

Math 114: Topics in Algebra

T Th 8:00-9:30 a.m. in 3 Evans

Instructor: Atoshi Chowdhury

Email: atoshi@berkeley.edu

Office: 1067 Evans

Office hours: Mondays 11:00-12:30, Tuesdays 10:00-11:30, and by appointment

Textbook

The main textbook will be Dummit and Foote, *Abstract Algebra*, 3rd ed. Chapters 13 and 14 of Dummit and Foote cover our first topic, field extensions and Galois theory, which will occupy the first half (or more) of the semester. Topics to be covered after that will be chosen mid-semester (based on class interest), and I'll provide any necessary reference materials.

Webpage

The course webpage can be found at <https://bcourses.berkeley.edu>. All emails to the class will be sent through bCourses (and posted as Announcements), all homework and other materials will be posted under Files, and all homework and exam scores will be recorded under Grades. If you don't have access to the bCourses page for this course (e.g. if you are auditing), send me an email and I'll add you.

Grade breakdown

- Homework: 40%
- Midterm 1: 15%
- Midterm 2: 15%
- Final: 30%

Course grades will be computed based on a curve. Note that although a large fraction of your grade is based on homework, most students tend to score high on homework; therefore high homework scores alone, while they will prevent you from failing the course, will not guarantee you an A.

Exams

- Midterm 1: Thursday, February 12th, in class (drop deadline is Friday, February 20th)
- Midterm 2: Thursday, March 19th, in class
- Final: Thursday, May 14th, 7-10 p.m.

Do not register for this course if you cannot make it to the final exam! I will not be able to reschedule the final or make alternative arrangements if you have a schedule conflict.

Special accommodations

If you have a documented disability and require special accommodations of any kind, please email me by Friday, January 30th, so that I can make arrangements for you.

Homework

There will be weekly homework assignments, due Thursdays. (The first assignment will be posted January 22nd and due January 29th.) You may turn in your homework by either

- handing it to me in class by 8:15 a.m. on the due date,
- sliding it under my office door by 7:55 a.m. on the due date,
- or emailing it to me by 7:55 a.m. on the due date.

The deadlines above are strict. This is so that you will not be tempted to skip class to finish your homework. Late homework will not be accepted under any circumstances, **including illness or other emergencies**. Instead, your lowest two homework grades will not be counted towards your course grade.

If you email me your homework, it must be **typed** (preferably using LaTeX) and in a single PDF file. **Scans or photographs of handwritten work will not be accepted**, because they are a pain to for me to print out. The only exceptions:

- If you will miss class on the due date, you may email me at least 48 hours in advance to request permission to submit a scan or photo of your handwritten homework by email. (I won't grant this permission on a regular basis!)
- If you have an unexpected emergency (e.g. you break your leg on the due date), you may submit a scan or photo of your handwritten homework by email. (Again, this is not acceptable on a regular basis.)
- If you know or fear you'll be late to class on the due date, you may email me a scan or photo of your handwritten homework by 7:55 a.m. as proof that you completed it on time, and submit a hard copy to me by the end of class (9:32 a.m.). In this case the subject line of your email should contain the word 'LATE'. If you don't bring in a hard copy, your homework will not be graded.

You may work in groups to solve homework problems, but you must write up solutions on your own, in your own words. All solutions should be clearly written in complete sentences.

In general **I will not post solutions** to the homework problems. This is because it is of very little benefit to a student to read a solution written by someone else. If you get stuck on a problem, or you get it wrong, or you don't know whether you did it right, it's much better to ask me about it in office hours and/or discuss it with your classmates until you've figured it out. (I'm happy to discuss your homework solutions with you in office hours before you turn them in!) If, after you have tried these avenues, you still want to see a formally written solution for a particular problem, you may email me and request one, and I'll write it up for you if time permits.

Study groups

During the first week of class, I'll send out a link to a poll where those of you who are interested (including auditing students) can sign up to be put into study groups of 6-10 students each. This is entirely optional and will not affect your grade, but I do recommend that you sign up so you can get to know some of your classmates. It can be very helpful to discuss the course material and work on homework with other people!

Office hours

I encourage you to come to office hours! This goes double if you feel you've fallen behind in the class. Also, if you think you'll want a letter of recommendation from me in the future, be sure to come to office hours a few times so I can get to know you.