

MATH 113 SYLLABUS - SECTION 1, SUMMER 2009

Instructor: Charley Crissman

Website: <http://math.berkeley.edu/~charleyc/113summer09/>

Office: 739 Evans

Email: charleyc@math.berkeley.edu

Office Hours: Wednesday 2-3:30, Thursday 9:30-11

Lectures: MTWTh 12-2 in 110 Barker

Textbook: *Abstract Algebra: Theory and Applications* by Tom Judson, available free at:
<http://abstract.ups.edu>

Description: We will cover the basic theory of groups, group actions, rings, and fields, with heavy emphasis on examples. Tentatively we will cover chapters 0-5, 8, 9, 12, 14, 15, 19, and 20 of Judson. If time permits, we will continue to chapter 21 and then to special topics as desired by the class. Each student will also be expected to independently learn and report on material approximately equivalent to one chapter of Judson (see **Project**).

Homework: Homework is due at the beginning of class each Monday. No late homework will be accepted for any reason whatsoever. By necessity of the Summer session schedule, we will be moving at an extremely rapid pace; if you get behind, there is no hope to catch up, so don't get behind.

Acceptable formats for homework are: (1) Handwritten, or (2) Typeset using \LaTeX ; *NO* equation editor, please! The homework is by far the most important part of this class. You cannot succeed in this class if you do not seriously attempt every homework assignment. Expect to set aside at least twelve hours per week for homework. You are both welcome and encouraged to collaborate with your peers on the homework, provided that: (1) You write up your own solutions; you should do this without looking at your notes; (2) You attempt each problem on your own first.

Reading: There will be periodic reading assignments, as well as suggested reading. I urge you to actually do the reading assignments; not only will you find it very helpful to see material before it is presented in class, but you will also improve your ability at reading

mathematics.

Reading mathematics is not like reading a novel; the techniques you need to develop are very different and take time to learn. I recommend actively participating in your reading; work out your own examples, try to find alternate proofs, and generally have fun with it.

Midterm: There will be one in-class midterm on Thursday, July 16th. The midterm will take the full two-hour class period. **No** make-up exams will be given for any reason.

Final: The final exam will be cumulative, and will be given in class on Thursday, August 13th. The final will take the full two-hour class period. **No** make-up exams will be given for any reason.

Project: There will be a project for this class, in the form of a short paper on a topic of your choosing. Details will be discussed in class.

Grading: 40% Homework, 10% Project, 20% Midterm, 30% Final. Grades will be curved using a complex system of weights, pulleys, and balsa wood.