# MTH 309 — LINEAR ALGEBRA 1

**Instructor:**  Matthew Lorentz   Email: lorentzm@msu.edu
Website:          https://users.math.msu.edu/users/lorentzm/

**Lectures:**        1:50 - 2:40pm Mon, Wed & Fri   Wells Hall A216

**Office Hours:**                                         2:00-3:00 Tue & Thus   C318 Wells Hall
(subject to change)                                  9:00-10:00 Wed          C318 Wells Hall

**Materials:** Linear Algebra with applications, 9th edition
Leon Steven ISBN: 9780321962218

**Course description:** Matrices, systems of linear equations, vector spaces, linear transformations, inner products and orthogonal spaces, eigenvalues and eigenvectors, and applications to geometry. A writing course with emphasis on proofs.

**Prerequisites:** (MTH 133 or MTH 153H or LB 119) and completion of Tier I writing requirement. Not open to students with credit in MTH 317H.

**Attendance:** All students are expected to attend and participate in each class, discussion session, and exam. A student who misses a class meeting is responsible for any assignments and/or announcements made.

**Assessments:** We will have 3 in class exams, a cumulative final exam, in class activities, and daily homework.

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| PARTICIPATION / ACTIVITIES: | 50 points |
| HOMEWORK: | 200 points |
| 3 IN-CLASS EXAMS, 150 POINTS EACH: | 450 points |
| FINAL: | 300 points |

**Homework:** There will be a homework assignment corresponding to each class which may be found on D2L. The homework will consist of exercises from the book and occasionally problems related to class activities.

- The homework will be turned in weekly and is due on Fridays at 11:59pm.
- You will submit your homework on D2L as a *single PDF*.
- Each homework is worth 20 points. I will "randomly" grade two questions in detail worth 5 points each. The remaining 10 points are based on completion.
- Multiple files, or file formats other than PDF will receive little to no credit.
- Late work will not be accepted. Instead your lowest 3 homework grades will be dropped.

**Exams:** The exam dates are as follows

(1) September 23
(2) October 21
(3) November 18

Attendance on these dates is compulsory; otherwise, a grade of zero will be recorded. Any student who has an excused, documented conflict with an exam time must inform their instructor **within the first two weeks of the semester** when possible. Late requests will either be denied or will result in an automatic deduction from the exam score.

**Final:** The Final exam will take place on 12/14/2022 from 5:45pm to 7:45pm. All students must take the final.

**Grades:**

The following table gives a minimum grade for each score. For example, an overall score of 850 is guaranteed to earn at least a 3.5 grade.

| Grade | 4.0 | 3.5 | 3.0 | 2.5 | 2.0 | 1.5 | 1.0 |
|---|---|---|---|---|---|---|---|
| Score (total points) | 900 | 850 | 800 | 750 | 700 | 650 | 600 |

**Sources of help:** All students are encouraged to come to *office hours* to discuss homework questions or material from class. If the advertised times do not suit you, please email me for an appointment.

**Academic integrity:** All students are expected to abide by the university's Conduct Code. Academic sanctions for dishonesty may include receiving an F in the assignment or receiving an F in the class. There may be additional administrative sanctions.
`https://ombud.msu.edu/resources-self-help/academic-integrity`

**Classroom policies:** Please refrain from using electronic items, including calculators, cell phones, music players, tablets, laptops, etc., during class, except for note-taking. Please arrive, be seated and ready to start each class on time. If you have a valid reason to leave early, please sit near the exit to minimize disruption.

**Resource Center for Persons with Disabilities (RCPD):** I am happy to work with you and the RCPD Program, if you need course accommodations due to a disability. RCPD is located in Bessey Hall (`https://www.rcpd.msu.edu/services`). All course modifications must be arranged through RCPD. You are encouraged to start this process as early as possible.