

Fall Term 2014

TMATH 308

UH 12:50-2:05 PM 110 JOY
Lecturer: Ruth Vanderpool
Office Hours: UH 2:05-2:55 PM

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Course Description: This course introduces vector and matrix algebra as a means to study both linear systems of equations and geometric constructs. Topics such as linear independence, bases, dimension, linear transformations, rank and nullity, and eigenvectors will be covered as the term progresses. TMATH 126 is the official prerequisite but the material is of a different character.

This is a 3 credit class thus we *officially* meet for 150 minutes a week. However, you may want to treat the remainder of the standard class session as built in group-work and office hours since the next class is not until 3:05pm.

Course Objectives: By the end of the course students should be able to:

1. use Gaussian elimination to find solutions to linear systems
2. perform basic matrix operations and find multiplicative inverses if one exists
3. calculate determinants manually or through the use of basic properties
4. write a mathematical proof for basic properties about subspaces
5. calculate eigenvectors and understand their connection with linear transformations
6. apply linear algebra to a science or engineering project of their choosing.

Required Items:

- Text: *Linear Algebra, A Modern Introduction* 3rd edition by David Poole
- Non-internet accessing calculators are optional.

Important Dates:

10/21	Exam 1	9/30	Last day to drop without a W
11/6	Exam 2	10/3	Last day to add a class
12/9	Final (12:50-2:55pm)	11/11	Last day to withdraw/change grading

Notes:

- There will be no tolerance for cheating. If caught, any and all disciplinary action will be pursued. All exams and quizzes are to be done individually unless otherwise specified. You are encouraged, however, to work together on the homework and form study groups outside of class.
- The University of Washington Tacoma is committed to making physical facilities and instructional programs accessible to students with disabilities. Disability Support Services (DSS) functions as the focal point for coordination of services for students with disabilities. In compliance with Title II of the Americans with Disabilities Act, any enrolled student at UW Tacoma who has an appropriately documented physical, emotional, or mental disability that “substantially limits one or more major life activities [including walking, seeing, hearing, speaking, breathing, learning, and working],” is eligible for services from DSS. If you are wondering if you may be eligible for accommodations on our campus, please contact the DSS reception desk at 692-4522.
- The Counseling Center offers short-term, problem-focused counseling to UW Tacoma students who may feel overwhelmed by the responsibilities of college, work, family, and relationships. Counselors are available to help students cope with stresses and personal issues that may interfere with their ability to perform in school. The service is provided confidentially and without additional charge to currently enrolled undergraduate and graduate students. To schedule an appointment, please call 692-4522 or stop by the Student Counseling Center (SCC), located in MAT 354.
- Safety Escorts are available Monday - Thursday 5:00pm - 10:30pm. They can be reached either through the duty officer or by dialing #300 from a campus phone. Additional safety information and emergency procedures is available at <http://www.tacoma.washington.edu/security>.
- While I have attempted to make this syllabus as complete as possible, adjustments will be made throughout the course. Announcements will be made during class and it is the responsibility of the student to keep updated if class is missed.

Outside Resources:

Come visit me if you have questions! If you are unable to attend my posted office hours but would like to meet, please let me know. I am willing to try and work with your schedule. Also remember that you are not alone in this class and your peers are a valuable (and often underutilized) resource.

The Teaching & Learning Center can offer a number of additional instructional services. Math tutors are available Monday through Thursday from 10am to 6pm. Complete information and updates are available at <http://www.tacoma.washington.edu/tlc/>.

Homework Policy: This is traditionally the first time students encounter completely abstract concepts in their studies and they often struggle because of it. Formulas are surprisingly absent here and the homework often requires as many words as calculations. Use your homework as a means to internalize the definitions and concepts covered in the course and realize that this will take a great deal more time than the computations you may have done in the past for other math courses.

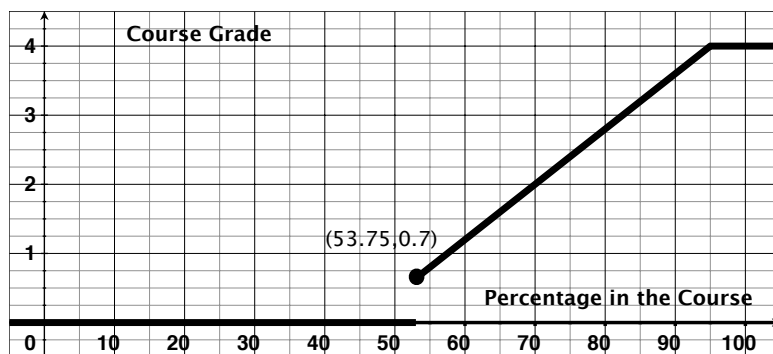
Keep in mind that after working a problem for a while you may still not have an answer and not have time to come back to it later. If this happens try to isolate the issue that is causing you trouble for this specific problem. Consolidate your findings into a question and write it down in the form of an essay. This question will serve as your answer to the homework question, and if well formed and specific enough, you will receive an answer as well as credit for the problem.

Homework will be assigned regularly at the beginning of class and the previous weeks problems will be due Thursdays by 3pm. The first twenty minutes of Tuesday's class will be set aside to answer homework questions. If completed early, you may turn these in to the Homework folder, otherwise slide your *stapled* assignment under my office door in GWP 430 by 3pm on Thursday. No late homework will be accepted.

Grades:

The following weights will be used to calculate your grade.

Homework	25%
Project	15%
Exams	30%
Final Exam	30%



Scores will be recorded regularly on Canvas (<http://www.tacoma.uw.edu/canvas>).