Math 341—Winter 2020—CRN 23727

Course Information

Instructor	Robert Lipshitz
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Office	Fenton 303
Office Hours	Mon. 1:00–1:50, Wed. 3:00–4:00. Subject to change.

Course Prerequisites	Math 252. Math 253 and 281 are recommended.
Course Requirements	There will be online homework, via WebWork, due roughly once a week, initially on Mondays, and written homework due roughly once a week, initially on Wednesdays. There will be two in-class midterm exams and a final exam. There *will* be new material covered and a homework assignment due during dead week (the last week of classes).
Test Dates	*Midterm 1*: January 29. *Midterm 2*: February 21. Subject to change if necessary. *Final exam*: per Registrar's schedule. Generally, there will *not* be makeup exams. If you are unable to attend the exam, contact me in advance to discuss whether other arrangements are possible. If you are unable to attend an exam because of an emergency, contact me as soon as possible; you will be asked to provide documentation of the emergency.
Grading Policy	Online Homework 10% Written Homework 20% Midterm 1 20% Midterm 2 20% Final Exam 30% The lowest online homework score and lowest written homework score will be dropped, to accommodate illnesses and other unforeseen events. Late homework will not be accepted. Only part of each written homework assignment will be graded carefully (by the grader).
Students with disabilities	The University of Oregon is committed to an inclusive learning environment. If you have a disability which may impact your performance on exams, please contact the Accessible Education Center to discuss appropriate accommodations. If there are other disability-related barriers to your participation in the course, please either discuss them with me directly or consult with the Accessible Education Center.

WebWork Information:

- The WebWork site is `https://webwork.uoregon.edu/webwork2/Math341-23727/` Log in with your DuckID.

Course Policies:

- Fridays will typically be used for review, and sometimes to catch up on material.
- Cell phones, computers, etc. are not permitted in this class except by instructor's permission. (They don't bother me, but they distract other students.)
- Calculators and other electronics are not permitted on exams. Notes and the textbook are also not permitted.
- Written homework must be turned in at the beginning of class on the due date. (If you can't make it to class, put it in the mailbox in Fenton before class.) Online homework is due as scheduled on WebWork.
- You may work together on WebWork problems, but should then go back and solve the problems again on your own. Similarly, you are welcome to work on the written homework together, but you must write up your final answers by yourself. Failure to abide by this policy constitutes cheating.
- You are welcome to use any resources you like *except* for ones that provide exact answers to homework problems. However, any resource beyond the textbook that you use for written homework must be cited. This includes electronic resources (including Wikipedia and Google) and human resources (including your classmates). Failure to cite sources, or copying solutions, constitutes academic misconduct, and will be punished.

Course Resources:

- Textbook: *Linear Algebra and Its Applications* by David Lay, 5th edition.
- We will use Canvas to track grades and post some solutions.
- Bonus homework points will be given for actively following the blog on using computers to solve linear algebra problems, linked from the course webpage.
- Course website, with up to date syllabus and assignments:

  `http://pages.uoregon.edu/lipshitz/Teaching/Wi20Ma341.html`

Getting Help: I have office hours twice a week. Get help as soon as you feel confused.

Course goals: The main goals of this course (learning outcomes) are:

- being able to find the solutions of a system of linear equations and understand the geometric meaning of the space of solutions;
- understanding the notions of a subspace, basis, and dimension, finding bases, and computing dimensions;
- understanding how to represent vectors with respect to different bases;
- understanding the definitions of linear transformations, some basic examples, and how to write linear transformations in terms of matrices;
- being able to find bases for the kernel and image of a linear transformation; and
- being able to compute determinants.