

Introduction to Linear Algebra and Differential Equations

Class Time: MW 7-8:50 p.m. *Class Room:* MH 476

Instructor: Angel R. Pineda, Ph.D. *Office:* MH 182L *Phone:* 714-278-8478
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Office Hours: Monday 12-12:50 pm, 6-6:50 pm, Wednesday 6-6:50 pm, Friday 10-10:50 am or by appointment.

Textbook: Stephen W. Goode and Scott A. Annin, *Differential Equations and Linear Algebra 3rd Edition*, Prentice-Hall Publishers.

Course Description:

This course is an introduction to both differential equations and linear algebra. Differential equations provide a natural way of describing phenomena which involve rates of change and hence can be used to model a wide variety of situations. The first part of the course will introduce the fundamental ideas for understanding and solving differential equations. We then study linear algebra which describes the solutions to systems of linear algebraic equations. In terms of the theory, linear algebra will give us the machinery to understand and solve systems of differential equations. In terms of applications, linear algebra is central to the solution of many practical problems with a large number of variables since generally the first step is to linearize the problem.

Course Homepage (Blackboard):

After login into <http://my.fullerton.edu/> choose the Blackboard tab. Select Math 250B 04. 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 tool):* 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 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 (30%)

Midterm Exams: (20 % each)

Exam I	Exam II
Wednesday Feb. 20	Wednesday April 9

Comprehensive Final (30 %)

Monday May 12, 7:30-9:20 pm

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. In cases where the grade is on the border of two grades, the instructor may raise the grade based on class participation and improvement during the class.

Withdrawal Dates and Holidays

- February 4: Last day to withdraw from course without a “w”.
- February 18: President’s Day Holiday.
- February 29: Math department deadline to withdraw without compelling reason and documentation.
- March 31 – April 4: Spring Break
- April 18: CSUF deadline to withdraw with a truly compelling reason and documentation.

Class Policies

- Late homework will not be accepted after solutions are distributed. Failure to attend class on a day of a quiz will result in a zero grade for that quiz. The lowest two homework or quiz grades will be dropped.
- No make-up exams will be given, unless you have a medical or family emergency. These emergencies require valid documentation. The grade for a missed exam is zero.
- All exams will be closed book, closed notes, and calculators will not be allowed but you will be able to bring one sheet of 8” x 11” paper written on one side.

Suggestions

- The course requires a time commitment of about 8-12 hours outside of class time. The material builds on itself, so it is very important not to fall behind.
- I suggest you work in groups on your homework but hand in individual solutions, not copied from each other. Doing the homework is when most of the learning occurs.
- I encourage you to come to office hours regularly. I will do my best to help you.

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>

Examples of actions that constitute academic dishonesty include, but are not limited to:

- Unacceptable examination behavior – communicating with fellow students, copying material from another student’s exam or allowing another student to copy from an exam, possessing or using unauthorized materials, or any behavior that defeats the intent of an exam.
- Plagiarism – taking the work of another and offering it as one’s own without giving credit to that source, whether that material is paraphrased or copied in verbatim or near-verbatim form.
- Unauthorized collaboration on a project, homework or other assignment where an instructor expressly forbids such collaboration.
- Documentary falsification including forgery, altering of campus documents or records, tampering with grading procedures, fabricating lab assignments, or altering medical excuses.

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 located at the east, west or center of the building.
- Do not use the elevator. They may not be working once the alarm sounds.
- Go to the lawn area towards Nutwood Avenue. This provides a safe distance from falling debris from buildings. Stay with class members.
- Building evacuation maps are located near each elevator.
- Anyone who may have difficulty evacuating the building, please see instructor.

The material in this syllabus may be changed at the instructor’s discretion. Any changes will be communicated to the students.