

Math 314

Course Information Sheet

Text: *Linear Algebra: A Modern Introduction (2nd edition)* by David Poole.

Introduction: At its simplest level, linear algebra is just the study of systems of linear equations. Simple systems like

$$3x - 7y = 2$$

$$4x + 2y = 1$$

ought to be familiar to you from high school. Although this particular system is easy to understand and to solve, in order to contend with very large systems of equations involving many variables and in order to better understand the nature of such systems, a framework is needed. Such a framework is precisely what matrix theory and linear algebra are all about.

Technology: Since dealing with matrices can involve a lot of arithmetic, a calculator is recommended. Any calculator will do as long as it is capable of working with (e.g., row-reducing) matrices. Calculators will be allowed on most exams and quizzes. An even more powerful tool for matrix computations is *Maple*, a computer algebra system. You will probably find *Maple* especially useful for the *Application Assignments*. (Other computer algebra systems, such as *MATLAB*, *Mathematica*, *Derive*, etc. can also be used.) *Maple* can be used in the Math Lab, located in Avery Hall 18. Your MyRED account will enable you to login to the computers in the Math Lab.

Homework: We all learn by doing, and so recommended homework are assigned as in the syllabus. I may assign homework that need to be handed in from time to time. Check our class page for update: <http://www.math.unl.edu/bdeng1/Teaching/teaching.html>

Group Project: I may assign one or more Group Projects over the course of the semester, with topics to be determined. You can expect to have a week or two to work on each one. It is recommended that Group Projects be done in groups of two or three students, but students have the option of working alone on these if they prefer. (Groups of size four or more are not allowed.) Each group will turn in one solution to the assignment, and each member of the group will receive the same grade. Under certain circumstances, late Group Project may be accepted, but they will be penalized.

Exams: There will be two Hour Exams and a Final. See the Course Syllabus for tentative, approximate dates for the Hour Exams. The Final will be in our usual classroom during our assigned Final Exam Period.

Grades: Course grade for the course will be assigned by the standard conversion from your earned point percentage to the letter grads, 90%-100% is an A, etc.

Administrative Issues: There are some Math Department and/or UNL policies of which you should be aware:

ACE Outcome 3: This course satisfies ACE Outcome 3. You will apply mathematical reasoning and computations to draw conclusions, solve problems, and learn to check to see if your answer is reasonable. Your instructor will provide examples, you will discuss them in class, and you will practice with numerous homework problems. The exams will test how well you've mastered the material.

Final Exam Policy: Students are expected to arrange their personal and work schedules to allow them to take the final exam at the scheduled time. Students who have conflicting exam schedules may be allowed to take an alternate final which is always given after the regularly scheduled final. No student will be allowed to take the final exam early.

Department Grading Policy: Students who believe their academic evaluation has been prejudiced or capricious have recourse for appeals to (in order) the instructor, the department chair, the departmental appeals committee, and the college appeals committee.

Rules and Expectations: At the risk of seeming overly controlling, here are some of the expectations I have for your turn-in works:

- Although Group Projects will typically be done in groups and you are welcome to work together on turn-in Homeworks (but each student must turn in his or her own words for solutions to these problems), you should never put your name on anything you do not understand. Copy-and-paste in any form is considered cheating.
- What you turn in should be self-contained. In particular, include the problem statement in their entirety so that you should be able to look at it again a month later and understand what is the problems and the solutions.
- Give justification (in complete sentences!) for your answers.
- Take pride in your work. This means, for example, that you should write legibly on full sheets of paper with no fringe. Do not turn in scratch or working papers.
- Turn in the problems in order, with the problems clearly labeled.
- Only use one side of each sheet of paper, especially if you write in ink.
- If you turn in more than one sheet of paper, staple your assignment together.
- Put your name (first and last, written legibly) in the top right-hand corner of every page you turn in. You should not include your student ID number or your social security number.
- My motto for your turn-in works: be neat, be complete, and be in good faith. Effort does count.
- Always read ahead. Do your classmates a favor by asking questions in class.
- Be academically honest.