Math 2B-38483 Linear Algebra (5 units)

Instructor: Christopher Bradley **Email:** bradleychristopher@fhda.edu

Classroom: S57 **Classtimes:** M/W 11:00AM-1:15PM

Student Hours:
Tuesday, 11:00AM-1:00PM in room: S55. Thursday and 11:00AM-1:00PM in room S55.

Office: Room E31a

Course Format

This is a face-to-face course. We will meet in Room S57 at the scheduled times, Monday and Wednesday. We will spend this time together to build community, to cover course content, to work on group activities, and to engage in classroom discussions.

I hope you **actively participate in this course**. Math education research literature shows that working together and learning from each other will help you better understand homework problems, minimize test anxiety, and strengthen your problem-solving skills.

There may be some times when you are unable to make it to the class meetings. All the class "lecture notes" will be posted to Canvas (**Note: from experience, the lecture notes alone do not translate to a good grade, so it is important to be present in class!**). You should make it a point to exchange contact information with a classmate, there could be information discussed in class that does not make it to the posted notes. If you find that these missed days are adding up, please talk to me so that we may assess your situation, together.

Prerequisites

MATH 1D or MATH 1DH (with a grade of C or better)

Advisory:
ESL 272 and ESL 273, or ESL 472 and ESL 473, or eligibility for ENGL C1000 or ENGL C1000H or ESL 5

Scope and Objectives

This course emphasizes concepts in linear algebra.

- Solve and analyze systems of linear equations using matrices and matrix theory

- Investigate special matrices and matrix operations including powers and factorization
- Develop understanding and use of n-dimensional vectors and vector operations
- Define and investigate vector spaces and vector sub-spaces and find their bases and dimensions
- Establish understanding of linear transformations and their geometry and find their matrix representation
- Define eigenvalues and eigenvectors and use them to diagonalize square matrices and solve related problems
- Utilize methods of linear algebra to solve application problems selected from engineering, science and related fields
- Prove basic results in linear algebra using appropriate proof-writing techniques

Student Learning Outcomes

- Construct and evaluate linear systems/models to solve application problems.
- Solve problems by deciding upon and applying appropriate algorithms/concepts from linear algebra.
- Apply theoretical principles of linear algebra to define properties of linear transformations, matrices and vector spaces.

Homework Platform

MyOpenMath (required): www.myopenmath.com. MyOpenMath is the online homework/practice program that you will use to practice concepts learned in class. Make sure to register though canvas (by clicking any assignment and following the steps.), no course number is required. (Free). **No late homework will be accepted!** I **will drop 3 of the lowest homework scores at the end of the quarter**.

Textbook

We will be using Linear Algebra: A First Course

Participation

This is a critical part of the course, participating in the group work, working with your peers, struggling (in a good way) through the material together. We will be doing activities (worksheets, think-pair-shares, etc.). Yes, you can miss some days because life happens. However, if you find that you are missing too many class meetings, please come talk to me so that we may assess your situation together. Everyone will have to present a solution to at least one problem sometime during the 12 weeks in order to get full credit for participation. Attendance, although I won't be taking attendance every single day, I will be keeping track of who shows up and who doesn't. We will also have entry/exit tickets sprinkled throughout our 12 weeks together.

Homework

As stated above, we will be using MyOpenMath as our online homework platform. Our homework is an integral part of our class. I encourage collaboration with other classmates on the homework. Work together, but be careful, your partner won't be able to help you during the exams! There will also be written homework, which will be graded on completeness and clarity. There are roughly 4-6 short written assignments scattered throughout the 12 weeks we have together. To help you stay on track with the course pacing, **late work is generally not accepted**. However, I automatically **drop your lowest 3 homework scores** to account for emergencies or busy weeks. We need to take responsibility with our time management and make sure we complete assignments on time.

Exams

We will have 4 exams total. Our final will happen on the last day of class. The final exam will be cumulative. The **tentative dates** for the exams will be Jan 28, Feb 18, Mar 11, and Mar 23 (Final Exam: 11:30AM-1:30PM). More info on the exams will be posted in our canvas course. **There will be no makeup exams.** If you miss an exam for any reason, your percentage on the Final Exam will replace that zero. This replacement policy also applies to your lowest exam score if you attend all exams but score higher on the final. If you miss more than one exam, the second missed exam will be recorded as a zero.

You are allowed 1 page of notes (front and back) for exams. It will be your job to prepare accordingly for each exam.

Grading	
Homework	15%
Participation	5%
Quizzes	10%
3 Exams	45% (15% each)
Final Exam	25%

Important Dates

Last day to add: 1/18/26
Last day to drop without a W: 1/18/26
Martin Luther King Jr. Holiday: 1/19/26
Presidents' Holiday: 2/13/26 - 2/16/26
Last day to drop with a W: 2/27/26
Final Exam: 3/23/26 (11:30AM to 1:30PM)

Grade Percentages

Grades in the class are as follows:

A+: 98% and above	B+: 88%-89%	C+: 77%-79%	D+: 66%-68%
A: 94%-97%	B: 83%-87%	C: 70%-76%	D: 62%-65%
A-: 90%-93%	B-: 80%-82%		F: Below 65%

If you are hovering around the border, getting bumped up will depend on your performance and participation (emphasis on participation) in the class.

Tutoring

All Math students can get tutoring at the Math, Science & Technology Resource Center! It is free, there is drop-in tutoring as well as online and workshops!

Disabilities Support Services

Students with disabilities needing reasonable accommodations are encouraged to contact DSS early in the quarter. If you think that you may have a learning disability (or physical disability), please contact DSS as soon as possible. More information is available at Disability Support Services (deanza.edu)

Classroom Conduct

You should not be listening to music during class. You should not be texting during class. Cell phones should be turned off/silent (if you need to leave your phone on for some reason, let me know). You may not use a cell phone, smart watch or other device capable of texting or connecting to the internet during an exam.

A graphing calculator is recommended for this class, and calculator usage is generally allowed on assignments, with some restrictions.

Cheating on exams is unacceptable and will result in a grade of 0 on the exam. See the Student Code of Conduct for further college policies.

All students must comply with the college's COVID policies and protocols.

FAQ

Are we allowed to use notes during the exams? Yes, you are allowed 1 page of notes, front and back. These notes can include theorems, definitions, formulas, and steps to solve certain problems. The main goal of a cheat sheet (at least in my head) is to optimize our strategies. Get rid of what we don't need and lay out what we do need and how to use it.

Will the exams be just like the lectures and the homework? For the most part. What we learn in class will be the foundation, working through the homework problems helps us fine tune our understanding and exposes us to the ins and outs of different variations of the things we learned in class. When writing the exams, I will assume that you went through the notes, completed the assignments and prepared accordingly.

May I come to office hours to work on the homework? Yes, I recommend you take advantage of office hours. Not only for this class, but all of your classes!

Student Learning Outcome(s):

• Construct and evaluate linear systems/models to solve application problems.
• Solve problems by deciding upon and applying appropriate algorithms/concepts from linear algebra.
• Apply theoretical principles of linear algebra to define properties of linear transformations, matrices and vector spaces.

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T,TH	11:00 AM - 1:00 PM	S55