

# Math 2130: Linear Algebra Spring 2019

**Section 004:** MWF 10-10:50am, FLMG 104  
**Section 005:** MWF 1-1:50pm, FLMG 102  
**Course Website:** <http://math.colorado.edu/~nita/LinearAlgebraSpring19.html>

**Instructor:** Alex Nita  
**Office:** Math 140  
**Email:** [alexander.nita@colorado.edu](mailto:alexander.nita@colorado.edu)  
**Office Hours:** Mon 11am-12pm, Wed 12-1pm

**Required Text:** *Linear Algebra and its Applications*, 5th Ed., David C. Lay, Steven R. Lay, Judi McDonald.

**Supplementary Texts:** *Linear Algebra*, 4th Ed., Friedberg, Insel and Spense.  
*Mathematics: Form and Function*, 2nd Ed., MacLane.  
*A History of Vector Analysis*, Crowe.

**Course Description:** This course will examine the basic properties of systems of linear equations, vector spaces, linear independence, dimension, linear transformations, matrices, determinants, eigenvalues, and eigenvectors. Time permitting, we will also explore bilinear functions, quadratic forms and symmetric matrices.

## Grading:

Homework	20%
Quizzes	20%
Midterm 1	15%
Midterm 2	15%
Final	30%

**Homework:** There will be *weekly homework assignments*, all posted on the course site and always **due Fridays** at the beginning of class. **The rules are:**

1. **No late assignments will be accepted.** But I will drop your two lowest scores to make up for this. Homework is exercise, building the conceptual muscle needed to swing around the somewhat heavy ideas of this course. Approach it with discipline and it will reward you with insight.
2. You may use outsider sources, such as websites, books and articles, but **you must cite your sources**. These citations should include urls, site names (such as Stack Exchange, Wikipedia, nLab, etc.), and standard book and article references. **Place these citations at the end of each homework assignment.** *There will thus be no cheating in this class*, because outside sources are legal—but *you must be honest and open in your report about these*. If I feel you are over-reliant on outside sources to the point where you can't solve enough problems by yourself, I will say something. *Use outside sources only if you are really stuck and no other option seems available.*
3. Color coding of homework problems: **blue problems** will be graded, **orange problems** and **red problems** will not be graded, but orange problems are considered as important as the blue, and may show up on quizzes and exams. You should thus *know how to do the green and the orange problems*. The red problems are routine, typically numerical in nature, and are meant as a simple check that you *can* do the calculations. You are thus simply *expected to know how to do the red problems*, and these or similar problems will occasionally also make appearances on quizzes and exams.

**Quizzes:** There will *daily quizzes*, at the beginning of class. Some will be individual quizzes, some will be group quizzes, and this is to be announced on the day of the quiz.

**Exam dates:** Mark these dates in your calendar!

**Midterm 1:** Monday, February 18 (in class)

**Midterm 2:** Friday, April 5 (in class)

**Final Exam:** Tuesday, May 7 (4:30-7pm)

**No makeup exams will be given** without official documentation or prior arrangement.

**Accommodations for disabilities:** If you qualify for accommodations because of a disability, please submit a letter to me from Disability Services in a timely manner so that your needs may be addressed. Disability Services determines accommodations based on documented disabilities. Contact: 303-492-8671, Willard 322, or <http://www.colorado.edu/disabilityservices>. Religious observances: If you have any course-related conflicts due to religious obligations, please let me know as soon as possible so that accommodations can be made.

### Miscellaneous University Rules and Regulations:

**Honor Code:** All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this institution. Violations of this policy may include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct shall be reported to the Honor Code Council ([honor@colorado.edu](mailto:honor@colorado.edu); 303-725-2273). Students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member and non-academic sanctions (including but not limited to university probation, suspension, or expulsion). Additional information on the Honor Code can be found at

<http://www.colorado.edu/policies/student-honor-code-policy>

**Classroom behavior policy:** Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender, gender variance, and nationalities. Class rosters are provided to the instructor with the students legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. See policies at

<http://www.colorado.edu/policies/student-classroom-and-course-related-behavior>

**Sexual harassment policy:** The University of Colorado at Boulder policy on Discrimination and Harassment, the University of Colorado policy on Sexual Harassment and the University of Colorado policy on Amorous Relationships apply to all students, staff and faculty. Any student, staff or faculty member who believes s/he has been the subject of discrimination or harassment based upon race, color, national origin, sex, age, disability, religion, sexual orientation, or veteran status should contact the Office of Institutional Equity and Compliance at (303) 492-2127 or [cureport@colorado.edu](mailto:cureport@colorado.edu). Information about the ODH, the above referenced policies and the campus resources available to assist individuals regarding discrimination or harassment can be obtained at

<https://www.cu.edu/ope/efficiency-and-effectiveness/presidents-task-force-efficiency/aps-5014-sexual-harassment-policy>

<http://www.colorado.edu/institutionalequity/>