

Section #002

MWF 10–10:50 AM, ECCR 105

Instructor: Dr. Sujeet Bhat

Office: ECOT 338 MWF 11 a.m – 1 p.m.

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**Course Objective:** The course goals are to understand the basic concepts of linear algebra and to be introduced to some aspects of computational techniques used in matrix methods. To accomplish these goals, we will study systems of linear equations and the LU decomposition, vector spaces and subspaces, linear transformations and the fundamental subspaces of a matrix, and eigenvalues and eigenvectors. Matrix decompositions (e.g. LU, QR, SVD, etc.) will play a fundamental role throughout the course. (Prerequisite: A grade of C- or better in Calculus 3, APPM 2350 or MATH 2400 or equivalent.)

**Text:** Applied Linear Algebra, by Peter J. Olver and Chehrzad Shakiban (1<sup>st</sup> Edition). We will cover most of chapters 1 through 5, 7, and 8. Additional sections will be covered as time permits. Corrections to the first printing can be found at [http://www.math.umn.edu/~olver/book/\\_alacor.pdf](http://www.math.umn.edu/~olver/book/_alacor.pdf)

**Grade Determination:** There are a total of 550 points for the course: homework assignments (100 points), project (100 points), two unit exams (100 points each) and a cumulative final exam (150 points).

**Homework and Quizzes:** To do well in this course you must *come to the lectures, read the textbook, do (and understand) the homework* and *work as many problems as needed for you to understand the concepts.*

**Homework is due in class every Wednesday.** Late homework will be penalized and will not be accepted after the answers have been posted. Selected problems will be graded.

**Project:** There is one project due at the end of the semester. The project has three phases: Project Proposal (10 points), rough draft (30 points) and final draft (60 points). For further details please see [http://amath.colorado.edu/courses/3310/2010Spr/project\\_3310\\_s10.pdf](http://amath.colorado.edu/courses/3310/2010Spr/project_3310_s10.pdf) for more information.

**Exams:** There will be two in-class exams and a cumulative final. The first exam is tentatively scheduled in-class for Wednesday, February 17<sup>th</sup>. The second exam is tentatively scheduled in-class for Friday, April 2<sup>nd</sup>. The final exam is on Saturday, May 1<sup>st</sup>, 1:30 - 4 p.m., location to be announced. There will be no make-up exams or early exams. If you are unable to take an exam due to illness, you must bring a note from your doctor verifying your illness. Your course grade will then be determined by the rest of your course work. Please bring your CU ID to each exam. Electronic devices of any kind (*e.g.* calculators, computers, MP3 players, cell phones, etc.) are **NOT** allowed during the exams. Requests for special accommodations for religious holidays and/or documented special needs should be submitted to your instructor within two weeks of the beginning of the semester.

**Course webpage and email:** <http://amath.colorado.edu/courses/3310/> It is your responsibility to check the web page on a regular basis. Here you will find detailed information such as homework assignments and solutions, past exams, final exam information and office hours. In addition, it contains policies on illness, academic honesty, and special accommodations for religious holidays and documented special needs. Please be sure to check your @colorado.edu email often as updates and information regarding the course will be sent to this address.

**Blue books:** Each student is required to purchase **four** 8.5 × 11 blue books and turn them in by the second week of class (Jan. 22<sup>nd</sup>.) These will be distributed for the exams, so please do not write anything (not even your name) on the front of the blue books.

**Dropping the course:** Advice from the Dean's office and your department advisor is recommended before dropping any course. After February 24<sup>th</sup>, dropping the course is only possible with a petition approved by the Dean's office, see [http://registrar.colorado.edu/calendar/calendar\\_spring10.html](http://registrar.colorado.edu/calendar/calendar_spring10.html).

**Academic Honesty:** Students can work in groups however, **all work turned in must be your own.** Violation of the CU Student Honor Code:

<http://www.colorado.edu/academics/honorcode>

or the College of Engineering's Academic Honesty Advising Guidelines:

[http://www.colorado.edu/engineering/ar\\_ugradadvising.html](http://www.colorado.edu/engineering/ar_ugradadvising.html)

will result in an automatic final grade of F in the course.