

## *Linear Algebra*

*Class Time:* MWF 9-9:50 a.m.

*Class Room:* MH 615

*Instructor:* Angel R. Pineda, Ph.D.

*Office:* MH 182L

*Email:* [apineda@fullerton.edu](mailto:apineda@fullerton.edu)

*Phone:* 714-278-8478

*Office Hours:* Monday 11-12 p.m., Wednesday 2:30 – 3:30 p.m., Friday 10-11 am or by appointment.

*Textbook:* Gilbert Strang, *Linear Algebra and its Applications 4<sup>th</sup> Edition*, Thomson Brooks/Cole 2006.

### *Course Description:*

Linear algebra is beautiful and useful. In this course we will cover the theory and applications of linear algebra by understanding the solutions to linear algebraic equations from many perspectives which will include computation, derivation and proof. The course will explore vector spaces, orthogonality, eigenspaces, least squares and the singular value decomposition.

### *Course Homepage (Blackboard):*

After login into <http://my.fullerton.edu/> choose the Blackboard tab. Select Math 307 01. Here you will find four features that will be used in this course:

- *Email:* make sure that your email on Blackboard is one that you check regularly. Homework assignments, announcements and other class related information will be sent via email.
- *Course Documents:* solution keys and HW problems not in the text will be posted here.
- *Discussion Board (under communication tools):* this online forum allows for students and faculty to communicate about the course (anonymously if desired). I want to encourage students to ask questions and make comments about the course (including homework) as well as answer them. This tool can be particularly helpful for students whose schedule does not permit them to meet in study groups.
- *Grades (under course tools):* students will be able to keep track of their grades online.

### *Grading:*

Homework and Quizzes (25 %)

Midterm Exams: (15 % each)

Exam I	Exam II
Monday Sept. 29	Monday Nov. 3

Course Project (15 %), Initial Presentation: Monday Nov. 17, Final Presentation and Paper: Monday Dec. 8

The student (or in groups of two) will write a paper on a topic of their choice with the instructor's approval. The students will give two presentations. The projects may be theoretical (reading a research paper or writing a proof), computational (running computer simulations), pedagogical (developing a lesson plan) or describe an application of linear algebra not covered in the course. Details for the final project will be given after Exam II.

Comprehensive Final (30 %), Wednesday Dec. 17, 9:30-11:20 a.m.

### *Tentative Grading Scale*

Percent	97-100	93-96	90-92	87-89	83-86	80-82	77-79	70-76	67-69	63-66	60-62	0-59
Grade	A+	A	A-	B+	B	B-	C+	C	D+	D	D-	F

The exact grading scale will be determined after the final exam. The numerical scores in the tentative grading scale guarantee the associated letter grade but the instructor may change the scale to the student's benefit.

### *Add Dates, Withdrawal Dates and Holidays*

September 1	Labor Day Holiday
September 8	Last day to add or to withdraw from course without a “w”
October 3	Math department deadline to withdraw without compelling reason and documentation
November 14	CSUF deadline to withdraw with a truly compelling reason and documentation
November 11	Veteran’s Day Holiday
November 24-28	Fall Break

### *General Class Policies*

- Failure to attend class on a day of a quiz will result in a zero grade for that quiz.
- The lowest two HW or quiz grades will be dropped. Late homework will not be accepted.
- Grading on homework and exams will emphasize complete solutions instead of partial credit.
- No make-up exams will be given, unless you have a medical or family emergency. These emergencies require valid documentation. In case of a valid reason for missing an exam, the type of make up exam will be discussed with the instructor in case by case basis.
- Exams will be closed book and closed notes, but you will be allowed to bring one sheet of 8” x 11” paper written on one side.

### *Homework Grading: Problems, Completion and Style Points*

Each HW will be worth 10 points. Four problems in each HW set will be graded, each worth 2 points. Completion of the entire assignment will be worth 1 point and 1 point will be for following the format given in class including writing the complete problem statement and a legible solution. Failure to follow the format, staple the pages, or homework which is hard to read will result in a loss of a “style” point.

### *Suggestions*

- The course requires a time commitment of about 9 hours outside of class time, so you should set aside enough time to do well. The material builds on itself, so it is important not to fall behind. Start strong.
- I suggest you work in groups on your homework but hand in individual solutions. In your homework include the names of your collaborators. Study groups really help.
- I encourage you to come to office hours regularly. I will do my best to help you.

### *Students with disabilities*

The University requires students with disabilities to register with the Office of Disabled Student Services (DSS), located in UH-101 and at (714) 278 – 3112, in order to receive prescribed accommodations appropriate to their disability. Students requesting accommodations should inform the instructor during the first week of classes about any disability or special needs that may require specific arrangements/accommodations related to attending class sessions, completing course assignments, writing papers or quizzes/tests/examinations.

### *Academic Integrity*

Students who violate university standards of academic integrity are subject to disciplinary sanctions, including failure in the course and suspension from the university. Since dishonesty in any form harms the individual, other students and the university, policies on academic integrity are strictly enforced. I expect that you will familiarize yourself with the academic integrity guidelines found in the current student handbook:

<http://www.fullerton.edu/deanofstudents/judicial/policies.htm>

### *Emergency Evacuation*

In the event of an emergency such as an earthquake or a fire:

- Take all your personal belongings and leave the classroom. Use the stairways not the elevators.
- Go to the lawn area towards Nutwood Avenue. Stay with class members.
- Anyone who may have difficulty evacuating the building, please see instructor.

*This syllabus may be changed at the instructor’s discretion. Any changes will be communicated to the students.*