HOMEWORK WILL BE ACCEPTED!** If you must miss a due date because of University business, it is your responsibility to make sure the homework gets to me *before* the due date. Since mathematics is a subject where the material for one section builds on the section before, it is critical that you keep up to date on the homework: hence the stringent policy. However, to calculate your semester-long homework average, I will drop your two lowest homework scores. Therefore, low scores for assignments where you were pressed for time can be erased as long as you don't have too many of them.

Though you may not copy directly from another's paper or use someone else's ideas as your own, I encourage you to discuss the homework problems with your classmates. Any scientific endeavor is rarely done in a vacuum; therefore it is to your advantage to learn the benefits of collaborating. Model homework solutions will be placed on reserve in the library after the assignment is due. Hopefully these will assist you in learning the material.

Homework assignments should be folded like a book with the following information on the "front cover:"

Name
Math 349-011—Edwards
Assignment Number
Date

You will turn in your assignments this way so that I may put your grade on the inside, thus ensuring your privacy. I will make every effort to ensure that your graded homework is returned in a timely manner.

Each homework assignment will consist of ten questions. Of those, some randomly selected problems will *not* be graded. For these questions, you will receive one point if you attempted the problem. For the problems that will be graded, you may receive up to four points, depending on the completeness and accuracy of your solution.

Obviously, I can assign only a select few homework problems to be turned in. Therefore, I choose ones which, if mastered, show adequate understanding of the material. The examinations will largely be based on the material covered in the homework assignments. However, you are encouraged to try other problems in the book for practice.

Assessment

Your grade for the course will be determined in two stages. First your *raw score* will be calculated using the *higher* of the two algorithms:

- 1) The exams will count for 90% of your grade (final counts double), and the homework counts 10%.
- 2) The exams will count for 80% of your grade (final counts double), and the homework counts 20%.

Therefore, performing well on the homework will not only help you learn the material, it can also directly help your grade. (In the past, it has been my experience that the vast majority of students improve their grades by using their homework scores.) Then each of the raw scores will be scaled to determine final grades.

Tentative Schedule

Note: This is only a tentative schedule; there may be deviations from it.

week of August 31: sections 1.1, 1.2, vector analysis (parts of sections 2.3 and 3.5)

September 1: Homework 1 distributed

week of September 7: sections 1.2, 2.1, 2.2

September 10: Homework 1 due; Homework 2 distributed

week of September 14: sections 2.2, 2.4, 3.1, 3.2

September 17: Homework 2 due; Homework 3 distributed

week of September 21: sections 3.1–3.3

September 24: Homework 3 due; Homework 4 distributed

September 29: sections 3.3, 3.5, 6.1

October 1: Exam I (covers vector analysis, chapters 1 and 2, sections 3.1, 3.2)

week of October 5: sections 3.5, 6.2, 6.3

October 8: Homework 4 due; Homework 5 distributed

week of October 12: sections 5.1, 6.3, 7.1, 7.2

October 15: Homework 5 due; Homework 6 distributed

week of October 19: sections 5.1–5.3, 7.1, 7.3

October 22: Homework 6 due; Homework 7 distributed

October 27: Exam II (covers sections 3.3, 3.5, 5.1, 5.2, 6.1–6.3, 7.1, 7.2)

October 29: sections 3.6, 6.4, 7.3

week of November 2: sections 3.6, 6.4–6.6

November 5: Homework 7 due; Homework 8 distributed

week of November 9: sections 4.2, 6.6

November 12: Homework 8 due; Homework 9 distributed

week of November 16: sections 4.1–4.4

November 19: Homework 9 due; supplemental study material distributed

November 24: section 4.4

November 26: Thanksgiving

December 1: Exam III (covers sections 3.6, 4.1, 4.2, 5.3, 6.4–6.6, 7.1, 7.3)

December 3: section 4.4

December 8: formal review session

TBA: Final Exam (covers entire course, but especially sections 4.3, 4.4)