Staff responsible: Dr. Taryn Flock (Professor Taryn) flock@math.umass.edu
Email preferred, emails sent M-F can expect a response within 24hrs 413-545-7693
Course Chair: Dr. Paul Hacking hacking@math.umass.edu
Office hours: TBA and by appointment LRGT 1344
Lecture: TuTh 10:00-11:15 GL 151
Midterm 1: Tuesday February 27th 7:00PM–9:00PM TBA
Midterm 2: Tuesday April 10th, 7:00PM–9:00PM TBA
Final: Monday May 7th, 10:30-12:30 Boyden gym
Informational Website: http://people.math.umass.edu/ hacking/235S18common/index.html
Textbook and Online Homework.
Linear algebra and its applications (5th edition) by David Lay, Steven Lay, and Judi McDonald.
MyMathLab is required for this course. An electronic copy of the textbook is included in your purchase of MyMathLab. Go to www.mymathlab.com and use the Course ID for your own section.
Online homework and quizzes will be assigned through MyMathLab.
Further Resources: Moodle.
Slides and/or lecture notes, as well as any addition resources, will be posted on the Moodle page. I will also use this page to make announcements as necessary.
Class participation.
There will be daily worksheets. Hand it in at the end of class for full marks. These help me get a sense of where we’re at as class. I will drop two worksheet scores no questions asked. If you miss more than two class periods get in touch with me.
Quizzes. A few times during the semester I will give a short quiz during class. These will be announced at least one week in advance. I will drop the lowest quiz score.

ASSessment structure

- Homework (9%)
- Class participation (7%)
- Quizzes (9%)
- Midterms (2x 25%)
- Final Exam (25%)

For exams, you are allowed one 8.5” x 11” sheet of notes (both sides). Calculators and the textbook are not allowed. You should bring your student ID (UCard) to each exam.

If you have a documented conflict for one of the exams, in order to take the make-up exam you must give the course chair Paul Hacking hacking@math.umass.edu at least one weeks’ written notice for a midterm exam and at least two weeks’ written notice for the final exam. If you cannot make the exam due to medical emergency or other emergent situation, get in touch with me as soon as you can. Make-up exams will not be given to accommodate travel plans.

Course description

This is an introductory course on linear algebra, covering systems of linear equations, matrices, linear transformations, determinants, vector spaces, eigenvalues and eigenvectors, and orthogonality.

The schedule below gives the topics from the course text to be covered each week (exact dates subject to change)

1Note per university policy: There is no class Tuesday April 17th because of Patriots day on Monday.
Material for Midterm 1. (2/27)
1/22–1/26: 1.1 Systems of linear equations; 1.2 Row reduction and echelon forms; 1.3 Vector equations.
1/29–2/2: 1.3 (continued); 1.4 The matrix equation Ax=b; 1.5 Solution sets of linear systems.
2/5–2/9: 1.7 Linear independence; 1.8 Introduction to linear transformations.
2/12–2/16: 1.9 The matrix of a linear transformation; 2.1 Matrix operations.

Material for Midterm 2. (4/10)
2/20–2/23: 2.2 The inverse of a matrix; 2.3 Characterizations of invertible matrices.
2/26–3/2: 3.1 Introduction to determinants; 3.2 Properties of determinants.
3/5–3/9: 3.2 (continued); 3.3 Cramer’s rule, volume, and linear transformations; 4.1 Vector spaces and subspaces.
3/12–3/16: Spring break.
3/19–3/23: 4.2 Null spaces, column spaces, and linear transformations; 4.3 Linearly independent sets and bases.
3/26–3/30: 4.4 Coordinate systems; 4.5 The dimension of a vector space.

Material for Final. (5/7)
4/2–4/6: 4.6 Rank; 5.1 Eigenvectors and eigenvalues.
4/9–4/13: 5.1 (continued); 5.2 The characteristic equation.
4/17–4/20: 5.3 Diagonalization; 5.5 Complex eigenvalues.
4/23–4/27: 6.1 Inner product, Length, and Orthogonality; 6.2 Orthogonal sets; 6.3 Orthogonal projections.

ACADEMIC HONESTY

Working on problems is how we learn mathematics. Spend some time struggling.
Feel free to discuss the homework problems with your classmates.
No collaboration will be allowed on exams.

Since the integrity of the academic enterprise of any institution of higher education requires honesty in scholarship and research, academic honesty is required of all students at the University of Massachusetts Amherst.

Academic dishonesty is prohibited in all programs of the University. Academic dishonesty includes but is not limited to: cheating, fabrication, plagiarism, and facilitating dishonesty. Appropriate sanctions may be imposed on any student who has committed an act of academic dishonesty. Instructors should take reasonable steps to address academic misconduct. Any person who has reason to believe that a student has committed academic dishonesty should bring such information to the attention of the appropriate course instructor as soon as possible. Instances of academic dishonesty not related to a specific course should be brought to the attention of the appropriate department Head or Chair. The procedures outlined below are intended to provide an efficient and orderly process by which action may be taken if it appears that academic dishonesty has occurred and by which students may appeal such actions.

Since students are expected to be familiar with this policy and the commonly accepted standards of academic integrity, ignorance of such standards is not normally sufficient evidence of lack of intent. For more information about what constitutes academic dishonesty, please see the Dean of Students website:

http://umass.edu/dean_students/codeofconduct/acad honesty/

ACCOMMODATIONS

Please let me know if there are extenuating circumstances affecting your attendance and/or performance in this class. The earlier you get in touch with me, the earlier we can plan solutions. Note that in all cases, you will be held responsible for the material in the course.

The University of Massachusetts Amherst is committed to making reasonable, effective and appropriate accommodations to meet the needs of students with disabilities and help create a barrier-free campus. If you are in need of accommodation for a documented disability, register with Disability Services to have an accommodation letter sent to your faculty. It is your responsibility to initiate these services and to communicate with faculty ahead of time to manage accommodations in a timely manner. For more information, consult the Disability Services website at http://www.umass.edu/disability/.