De Anza College – Fall 2025

MATH 2B-15 (CRN 28070) Linear Algebra

Instructor: Lucian Sega, PhD

Class: MW 6:30-8:45 pm PST, room S16

Email: segalucian@fhda.edu

Office Hours: Thursdays, 11:00 am – 12:00 pm PST (zoom) or by appointment

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Prerequisites

Math1D or 1DH with a grade of C or better, or equivalent.

Course Materials

- Textbook: Ron Larson, Elementary Linear Algebra, 8th edition, e-book ISBN-13: 9780357539538
- Instructor notes

Calculator

A graphing calculator (e.g. TI-83/TI-84, TI-nspire CX CAS) is recommended/useful, but not required.

Tips for Success

- Participate actively in class
- Do not fall behind on assignments, work problems/practice every day
- Review old material constantly
- Form study groups
- Make use of tutoring and online resources

Course Objectives

- 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 and Quizzes

Homework problems will be assigned regularly and posted in canvas each week. The homework for an entire week is due by 11:59 pm PST on Monday of the following week. The homework problems will provide a good preparation for the midterms and final exam.

Quizzes will be given approximately once a week and will be similar to the homework and class examples. The quizzes are take-home, will be posted in canvas on Friday each week, and are due back by 11:59 pm PST on the following Monday. Please submit your solution files through Canvas for both homework and quizzes.

Midterm Exams

There will be two one-hour in-class midterm exams:

- Monday, October 13
- Monday, November 10

Make-up midterms will only be given in extraordinary circumstances.

Final Exam: Wednesday, December 10, 6:15-8:15 pm

A mandatory comprehensive final exam will be given at the end of the quarter. The final exam must be taken on Wednesday, December 10, at the scheduled time. There is no make-up final exam.

Grading Policy

- Quizzes……15%
- Homework……...15%
- Each midterm exam……20%
- Final exam……30%

A+: 98-100	**B+**: 87-88	**C+**: 74-77	**F**:0-54
A: 92-97	**B**: 80-86	**C**: 65-73	
A-: 89-91	**B-**: 78-79	**D**: 55-64	

Attendance Policy

Students are expected to attend all classes, to be on time and to stay for the entire class period. Any student who misses more than one (1) class during the first week may be dropped by the instructor. If a student decides not to continue with the course, it is the student's responsibility to officially drop the course. Failure to do so may result in a grade of F for the course.

Academic Honesty Policy

Students are responsible for keeping themselves informed of the De Anza College Policy on Academic Integrity. Cheating will not be tolerated and may result in receiving a zero on the exam or an F for the course and being reported to the Dean of Students Office for possible disciplinary action.

https://www.deanza.edu/policies/academic-integrity.html

Student Conduct and Classroom Behavior

Students are responsible for keeping themselves informed of the De Anza College Student Code of Conduct. Disruptive classroom behavior is unacceptable. Examples of such behavior include, but not limited to, talking during lecture and student presentation, making distracting noises, or arriving to class late or leaving early. Persistent disruption may result in being asked to leave the class and/or being referred to the Dean of Students Office.

https://fhdafiles.fhda.edu/downloads/aboutfhda/5510ap.pdf

Accommodations for Students with Disabilities

Students with disabilities who believe that they may need accommodations in this course are encouraged to contact Disability Support Services (408-864-8753) or Educational Diagnostic Center (408-864-8839) as soon as possible to ensure that such accommodations are arranged in a timely fashion.

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.

Office Hours:

TH	11:00 AM - 12:00 PM	Zoom
TH	12:00 PM - 1:00 PM	Zoom
T	12:00 PM - 1:00 PM	Zoom
T	11:00 AM - 12:00 PM	Zoom