Linear Algebra

CLASS MODE: 100% in person

In person time and location: M,W 1:30-3:45pm in S-57

| Instructor: | Vinh Kha Nguyen | | | | |
|---|--|--|--|--|--|
| How to contact instructor: <u>nguyenvinh@fhda.edu</u> or Canvas Inbox the instructor (preferably) | | | | | |
| Office hours: M | I,T,W,Th 11:30-12:00pm in S-55 | | | | |
| Т | Th 2:30-3:20pm on Zoom (see Canvas course for zoom link) | | | | |
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Textbook: Anton, Howard. "Elementary Linear Algebra, Applications Version", 12th edition, 2014 by John Wiley. Either a hard copy or eText or .pdf textbook is ok to use.

Required Materials: Textbook and TI-83/84 Calculator

| Grade is composed of homework, quizzes, discussions, exams, and final. | | | | | |
|--|--------------|--------------|--------------|--|--|
| 0-59.99% F | 70-76.99% C | 80-82.99% B- | 90-92.99% A- | | |
| 60-69.99% D | 77-79.99% C+ | 83-86.99% B | 93-100% A | | |
| | | 87-89.99% B+ | | | |

| homework | quizzes | discussions | exams | final | total |
|----------|---------|-------------|--------|--------|--------|
| 70pts | 70pts | 40pts | 180pts | 120pts | 480pts |

Homework: each hw due date is posted on the course calendar and Canvas Grade tab. Late homework gets Opts regardless of excuses. Student must submit hw on Canvas using the Grades tab by its due date to get credit.

Discussions: discussion and its due date are posted on the course Canvas Grade tab. *Missed discussion gets Opts regardless of excuses*. **Quiz:** each regular quiz date is posted on the course calendar and must be taken in person. *Missed quiz gets Opts regardless of excuses*. **Exam:** each exam date is posted on the course calendar and must be taken in person. *Missed exam gets Opts regardless of excuses*. **Final:** comprehensive and given in a specific date and time during final week. There is no make-up for final exam.

If student notices that the instructor made an error on the grading, the student is responsible to inform the instructor within a week of the date of the exam/quiz. Otherwise, the student's score on the exam/quiz will be unchangeable.

Makeup Policy: No makeup quizzes or exams are available. Student must notify the instructor in advance of a missed quiz or a missed exam to use the following makeup policy.

Only 1 missed regular quiz due to an excused absence or emergency will be covered by the next quiz (exact point). Only 1 missed exam due to an excused absence or emergency will be covered by the final exam (half point).

Exam procedure/policy:

- Each exam is 50 minutes, and there is no dropping lowest exam score.
- The Final Exam is 2 hours. (see course calendar for detail)
- Make sure you have fully studied and prepared before you take each exam. (see Canvas Modules for outlines)
- All quizzes and exams must be taken in class in person.
- No phone and restroom break are allowed during quizzes and exams.

Academic Dishonesty: Students will get 0pt on the related assignments if:

- Cheat on exams and assignments.
- Copy other's work as their own.
- Only include the final answer, but do not show any work or offer any explanation.
- Alter work on exam/quiz after it has been graded to deceive the instructor.
- Uploading instructor's exams or a part of the exam online for others to view will result in a failing grade.

Repeated academic dishonesty will result in a failing grade in the course. Moreover, all academic dishonesty instances will be reported to the college!

Time Commitment: Students are expected to spend at least 1 hour each week to watch lecture videos before coming to class. Students are also expected to spend at least 10 hours each week outside of class to do homework and study for quizzes and exams.

Grade improvement: This class is rigorous, so it can be fast-paced and challenging quite often during the quarter. The only way to build confidence is through practice and more practice. Other strategies to improve grade: take detailed note during lecture, ask

questions when in doubt, work with classmates during group work, form study group, do hw sooner than later, seek help when need help, understanding rather than memorizing, prioritize tasks, do not multi-tasking while studying, etc. **If you are interested in improving your grade, please spend time to study and do the homework.**

Campus tutoring, additional assistance, and Internet resources:

- On campus tutoring in S43: <u>https://www.deanza.edu/studentsuccess/mstrc/</u>
- Online tutoring: <u>https://www.deanza.edu/studentsuccess/onlinetutoring/</u>
- Student's services: <u>https://www.deanza.edu/services/</u>
- Disability Support Service, EOPS, Veterans, CalWORK, Foster Youth, Food Pantry, Health Service, etc.
- The Internet: Youtube lecture video, Khan Academy, Paul's note, Wolfram Alpha, Microsoft Math Solver, Desmos, GeoGebra, etc.

