MATH 460/872 2024-2025
Multilinear Algebra T2

Instructor:

Dr. Curtis Wendlandt
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Course Details

Math 460 CRN 31738
Math 872 CRN 31741

Schedule:

Term 2
M, W, F 3:30 – 4:20 PM

Tentative Topics:

Some of the topics covered will include:

- Jordan normal form,
- diagonalization of commuting operators,
- dual spaces,
- quotient spaces,
- tensor products,
- exterior and symmetric products,
- multilinear functions.

Course Objective:

The goal of this course is to introduce concepts, techniques, and tools from Multilinear Algebra and Advanced Linear Algebra which play a dominant role in many modern areas of Mathematics, including Representation Theory, Lie Theory, Abstract Algebra, Mathematical Physics, Differential Geometry, and beyond. In particular, the course will draw a lot of inspiration from Representation Theory and Lie Theory.

Students Who May Be Interested:

Undergraduate students in Mathematics or Mathematical Physics. There also might be some interest among students in Computer Science.

Graduate students in various branches of Pure and Applied Mathematics who wish to build a stronger foundation in advanced (multi)Linear Algebra

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Other Information:

Though the standing requirements for Math 460 are Math 361 and Math 362, students *do not* need both Math 361 and Math 362 to take this course. In fact, Math 266 (Linear Algebra II) and an interest in Algebra should be sufficient. Students interested in learning more about the course are encouraged to contact the instructor.
