

# Math2B Linear Algebra

## Fall 2023, Section 13Z, CRN 27518

### INSTRUCTOR INFORMATION

Instructor	MISAKO VAN DER POEL
Email	<a href="mailto:van_der_poelmisako@fhda.edu">van_der_poelmisako@fhda.edu</a> Please following the format of the subject line stated below. <b>"Math 2B: _____"</b> You write your inquiry after the colon.
Class Hour	<b>Monday &amp; Wednesday: 4:00pm–6:15pm</b> <b>Zoom Link:</b> <a href="https://fhda-edu.zoom.us/j/84545311086">https://fhda-edu.zoom.us/j/84545311086</a> Passcode: 689157
Office Hours	<b>Tuesday &amp; Thursday: 6:15pm–7:30pm</b> or email me for appointments on Monday through Friday. <b>Zoom Link:</b> <a href="https://fhda-edu.zoom.us/j/97937658869">https://fhda-edu.zoom.us/j/97937658869</a> Passcode: 640477


### CLASS MODE

This class is **synchronous and online**.

You are expected to attend class via zoom and check our Canvas page to see announcements and week module regularly.

The due date of all the assignment follows the **U.S. Pacific Standard Time (PST)**.

For this course, **all you need to do is:**

1. **Attending** all classes via zoom, joining on time, and staying for the entire class.
2. Using **Study Sheet** posted in **Canvas:** 
3. Completing **Homework assignments** in **MyOpenMath**.
4. Taking **Quizzes** in **MyOpenMath**.
5. Taking **Midterms** and **Final Exam** in **MyOpenMath**, being proctored by the instructor via Zoom.



### PREREQUISITES

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

### MATERIALS

Linear Algebra and Its Applications, 5<sup>th</sup> edition, by D. Lay, S. Lay and J. McDonald (2015), Pearson.  
ISBN: 978-0321982384 (**Optional**)

Use of **MyOpenMath** is required to complete homework assignments.

### OTHER REQUIRED MATERIAL

- **Two electronics devices (Laptop, desktop, tablet, smartphone, webcam, etc..)** are needed for taking Midterms and Final Exams.

**De Anza College CompTechS:** lets students borrow a refurbished desktop or laptop for coursework, [https://www.deanza.edu/oti/computer\\_scholar.html](https://www.deanza.edu/oti/computer_scholar.html)

## CALCULATORS

The TI-83, TI-83 plus, TI-84, or TI-84 plus are recommended for the students.

Download: TI-SmartView™ Emulator Software for the TI-84 Plus Family

<https://education.ti.com/en/software/details/en/FFEA90EE7F9B4C24A6EC427622C77D09/sda-ti-smartview-ti-84-plus>

**TI Emulator Apps** For iPhone: GraphNCalc83 (free) For Android: Wabbit EMU (free)

Free online graphing tool such as <https://www.desmos.com/> or <https://www.wolframalpha.com/>.

## CANVAS

You are expected to check our Canvas page to see announcements, assignments, and week module regularly.

### Modules:

- A new module will be created every week.
- All the lectures and the assignments will be listed in each module.
- **Study Sheets** are posted for each section.

### Files:

*Study Sheets, Student Contract, Score Sheet, Formula Sheets, Tables*, or any documents will be posted on the Files tab.

## READING or WATCHING VIDEOS

In general, you should do the assigned reading section or watching video before the topics come up in class or in the homework. Throughout the quarter, I'll always assume that you've done all of the reading section or watching video.

## HOMEWORK

- Homework will be assigned in [MyOpenMath](#) weekly and **no late work** will be accepted.
- **No extensions** will be granted.
- **Three submissions** are allowed for each question.
- **Five homework assignments with lowest percentage will be dropped.**
- Submissions are due at **11:59pm** on each due date.

**You are expected to check the due dates on your MyOpenMath account at least once a day to plan accordingly.**

To create an account in MyOpenMath follow these steps:

- Click here: <https://www.myopenmath.com/>
- Click "Register as a new student"
- Course Name: Math2B-13Z
- Use Course ID: **187339**
- Use Enrollment Key: **da2b13**

## QUIZZES

Quizzes will be assigned in MyOpenMath and **no late quiz** will be accepted.