Students Responsibility:

- Read the syllabus word by word and honor the syllabus.
- Attend lecture, take note, and study problems on the note before working on homework.
- Collaborate with classmates and the instructor during group work and in-class activities.
- Do and submit all assignments on time.
- Do homework outside of class before the next lecture to stay current with the materials.
- Study and prepare for quizzes and exams.
- Read textbook for more examples.
- Behave as educated and civilized individual, to be hold accountable for your actions.

Attendance: Students are expected to attend all class meetings, arrive on time, take note, and stay for the entire class. The instructor reserves the right to drop/withdraw students who are absent more than five lectures during the quarter. However, **a student who discontinues coming to class and does not drop the course will get an F**. It is the student's responsibility to drop the course. Moreover, showing up after roll call is counted as one late. Two lates is counted as an absence.

Withdrawal/Drop Policy: It is the ultimate responsibility of the student to drop the class. Do not rely on the instructor to drop.

Smartphone Use: All smartphones must be on silent mode and put away during lecture. We do not learn how to text or search the Web in this class, so there is no reason to have smartphones out during class unless the instructor allows.

Expected Student Conduct: A student who is disruptive will be asked to leave the class. A student who refuses to leave the room will be dropped from the class and will be reported for further action. During the quarter, if you have any questions about the course policies, you will be first referred to this syllabus. Please make sure you keep a copy. You can find Foothill-De Anza College Code of Conduct at https://www.deanza.edu/student-development/conduct.html

Accommodation: Students who need additional accommodations, due to learning disability or some other reason, please contact the instructor during the first two weeks of class to discuss your options. Disability Support Services determines accommodations based on appropriate documentation of disabilities. DSS is located in Student Community Services building room 141, and their phone number is (408) 864-8753.

All students registered for this course will be expected to uphold the following values:

We strive to establish a class atmosphere that is welcoming and inclusive so that students may bring their authentic selves and work to reach their potential. We recognize the value and individuality that each student brings – our learning experience becomes all the richer when we hear from different perspectives. As such, we support all students equally, without regard to race, color, religion, gender, gender identity or expression, sexual orientation, national origin, genetics, disability, age, or veteran status.

Course SLOs:

Upon successful completion of the course, students will be able to:

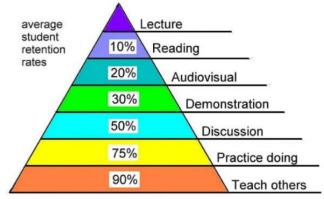
- Construct and evaluate linear systems/models to solve application problems.
- Solve problems by deciding upon and applying appropriate algorithms/concepts from linear algebra.
- Apply theoretical principles of linear algebra to define properties of linear transformations, matrices and vector spaces.

Tentative Course Calendar

| Μ | Т | W | Th |
|---------------------|------|----------------------|------|
| 4/08 | 4/09 | 4/10 | 4/11 |
| Syllabus&Canvas Q&A | | 1.3,1.4 | |
| 1.1, 1.2 | | | |
| 4/15 Hw#1 due | 4/16 | 4/17 | 4/18 |
| Quiz#1 | | 1.7,1.8 | |
| 1.5,1.6 | | | |
| 4/22 | 4/23 | 4/24 Hw#2 due | 4/25 |
| 2.1, 2.2 | | EXAM#1 | |
| 4/29 | 4/30 | 5/01 | 5/04 |
| 2.3, 3.1, 3.2 | | 3.3, 3.4 | |
| 5/06 Hw#3 due | 5/07 | 5/08 | 5/09 |
| Quiz#2 | | 4.3, 4.4 | |
| 4.1,4.2 | | | |
| 5/13 | 5/14 | 5/15 Hw#4 due | 5/16 |
| 4.5, 4.6 | | EXAM#2 | |
| 5/20 | 5/21 | 5/22 | 5/23 |
| 4.7, 4.8, 4.9 | | 5.1, 5.2 | |
| 5/27 HOLIDAY | 5/28 | 5/29 Hw#5 due | 5/30 |
| No class | | Quiz#3 | |
| | | 6.1, 6.2 | |
| 6/03 | 6/04 | 6/05 Hw#6 due | 6/06 |
| 6.3, 6.4 | | EXAM#3 | |
| 6/10 | 6/11 | 6/12 | 6/13 |
| 7.1, 7.2 | | 8.1 | |
| 6/17 | 6/18 | 6/19 HOLIDAY | 6/20 |
| 8.2 | | No class | |
| 6/24 Hw#7 due | 6/25 | 6/26 | 6/27 |
| FINAL EXAM | | | |
| 1:45-3:45PM | | | |

