

**Math 314 – Section 004**  
**MWF 11:30 – 12:20**  
**Avery Hall 109**  
**Spring Semester 2009**

**Instructor:** Petronela Radu

**Office:** Avery Hall 239

**Phone:** 472-9130

**Office Hours:** Tuesday 1:00 – 2:30; Wednesday 1:00 – 2:00; Friday 1:30 – 3:00

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**Course Web Page:** I will use Blackboard to post assignments, announcements, grades, etc. Go to <http://my.unl.edu> and enter your WAM login name and password. You may find general information about the course at <http://www.math.unl.edu/pradu3>

**Text:** David Poole, *Linear Algebra: A Modern Introduction*, 2<sup>nd</sup> Edition, Thomson, 2006

**Introduction:** At its simplest level, linear algebra is just the study of systems of linear equations — that is, systems like

$$3x - 7y = 2$$

$$4x + 2y = 1$$

that 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:** Dealing with matrices can involve a lot of arithmetic. Thus, you might find a calculator that can do matrix operations, such as a TI-85 or better, useful for this course. Even more powerful tools for matrix computations are computer algebra systems such as *Maple*, *MATLAB*, *Mathematica* and *Derive*. *Maple* can be used in the Math Lab, located in Avery Hall 18. Your WAM account will enable you to login to the computers in the Math Lab.

**Components:** Your grade will be based on quizzes, mid-term exams, and the final exam. In addition, you are expected to do homework.

*Homework:* Homework will be assigned each day. The problems are listed on the syllabus, but sometimes there may be a few changes to that. You are expected to do the homework problems regularly. Before the start of class each day, I will write the numbers of some of the assigned homework problems on the board and volunteers will put the solutions on the board. When class begins, we'll take a minute or two to look over the solutions on the board and make corrections if necessary. *If a reasonable effort has been made to get the solutions on the board*, we will spend the first part of class discussing the homework.

*Quizzes:* Each Wednesday (except during weeks when hour exams are given), I will either give a short in-class quiz or assign a take-home quiz to be handed in the following Monday. Each quiz will be graded on a 10-point scale, and your top 10 quiz scores will form the Quiz portion of your final grade. I hope to give 12 quizzes in total, so that the lowest two scores will be dropped. *Make-up quizzes will not be given*. If you miss *one* quiz for a valid reason (and, if possible, explain your absence ahead of time), I will give you the average score of your other 11 quizzes for the missed quiz.

*Hour Exams:* There will be two one-hour exams, given roughly on the dates indicated on the syllabus.

*Final Exam:* The final exam for this class will be comprehensive and will be given 10:00 am – 12:00 pm on Wednesday, May 7 (in the same room as our regular class). Our final will involve only our section of Math 314.

*Calculator policy:* You will be allowed to use calculators on the quizzes and exams, but generally only for routine calculations such as manipulation of real numbers, multiplication of matrices, and so on. Specific guidelines for legitimate use of calculators will be given before each exam.

**Course Grade:** The total points you receive in this course is based on the following table.

Quizzes		100 points
Hour Exams	100 points each	200 points
Final Exam		150 points
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Total		450 points

The following table represents a “worst-case” scenario for the assignment of letter grades based on your course total. By this I mean, for example, that if you earn 82% of the course points, you are guaranteed a “B” for the course, but I might actually lower the cut-off for a “B” at the end of the semester.

*Note: The minimum grade needed for a “P” if you are taking this class Pass-No Pass is a “C”.*

Letter Grade	Pct. Needed	GPA value
A+	96.0%	4.00
A	92.0%	4.00
A-	89.0%	3.67
B+	86.0%	3.33
B	82.0%	3.00
B-	79.0%	2.67
C+	76.0%	2.33
C	72.0%	2.00
C-	69.0%	1.67
D+	66.0%	1.33
D	62.0%	1.00
D-	59.0%	0.67