

Syllabus: M524 Graduate Linear Algebra - Spring 2019

Instructor:

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Course Overview

Linear algebra is fundamental to virtually every field of advanced mathematics. This course is designed to build on the standard sophomore level linear algebra course. It will not only provide a rigorous review of the usual undergraduate curriculum, but will also introduce some more advanced topics. These may include dual spaces, quotient spaces, canonical forms, adjoint maps, singular values, and/or quadratic forms.

Not only should this class provide a foundation for your chosen research field, but it will also serve as good preparation for the linear algebra portion of UM's algebra preliminary exam.

Prerequisites

This course is designed to be useful to every graduate student as well as to advanced undergraduates. Students should have experience writing careful mathematical proofs.

Text

Linear Algebra, by Peter Petersen. This text can be downloaded for free through the Mansfield Library.

Homework and expectations

Your grade will be based on a homework score. Assignments will be collected weekly. You are free to work together on your homework and to ask me questions, but your final write ups should be (neatly) written in your own words. Homework will be graded on completeness, correctness, and writing style.

If you have passed your comprehensive examination then you need only complete one problem per week.

You are expected to be an active participant in the course. You should speak up in class and try to answer questions as they come up.

Guidelines and policies

University dates and deadlines

You should be aware of the important dates and deadlines posted by the [Registrar's Office](#).

Academic honesty

I take academic honesty very seriously and I will act on any transgressions that I notice. Misconduct is subject to an academic penalty in this course and/or a disciplinary sanction by the university. We all know that a record of academic misconduct is a very bad thing to have documented in your academic history.

All students should be familiar with the [Student Conduct Code](#).

Disability modifications

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and [Disability Services for Students](#). If you think you may have a disability adversely affecting your academic performance, and you have not already registered with Disability Services, please contact Disability Services in Lommasson Center 154 or call 406.243.2243. I will work with you and Disability Services to provide an appropriate modification.