

# MATH 2270-002 Linear Algebra Syllabus

Summer 2018

**Instructor:**

- Javier A. Carvajal-Rojas<sup>1</sup>
- Office: JWB 105 (President's Circle)
- E-mail: [carvajal@math.utah.edu](mailto:carvajal@math.utah.edu) (I tend to reply more promptly if you e-mail me via CANVAS)
- Website: <http://www.math.utah.edu/~carvajal/>
- Office Phone: +1 (801) 585-7663

**Class time and place:** M-H 10:00AM-11:00AM, ST 214.

**Office hours:** Mondays 2:00PM-2:50PM, Thursdays 2:00PM-2:50PM and by appointment.

**Class web page:** CANVAS, accessible through CIS from the University website. All assignments will be announced on CANVAS, check it at least on a daily base.

**Textbook:** *Linear Algebra and its Applications*, by David C. Lay, 5th edition. ISBN: 13-9780321982384

**Course information:** MATH 2270 Linear Algebra is a 4-credit semester course.

**Prerequisites:** "C" or better in (MATH 2210 OR MATH 1260 OR MATH 1280 OR MATH 1321 OR MATH 1320).

**Course description:** Euclidean space, linear systems, Gaussian elimination, determinants, inverses, vector spaces, linear transformations, quadratic forms, least squares and linear programming, eigenvalues and eigenvectors, diagonalization. Includes theoretical and computer lab components.

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<sup>1</sup>My last name is Carvajal-Rojas.

**Grading:** The grades will be calculated as follows:

Quizzes 10%

Homework 20%

Midterms (20% each) 40%

Final Exam 30%

**Quizzes:** In the last 10 minutes of every Thursday class (except for Thursdays after midterm exams), a short 1-3 problem quiz testing fundamentals will be given. The quiz will cover relevant topics covered in the week's lectures. The lowest quiz score will be dropped.

**Homework:** Homework exercises will be assigned from each section in the textbook as we cover the respective material. Most of the homework will be graded based on completeness, but part of it may be graded for correctness as well. The lowest two homework scores will be dropped. Homework must be turned in right before the class starts, or well right after it ends (do not interrupt the class to turn it in!) **No late homework will be accepted.**

**Midterms:** There will be two midterms, both of them having the same weight on the final grade. The midterms will take place during class hours. The following are the dates on which we will have the midterms: first midterm on **June 14th**, and second midterm on **July 19th** (mark these dates on your calendar). You must bring a valid ID to the exam. Absence from an exam will be excused only if you can provide verifiable and convincing evidence that you have a significant illness or serious crisis that will prevent you from attending. Except under extremely unusual circumstances, you must inform me in advance of the missed test. You are expected to promptly talk to me about any absence. **There will not be make up exams at all.**

**Final Exam:** The final exam for this class is comprehensive. The exact date is the **Friday August 3rd, from 10:00AM to 12:00PM**, taking place in our classroom ST 214. Mark this date on your calendar. There is no way to take the exam on a different date or time.

**Calculators:** Since we will focus on concepts rather than computations, a calculator certainly will not be necessary, all numeric computations on evaluations will be intended to be quite simple. Thus, calculators will not be allowed at all for the midterms nor the final exam.

**Grading scale:** The grade scale will be the usual: *A* (93-100), *A-* (90-92.9), *B+* (87-89.9), *B* (83-86.9), *B-* (80-82.9), *C+* (77-79.9), *C* (73-76.9), *C-* (70-72.9), *D+* (67-69.9), *D* (63-66.9), *D-* (60-62.9), *E* (0-59.9).

**ADA Statement:** The University of Utah seeks to provide equal access to its programs, services, and activities for people with disabilities. If you will need accommodations in this class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, (801) 581-5020. CDS will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in an alternative format with prior notification to the Center for Disability Services.

**Veterans Center:** If you are a student veteran, the U of Utah has a Veterans Support Center located in Room 161 in the Olpin Union Building. Hours: M-F 8-5pm. Please visit their website for more information about what support they offer, a list of ongoing events and links to outside resources: <http://veteranscenter.utah.edu/>. Please also let me know if you need any additional support in this class for any reason.

**Addressing Sexual Misconduct:** Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a civil rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran's status or genetic information. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to the police, contact the Department of Public Safety, 801-585-2677(COPS).

**Student Names & Personal Pronouns statement:** Class rosters are provided to the instructor with the student's legal name as well as "Preferred first name" (if previously entered by you in the Student Profile section of your CIS account). While CIS refers to this as merely a preference, I will honor you by referring to you with the name and pronoun that feels best for you in class, on papers, exams, group projects, etc. Please advise me of any name or pronoun changes (and update CIS) so I can help create a learning environment in which you, your name, and your pronoun will be respected. If you need assistance getting your preferred name on your UIDcard, please visit the LGBT Resource Center Room 409 in the Olpin Union Building, or email [bpeacock@sa.utah.edu](mailto:bpeacock@sa.utah.edu) to schedule a time to drop by. The LGBT Resource Center hours are M-F 8am-5pm, and 8am-6pm on Tuesdays.

**Student Responsibilities:** All students are expected to maintain professional behavior in the classroom setting, according to the Student Code, spelled out in the Student Handbook. You have specific rights in the classroom as detailed in Article III of the Code. The Code also specifies proscribed conduct (Article XI) that involves cheating on tests, collusion, fraud, theft, etc. Students should read

the Code carefully and know you are responsible for the content. According to Faculty Rules and Regulations, it is the faculty responsibility to enforce responsible classroom behaviors, beginning with verbal warnings and progressing to dismissal from class and a failing grade. Students have the right to appeal such action to the Student Behavior Committee.

**Non-contract note:** This syllabus is meant to serve as an outline and guide for our course. Please note that I may modify it with reasonable notice to you. I may also modify the Course Schedule to accommodate the needs of our class. Any changes will be announced in class and posted on Canvas under Announcements

**Course roadmap week-by-week:** The following is a tentative schedule of the sections covered in this course. The weeks marked with a “**Q**” are the weeks for which we expect to have a quiz (on Thursdays) unless otherwise is announced. The weeks marked with a “**MT**” are the midterms weeks.

**Week 01 May 14-17:** Introduction, 1.1-1.5

**Week 02 May 21-24:** 1.6-1.9, **Q**

**Week 03 May 28-31:** Memorial Day holiday, 2.1-2.3, 2.8, **Q**

**Week 04 June 4-7:** 2.9, 3.1-3.3, **Q**

**Week 05 June 11-14:** 4.1-4.3, Review (Wednesday), **MT 1** (Thursday)

**Week 06 June 18-21:** 4.4-4.7, **Q**

**Week 07 June 25-28:** 5.1-5.2, **Q**

**Week 08 July 2-5:** 5.3-5.5, Independence Day holiday, **Q**

**Week 09 July 9-12:** 6.1-6.3, **Q**

**Week 10 July 16-19:** 6.4-6.5, Review (Wednesday), **MT 2** (Thursday)

**Week 11 July 23-26:** 7.1-7.2, Pioneer Day holiday, **Q**

**Week 12 July 30-31 and August 1:** 7.3-7.4, Final Exam’s Review