For each quiz:

- It is a timed quiz of **60 minutes**.
- **No extensions** will be granted.
- **One submission** is allowed for each question.
- Use any materials including textbook and notes.
- Submissions are due at **11:59pm** on each due date.
- Each quiz is worth **10 points**.
- **Three lowest scores will be dropped.**

## EXAMS

- There will be **two** exams (**90 min**-exams) in MyOpenMath.
- Each exam is worth **120 points**.
- **One submission** is allowed for each question.
- All the exams are **closed-book**.
- You may use **one 8.5 X 11 inch sheet of handwritten notes (one side)**.
- **NO calculator, phones, and other aids** are allowed.
- **Two electronics devices are required**.(Laptop, desktop, tablet, smartphone, webcam, etc..)
- **Your exam will be proctored via Zoom**.
- There are **no dropped exams**.
- If the percentage of the lowest of your exam scores is lower than that of your final exam score, then the percentage of the lowest exam will be replaced by that of your final exam.  
(Note that the final exam score will NOT be replaced in this manner).

**Missed Exam:** There are **no make-up exams**, regardless of why you missed it. If you are unable to take the exam at the scheduled time due to illness or an emergency, then your percentage from the final exam will be used to compute your score for the missed exam. If a second exam is missed, you will get a zero.

## FINAL EXAMS

- There will be a mandatory comprehensive final exam worth **200 points** in MyOpenMath.
- Final exam must be taken on **Dec 13, Wednesday at 4:00pm-6:00pm**.
- The final will cover all the material discussed during the quarter.
- Missing the final will result in a grade of "F" for the course.
- It is **closed book**.
- You may use **one 8.5 X 11 inch sheet of handwritten notes (both sides)**.
- **No calculator** is allowed.
- **Two electronics devices are required**.(Laptop, desktop, tablet, smartphone, webcam, etc..)
- **Your final exam will be proctored via Zoom**.
- There are **no make-up final exams**, regardless of why you missed it.

## GRADES

Your grade will be based upon the total points earned, according to the following:

<i>Homework-MyOpenMath</i>	100 pts
<b>Five lowest percentages</b> will be dropped.	
<i>Quiz-MyOpenMath</i> (10 pts each)	60 pts
<b>Three lowest scores</b> will be dropped.	
<i>Midterms- MyOpenMath.</i> (120 pts each)	240 pts
<i>Final Exam- MyOpenMath</i> (200 pts)	200 pts
Total	600 pts

Points		Percentage
582 – 600	<b>A+</b>	97%-100%
558 – 581	<b>A</b>	93%-96.9%
540 – 557	<b>A-</b>	90%-92.9%
510 – 539	<b>B+</b>	85%-89.9%
480 – 509	<b>B</b>	80%-84.9%
450 – 479	<b>B-</b>	75%-79.9%
432 – 419	<b>C+</b>	72%-74.9%
408 – 431	<b>C</b>	68%-71.9%
390 – 407	<b>C-</b>	65%-67.9%
372 – 389	<b>D+</b>	62%-64.9%
348 – 371	<b>D</b>	58%-61.9%
330 – 347	<b>D-</b>	55%-57.9%
Below 330	<b>F</b>	Below 55%

## ATTENDANCE / PARTICIPATION: **Extra Credit**

- You are expected to attend all classes, arrive on time, and stay for the entire class.
- Your participation will be checked in **Canvas** on each day.
- Each attendance is worth **1 point** as a participation.
- There will be no other extra credit opportunities in this course.

## TIME COMMITMENT

The De Anza College catalog advises students to do at least two hours studying outside of class for each credit hour. That means you should be spending at least four and one half hours on each homework assignment (reviewing the notes, reading the textbook, doing the homework problems, watching videos related to the course material, etc.).

## STUDENT RESPONSIBILITIES

1. It is your responsibility to keep up with the material even if you miss class.

**Note: I will not answer any Math questions over email.**

2. Students are responsible for any material covered and any announcements made in their Absence. It is your responsibility to find and use all materials posted in CANVAS.
3. You are expected to attend all classes via zoom. If you miss class, please send me an email explaining the reason.
4. It is your responsibility to submit all assignments on time.

**Note: There are no make-ups and no extensions will be granted.**

5. If you plan on dropping the class, it is your responsibility to use "MyPortal" online, or contact Admissions and Records office.
6. It is your responsibility to record all the scores you have earned, using a "Score Sheet."

## TUTORIAL HELP

- **SSC tutoring links and schedules:** go to the [SSC homepage](#) and click on the yellow link to add yourself to [SSC Resources Canvas](#). Once there, click on Modules then the SSC area for your course. <https://www.deanza.edu/studentssuccess/>
- **Support for online learning:** If you'd like to speak with someone about motivation and organization strategies for online classes, we encourage you to talk with a peer tutor or SSC staff member. We get it and are going through the same things, so let's support each other!
- **Need after-hours or weekend tutoring?** See the [Online Tutoring](#) page for information about NetTutor (via Canvas) or Smarthinking (via MyPortal).

