

Math 505A—Modern Algebra

Winter 2025

MWF 10:30, PDL C-38

Instructor: Monty (or William) McGovern, PDL C-450, mcgovern@math.washington.edu

Office Hours: Th 9:30 and by appointment.

Text: *Abstract Algebra*, by Dummit and Foote (3d ed., Wiley, 2004) (recommended). I will also use a pdf that I will send to you later.

Prerequisite: Math 504, the equivalent, or instructor permission.

What to Expect: This is the second quarter of the first-year graduate algebra sequence. I will be covering the theory of field extensions and Galois theory, followed by the cohomology of finite groups (as an application of the homological algebra covered last time), Dedekind domains and modules over them, and Artinian rings. Homework will be due every Friday and submitted on Gradescope. The course grade will be based 50% on homework and 50% on a final exam. I will post notes for all lectures on Canvas.