MATH 672-010 Vector Spaces
MWF 10:10–11, EWG 204 Fall 2008
Web Page: http://www.math.udel.edu/~edwards/download/m672/f08home.html

Instructor: Prof. D. A. Edwards Office Hours: R 10–11, F 2–3 or by appointment
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Introduction

Welcome to Vector Spaces! In this course you will be continuing your study of linear algebra and vector spaces that you began during your undergraduate studies. The text for this course is *Linear Algebra Done Right*, 2nd ed., by Axler. **The text is required**, since you will be assigned both reading and homework problems from the book. In addition, upon request I will put other books on reserve in the Morris Library that may prove helpful for certain sections.

If you have a problem, question about the material, or interesting application you would like me to address in class, please feel free to 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).

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 homework will count for 15% of your grade, with the remainder split equally between the two exams.
2) The homework will count for 30% of your grade, with the remainder split equally between the two exams.

Then each of the raw scores will be scaled to determine final grades, if necessary.

Exams

There will be a midterm and final exam for the course; the dates are listed on the attached schedule. The midterm exam will be given in class. I have not yet decided on the format for the final exam. Attached to the midterm 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

The most effective way to succeed in this course is to do all the homework assignments. I select the problems carefully to illustrate the most important topics in the course. Even if you are registered as a listener, I recommend doing the homework, and I will review it.

In most cases, homework will be distributed every Monday during lecture (the first assignment is attached to this introduction) and it will be due at the beginning of class the following Monday. The homework will ideally cover material up through the Wednesday after 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. (All students are expected to be familiar with and follow the guidelines on academic dishonesty at `http://www.udel.edu/stuguide/08-09/code.html`.) 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 posted on the Web 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 672—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. The number of points assigned to each problem will be listed.

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.

Tentative Schedule

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

September 3–5 : chapter 1
September 3: Homework 1 distributed
week of September 8: chapters 1 and 2
week of September 15: chapters 2 and 3
September 15: Homework 1 due; Homework 2 distributed
week of September 22: chapter 3
September 22: Homework 2 due; Homework 3 distributed
week of September 29: chapters 3 and 5
September 29: Homework 3 due; Homework 4 distributed
week of October 6: chapter 5
October 6: Homework 4 due; Homework 5 distributed
week of October 13: chapters 5 and 6
October 13: Homework 5 due; Homework 6 distributed
week of October 20: chapter 6
October 20: Homework 6 due; Homework 7 distributed
October 24: Midterm exam
week of October 27: chapter 6
week of November 3: chapters 6 and 7

November 3: Homework 7 due; Homework 8 distributed
week of November 10: chapter 7
November 10: Homework 8 due; Homework 9 distributed
week of November 17: chapters 7, 8, 10
November 18: Homework 9 due; Homework 10 distributed
November 24, 26: chapter 8
November 24: Homework 10 due; Homework 11 distributed
November 28: Thanksgiving Recess (no class)
week of December 1: chapter 8
December 8: chapter 8
December 8: Homework 11 due; supplemental study material distributed
December 11: course review
TBA: Final Exam (covers entire course, but especially last half of course)