

Instructor: William (Riley) Casper, Padelford C-111, wcasper@math.washington.edu

Office Hours: Wednesday and Friday after class and by appointment.

Course Webpage: http://www.math.washington.edu/~wcasper/math308_win15.html

Tentative Course Outline:

Matrices and Systems of Linear Equations:

- Gaussian elimination (3 lectures)
- Matrix operations (2 lectures)
- Linear independence (1 lecture)
- Data fitting (1 lecture)
- Matrix inverses (2 lectures)

Vector spaces in \mathbb{R}^n :

- Subspaces (3 lectures)
- Bases and dimension (3 lectures)
- Orthogonal bases and linear transformations (3 lectures)
- Least Squares (2 lectures)

Eigenvalues and Eigenvectors:

- Eigenvalue introduction and determinants (2 lectures)
- Eigenvalues, characteristic polynomial, eigenspaces (2 lectures)
- Applications (2 lectures)
- Complex eigenvalues, similarity, diagonalization (time allowing)

Textbook: *Linear Algebra with Applications* by Jeffrey Holt. Weekly reading assignments and homework problems will come primarily from this text.

Prerequisites: Math 126

Classroom Expectations: Students are expected to attend class daily, follow along with the lecture, participate and ask questions. Unannounced quizzes will occur throughout the quarter,

and all past and present material from the course is fair game. There will also be weekly homework assignments on webassign.

How to Succeed: Do problems. Done all the homework problems? Do more problems. Find 'em in the book, in other books, and on the web. Done lots of problems now? Don't stop there, DO MORE PROBLEMS.

Grade Evaluation: Your grade will be based on homework, a , and the final exam.

- Homework: 10%
- Quizzes: 15%
- Midterm: 25%
- Final Exam: 50%

Homework: Students should expect weekly homework assignments. Late homework will not be accepted.

Extra Help: Do not hesitate to come to my office during office hours or by appointment to discuss a homework problem or any aspect of the course. You also may want to consider getting help from the free tutors in the Math Study Center (MSC). Additionally, if you want to hire an outsider tutor (for a fee), you can find a list of such people through the UW math department.

Students with Disabilities: To request academic accommodations due to a disability, please contact Disabled Student Services: 448 Schmitz, 206-543-8924 (V/TTY). If you have a letter from DSS indicating that you have a disability which requires academic accommodations, please present the letter to me so we can discuss the accommodations you might need in the class. Academic accommodations due to disability will not be made unless the student has a letter from DSS specifying the type and nature of accommodations needed