

## Algebra

### Fall 2024 tentative schedule

The following (preliminary) schedule serves as a guideline for the sections covered in the lecture.

Math UA 343 Section 005 Schedule		
Week	Date	Topic
1	Tue, Sep 3rd Thu, Sep 5th	Sets and functions Sets and functions
2	Tue, Sep 10th Thu, Sep 12th	Introduction to groups: symmetries of a square, dihedral groups What is a group?
3	Tue, Sep 17th Thu, Sep 19th	Subgroups and cyclic groups Subgroups and cyclic groups
4	Tue, Sep 24th Thu, Sep 26th	Permutations and symmetries Permutations and symmetries
5	Tue, Oct 1st Thu, Oct 3rd	Odd and even permutations, the alternating group Odd and even permutations, the alternating group
6	Tue, Oct 8th Thu, Oct 10th	Cosets Cosets
7	Tue, Oct 15th Thu, Oct 17th	— <i>Monday schedule (no class)</i> — Cayley's theorem, products, homomorphisms
8	Tue, Oct 22nd Thu, Oct 24th	Cayley's theorem, products, homomorphisms <b>Midterm exam</b>
9	Tue, Oct 29th Thu, Oct 31st	Kernels and images, factor groups Kernels and images, factor groups
10	Tue, Nov 5th Thu, Nov 7th	Isomorphism theorems, finite abelian groups Isomorphism theorems, finite abelian groups
11	Tue, Nov 12th Thu, Nov 14th	Rings Rings
12	Tue, Nov 19th Thu, Nov 21st	Polynomials and polynomial rings Polynomials and polynomial rings
13	Tue, Nov 26th Thu, Nov 28th	Factorization — <i>Thanksgiving (no class)</i> —
14	Tue, Dec 3rd Thu, Dec 5th	Factorization Vector spaces and fields
15	Tue, Dec 10th Thu, Dec 12th	Vector spaces and fields Review