



Fall 2019 MAS 4105

Section

1071

Time and Location

M T W F Period 5 (11:45 am – 12:35 pm), in **MAT 116**.

Textbook

Linear Algebra, 4th edition, by Briedberg, Insel, and Spence.

Prerequisites

The calculus sequence. It is strongly advised to take sets and logic (MHF 3202) before taking this course.

Brief Description

The purpose of this course is to introduce the student to the theory and application of the field of mathematics called *linear algebra*. This will involve the study of the abstract structures called (real) vector spaces, which occur throughout mathematics and its modern application to the natural sciences. It will also involve the development of the student's ability to recognize these structures in concrete instances. Some important topics of linear algebra we shall cover are solving systems of linear equations in several unknowns, spectral theory and linear transformation theory. We shall see examples of applications of linear algebra to physics, engineering, computer science, economics, biology and animal husbandry.

The course serves both as a transition for mathematics majors from a study of computational techniques into more abstract mathematics (which is the real source of the power and utility of mathematics) and as a coherent foundation in linear algebra for engineering and science majors who wish to have sufficient grasp of the conceptual structure of the material to be able to utilize linear algebra in contexts for which they do not have templates.

The student will be expected to develop the ability to reason through and coherently and correctly write proofs of theorems, as well as to develop relevant computational skills. An emphasis will be placed upon clarity of thought and expression.

We will make an effort to cover Chapters 1-5 of the above-mentioned textbook.

Homework

Homework will be assigned regularly but not collected. However, doing all the homework is essential for success in this class as the exams test your conceptual understanding of the homework assignments. Many homework problems involve doing proofs. Students are encouraged to check their proofs with their instructor.

Grading System

The course grade will be determined by three in-class exams (equally weighted), the first two of which will be announced a week in advance and the third one will be on the last day of classes. **No electronic devices (including calculators) are permitted during the exams.** The resulting score determines the letter grade according to the following table.

Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D
Score	100 – 93	92 – 88	87 – 83	82 – 74	73 – 69	68 – 64	63 – 59	58 – 54	53 – 49	48 – 40

Attendance

Attendance is mandatory. Also, please arrive to class before it starts; it is very disruptive when someone walks in late.

Make-ups

Make-up exams will not be administered unless they are supported by valid documentation.

Student Honor Code

Students are expected to abide by the Honor Code.

Accommodations

Students requesting classroom accommodations must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to their instructor when requesting accommodations.

Disclaimer

I reserve the right to change the above policies if situations warrant.



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