Course Information

Instructor: Timothy Blass
tblass@andrew.cmu.edu
Wean Hall 7115 / 268-5608 (office)

Office Hours: Tuesday 4:00pm – 6:00pm, or by appointment, WEH 7115

Schedule of Lectures: MWF 11:30am – 12:20pm, Gates-Hillman Center 4102

Teaching Assistant: Mikhail Lavrov
mlavrov@andrew.cmu.edu
Wean Hall 8213 / 268-8755 (office)

Office Hours: Tuesday and Friday 12:30pm – 1:20pm, Wean Hall 8213

Schedule of Recitations: Tuesday 10:30am – 11:20am, Wean Hall 4709

Course Website: Course materials, assignments, and announcements will be available on the Blackboard website:
http://blackboard.andrew.cmu.edu


Prerequisites: None.

Learning Objectives

Matrix Algebra, also called Linear Algebra, is one of the fundamental blocks of Mathematics. You are likely to use Matrix Algebra in courses on Physics, Statistics, Computer Science, Engineering, and Economics.

In this course, you will learn how to solve systems of linear equations, how to compute the determinant, eigenvalues, and eigenvectors of a matrix, and how to orthogonalize a set of vectors. You will also learn the definition and basic properties of linear spaces (vector spaces), subspaces, and linear transformations. At the end of the course, you will be able to apply Matrix Algebra results to solve many different types problems.

Course Content

During this course, we will aim to cover the following sections/topics from the textbook:

1.1 Systems of Linear Equations
1.2 Row Reduction and Echelon Forms
1.3 Vector Equations
1.4 The Matrix Equation $A\vec{x} = \vec{b}$
1.5 Solution Sets of Linear Systems
Attendance

You are required to attend all the lectures and recitations. You are responsible for all of the announcements made in class. Get to know your classmates so that if you do miss class, you can exchange notes.

Homework

Homework is an integral part of the course. Many problems on the midterms and final exam will come from the homework, so it is important for you to complete all of the homework problems.

Homework will comprise 25% of your total grade. Assignments will be posted on Blackboard each Wednesday, and will be due in lecture the following Wednesday. They must be turned in within the first ten minutes of class. Late homework will not be accepted.

The two lowest homework scores will be dropped. This policy accounts for missed assignments due to unforeseen circumstances.

Study groups are encouraged, but assignments should be completed individually. You may not copy another student’s work. The university’s policy on cheating and plagiarism can be found at http://www.cmu.edu/policies/documents/Cheating.html. Always show your work.

Exams

There will be three non-comprehensive midterm exams and one comprehensive final exam. The midterm exams will be given in class (50 minutes), and each will comprise 15% of your total grade. The final exam will comprise 30% of your total grade.

The tentative dates for the midterms are Wednesday, February 8, Wednesday, March 7, and Wednesday, April 11. The exact date and location for the final exam will not be determined until mid-semester, so do not make plans to leave the university prior to the end of the finals period.

Grading Policy

Final grades are based on homework and exam scores with the following weights:

- Homework: 25%
- 3 Midterms: 45%
- Final Exam: 30%

Your letter grade for the course will be based on the following ranges:

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<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>90–100%</td>
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<tr>
<td>B</td>
<td>80–89%</td>
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<tr>
<td>C</td>
<td>70–79%</td>
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<td>D</td>
<td>60–69%</td>
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<tr>
<td>R</td>
<td>0–59%</td>
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</tbody>
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The cutoffs may be lowered slightly, but will not be increased.
Additional Information

**Academic Integrity:** All CMU academic integrity policies apply to this course. Please take time to review these policies at: [http://www.studentaffairs.cmu.edu/acad_integ/acad_index.htm](http://www.studentaffairs.cmu.edu/acad_integ/acad_index.htm)

**Learning Accommodations:** If you anticipate needing learning accommodations in this course, please let me know at the beginning of the term so that we can work out necessary alternative assessment options. Accommodations will require the appropriate medical documentation. See the CMU Disability Services website [http://www.cmu.edu/hr/eos/disability/index.html](http://www.cmu.edu/hr/eos/disability/index.html).