4/21 Last day to add/drop4/22 Census5/31 Last day to drop with a W6/24-6/28 Final Exam week, no lecture

Learning Pyramid



Source: National Training Laboratories, Bethel, Maine

Math 2B Homework

(see Canvas for due date, scan and upload files in .pdf format)

- Homework is graded on completeness and neatness, see tentative course calendar for due date.
 - Must show work for each problem. Hw without show work will be -1pt.
 - Submit one file per section. If not, hw will be -1pt.
 - Name each file to match with the hw description. If not, -1pt.
 - o Deduct points from each missing problem depending on the amount of problems in each hw.
- Why should students care about showing work?
 - Practice makes confidence
 - Help to prepare for quizzes and exams
- Students are responsible to do all homework and submit the work on time,
 - Late hw gets a solid 0pt, so do not submit late hw.

Hw#1

1.1 #1,5,7,11,13,15,17,19,25 pg. 9-10 1.2 #1,3,5,7,9,11,15,17,31,39,43 pg. 22-25 1.3 #1.3a,3b,5f,5g,11,13,15,23,25,29 pg. 37-39 1.4 #3,5,7,11,13,15,17,19,31,33a,35,39,43 pg. 51-52 Hw#2 1.5 #1,3,5,9,11,13,17,27,29 pg. 60-61 1.6 #1,3,5,9,13,15,17,19 pg. 67-68 1.7 #1,3,7,9,11,17,19,21,23,25,29,31,39 pg. 74-75 1.8 #1,3,5,7,11,13,15,17,19,27,29a,41,49 pg. 88-90 Hw#3 2.1 #15,16,21,23,25,27,29,31,35 pg. 125 2.2 #1,3,5,7,9,11,13,15,17,19,21,23,29,31 pg.131-312 2.3 #1,3,5,7,9,15,17,25,27,33,35 pg. 142-143 3.1 #1,3,5,7,9,11,13,15,17,19,21 pg. 156-157 3.2 #1,3,5,7,9,11,13,15,17,21,25 pg. 170-171 3.3 #1,3,5,7,9,11,13,15,17,21,23,25,27,29 pg. 182-183 3.4 #1,3,5,7,9,11,13,15,17,19,21a pg. 189-190 Hw#4 4.1 #1a,1b,1e,3,5,7,9 pg. 209 4.2 #1,3,5,7,9,11,13,15,17,19 pg. 218-219 4.3 #1,3,5a,7a,9,11a,15a,17a,21 pg. 226-227 4.4 #1,3a,5a,7a,9a,11,17,19,21 pg. 236-237 4.5 #1,3,5,7a,9,11a,13a,15,17,19,21a pg. 246 4.6 #1,3,5,7,9,13,15,17,19 pg. 254-255 Hw#5 4.7 #1,3,5a,7a,9,15,17 pg. 261-262 4.8 #1,3,5,7,9,11,15,17,21,25,27 pg. 173-175 4.9 #1,3,5,7,13,25,29,31 pg. 287-288 5.1 #1,3,5a,5b,7,9,11,13,25,33,35 pg. 299 5.2 #1,3,5,7,9,11,15,17,19,27 pg. 309-310 Hw#6 6.1 #1,3,5,7,9,11,13,17,19,21,35,37 pg. 349-350 6.2 #1,3,5,9,11,15,17,25,35,37 pg. 358-359 6.3 #1,5,7,9,19,23,29,37 pg. 374-375 6.4 #1,3,7,15,17,27 pg. 384 Hw#7 7.1 #1,3,7,11,13,15,19 pg. 405-406 7.2 #1,3,5,7,9,15,19,21,23b pg. 415 8.1 #1,3,5,7,15,19,21,23,35 pg.456-458 8.2 #3,5,7,13,19,23,27,31 pg.468-470

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:

| M,T,W | /,TH | 11:30 | AM | 12:00 | PM | In-Person | S-55 |
|---------------|-------|-------|-------|-------|------|-----------|------|
| т <i>,</i> тн | 02:30 | PM | 03:20 | PM | Zoom | | |