## ACADEMIC MISCONDUCT

Academic dishonesty will not be tolerated. If a student is found cheating on an exam, plagiarizing on writing assignments, or violating other codes of academic integrity, he or she will receive a failing grade for the course and may be reported to the college for an appropriate action. See section on Academic integrity in your current schedule of classes catalog.

Please refer to [https://www.deanza.edu/policies/academic\\_integrity.html](https://www.deanza.edu/policies/academic_integrity.html)

## DISABILITY SUPPORT SERVICES

For information or questions about eligibility, support services or accommodations to disability (physical or learning disability) see contacts below:

Disability Support Service (DSS): Student Services Building (408) 864-8753; TTY (408) 864-8748

Educational Diagnostic Center (EDC): Learning Center West 110; (408) 864-8839

Special Education Division: 864-8407; [www.deanza.edu/specialed](http://www.deanza.edu/specialed)

The application process can be found here: <https://www.deanza.edu/dsps/dss/applynow.html>

## IMPORTANT DAYS TO REMEMBER

Oct 7, Saturday	Last day to add quarter-length classes
Oct 7, Saturday	Last day to drop for a full refund or credit.
Oct 8, Sunday	Last day to drop with a "W"

## Math 2B-13Z Tentative Course Schedule

Week #	Section #	Homework & Quiz	Due at 11:59pm
<b>Week 1</b> Sep 25 & 27	1.1 Systems of Linear Equations 1.2 Row Reduction and Echelon Forms 1.3 Vector Equations 1.4 The Matrix Equation $Ax=b$		
<b>Week 2</b> Oct 2 & 4	1.5 Solution Sets of Linear Systems 1.7 Linear Independence 1.8 Introduction to Linear Transformations	1.1, 1.2, 1.3, 1.4, 4.1, 4.2, 4.3, 4.5 Quiz 1	Oct 8
<b>Week 3</b> Oct 9 & 11	1.9 The Matrix of a Linear Transformation 2.1 Matrix Operations 2.2 The Inverse of a Matrix 2.3 Characterizations of Invertible Matrices	1.5 Quiz 6	Oct 15
<b>Week 4</b> Oct 16 & 18	2.5 Matrix Factorizations 2.8 Subspaces of $\mathbb{R}^n$ 2.9 Dimension and Rank	2.1-2.4, 5.1, 5.2, 5.3, 5.4, 5.5, 5.9 Quiz 2	Oct 22
<b>Week 5</b> Oct 23 & 25	3.1 Introduction to Determinants 3.2 Properties of Determinants 3.3 Cramer's Rule, Volume, and Linear Transformations Review	2.5-2.10, 3.1-3.3 Quiz 3	Oct 29
<b>Week 6</b> Oct 30 & Nov 1	<b>Exam 1 (1.1 - 3.3) on Oct 30</b> 4.1 Vector Spaces and Subspaces 4.2 Null Spaces, Column Spaces, Row Spaces, and Linear Transformations	3.4 Quiz 4	Nov 5
<b>Week 7</b> Nov 6 & 8	4.2 Null Spaces, Column Spaces, Row Spaces, and Linear Transformations 4.3 Linearly Independent Sets; Bases 4.4 Coordinate Systems 4.5 The Dimension of a Vector Space	9.1 Quiz 5	Nov 12
<b>Week 8</b> Nov 13 & 15	4.6 Rank 4.7 Change of Basis 5.1 Eigenvectors and Eigenvalues 5.2 The Characteristic Equation	4.10, 5.6, 5.7, 5.8, 9.2, 9.3, 9.4-9.5, 9.6 Quiz 7	Nov 19
<b>Week 9</b> Nov 20 & 22	5.3 Diagonalization 5.4 Eigenvectors and Linear Transformations 6.1 Inner Product, Length, and Orthogonality 6.2 Orthogonal Sets 6.3 Orthogonal Projections	Quiz 8	Nov 26
<b>Week 10</b> Nov 27 & 29	6.3 Orthogonal Projections 6.4 The Gram-Schmidt Process Review <b>Exam 2 (4.1 - 5.4) on Nov 29</b>	7.1, 7.2 9.7, 9.8, 9.9 Quiz 9	Nov 28
<b>Week 11</b> Dec 4 & 6	6.5 Least-Squares Problems 7.1 Diagonalization of Symmetric Matrices 7.4 The Singular Value Decomposition Review for Final Last day of Class on Dec 6	4.4, 4.7, 4.11	Dec 10
<b>Week 12</b> Dec 13	<b>Final Exam</b> <b>Dec 13 Wednesday 4:00pm-6:00pm</b>	7.1, 7.2, 7.4	Dec 12



**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:**

T,TH 06:15 PM      07:30 PM      Zoom