

MTH-309 Section 3 (Fall 2012)

Instructor. Dr. Tianran Chen

Office: C201 Wells Hall

Email: chentia1@msu.edu

Website: www.math.msu.edu/~chentia1/

Office hours. Tuesday, Thursday, Friday 1:30pm–2:30pm and by appointment

Textbook. Robert Messer, *Linear Algebra, Gateway to Mathematics*, Harper Collins, 1994

Course objectives. This is a course on the basic concepts of linear algebra with an emphasis on proofs. This may be the first course in which you encounter rigorous proofs. We will discuss different ways for writing proofs. Upon completion of the course you are expected to present written proofs to relevant theorems and problems. Please keep in mind that understanding mathematical arguments is different from memorizing the correct answer!

The course covers the following topics: linear systems of equations, vector spaces, linear independence and bases, linear transformations, determinants, and eigenvalues and eigenvectors, and if time permits: inner product spaces. Please note that all covered material is relevant for tests and for the final exam.

Homework. Homework problems, which are essential to your understanding of the course material, will be assigned at the beginning of each class. The problems will be collected every Friday at the beginning of the class. Solutions must be written up *neatly* and *logically*, with sufficient explanation in *complete sentences*. Half to one third of the homework problems will be graded. Students may discuss any of the problems with one another. However, you must write the solutions yourself with your own wording.

Recitation. There are 4 recitation sections of 90 minutes each. Every student should sign up for a specific recitation section and can only receive credit in the section he or she signed up for. To receive credit, students must be present during the entire recitation and take a 15 minute quiz at the end of the session.

Exams. There will be 2 in-class exams (dates to be announced in class). A third exam may be offered during the last week of classes to the students who do not participate in the recitation sessions due to their time conflicts. There is a uniform Final Exam scheduled for Monday, December 10, 10:00am -12 noon. (Location to be decided)

Grading. You can earn up to 650 points in this class with the following distribution.

2 exams	Quizzes / 3rd exam	Uniform final	Homework
200	100	200	150

You need at least 50% in each category in order to achieve a passing grade in this course. If you have earned at least 50% in each category, your grade will be determined according to the following scale:

4.0	3.5	3.0	2.5	2.0	1.5	1.0
92% – 100%	85% – 91%	78% – 84%	71% – 77%	64% – 70%	57% – 63%	50% – 56%