

Math 417, Section E13

Introduction to Abstract Algebra

BASIC INFORMATION

- **Section:** E13 **CRN:** 72897
- **Time and Place:** MWF at 1:00pm in 307 David Kinley Hall.
- **Instructor:** Jacob Rasmussen
 - **E-mail:** rasmusj@illinois.edu
 - **Office:** 374 Altgeld Hall
 - **Office Hours:** 2-3pm Wednesdays and 4-5pm Thursdays; other times are possible by appointment.

COURSE DESCRIPTION

This is a first course in abstract algebra. Despite the name, many of the things we will study are concrete and well-known to you: integers, polynomials, and matrices. We will look at these objects with fresh eyes and see how the familiar rules that the algebraic operations on them satisfy govern their behavior and that of other, similar objects. More formally, we will study groups, which have one operation similar to matrix multiplication; rings, which have operations of addition and multiplication; and fields, where we can also divide.

Prerequisites: Math 416; or one of ASRM 406, Math 415 together with one of Math 347, Math 348, or CS 374.

Textbook: Frederick M. Goodman, *Algebra: Abstract and Concrete* version 2.6. This e-book is available from the author's website.

COURSE POLICIES

Grading: Your course grade will be based on homework (20%), three in-class midterm exams (16% each), and a comprehensive final exam (32%). You can view your grades in Canvas.

Homework: Homework assignments are typically due on Fridays. They should be submitted via Canvas. Late homework will not be accepted, but your two lowest homework grades will be dropped. Collaboration on solving the homework problems is encouraged, but you must write up your solutions individually and *understand them completely*.

In-class midterms: These three 50 minute exams will be held in our usual classroom on the following Wednesdays: September 20, October 18, and November 15.

Final exam: The final exam is tentatively scheduled for Wednesday, December 13, from 7-10pm in our usual classroom, 307 Donald Kindley Hall.

Missed exams: There will typically be no make-up exams. Rather, in the event of a valid illness, accident, or family crisis, you can be excused from an exam so that it does not count toward your overall average. I reserve final judgment as to whether an exam will be excused. All such requests should be made in advance if possible, but in any event no more than one week after the exam date.

Cheating: Cheating is taken very seriously as it takes unfair advantage of the other students in the class. Penalties for cheating on exams, in particular, are very high, typically resulting in a 0 on the exam or an F in the class.

Disabilities: Students with disabilities who require reasonable accommodations should see me as soon as possible. Any accommodation on exams must be requested at least a week in advance and will require a letter from DRES.