Analysis III: Integration Theory and Hilbert Spaces

2024-2025 Spring

MAT 425

DISTRIBUTION AREA:
QCR

GRADING BASIS:
Graded A-F, P/D/F, Audit

INSTRUCTORS:
- Jacob Shapiro MATH ⧉

LINKS:
- Books
- Evaluations ⧉

Description:

The theory of Lebesgue integration in n-dimensional space. Differentiation theory. Hilbert space theory and applications to Fourier Transforms, and partial differential equations. Introduction to fractals. This course is the third semester of a four-semester sequence, but may be taken independently of the other semesters.

Sample Reading List:

- Stein & Shakarchi, *Real Analysis*

Reading/Writing Assignments:

Bi-weekly problem sets. Regular office hours will provide opportunity to discuss lecture material.

Requirements/Grading:

Term Assessments:

- Exam(s) given during term - 50%
- Presentation or performance - 45%

Final Assessments:

- Final paper, problem set, or project - 5%

Other Requirements:

- Not Open to First Year Undergraduates.

Prerequisites and Restrictions:

MAT 215, 218 or equivalent.

Other Information:

The final assessment scheduled exam will be an oral exam, given during the reading period.

Schedule/Classroom Assignment:

CLASS NUMBER	SECTION	MEETINGS	SEATS OPEN	SEATS ENROLLED	STATUS
41688	C01	T Th, 1:30 pm – 2:50 pm, View Room	11	24	Books ⧉