

Math 120: Groups and Rings (Fall 2015)

Lecture: MWF 9:30am–10:20am, in **380-W**

Course website: <http://math.stanford.edu/~church/teaching/120-F15/>

	Professor: Thomas Church	Teaching assistant: Niccolò Ronchetti
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Office:	383-Y	381-M
Office hours:	Monday 4–5:30pm Thursday 4–5pm	Tuesday 6–7:30pm Friday 6–7:30pm

Course: Math 120 is a fast-moving, high-workload class in abstract algebra (groups, rings, fields). Most students interested in this material will find Math 109 (offered in winter quarter) more appropriate. Math 120 is also a Writing in the Major (WIM) class.

Textbooks: The required textbook for the course is *Abstract Algebra* (3rd ed.) by Dummit and Foote, available at the campus bookstore.

Homework: Essentially all homework problems will consist of proofs. Even if the problem doesn't start with "Prove that...", you are expected to prove that your answer is correct. The only exception are some computations, which will be marked explicitly as "answers only". Make sure you write complete sentences (not just a string of formulas), and emphasize which axioms, propositions, lemmas and theorems you use in your argument.

It is very important that you do all the homework. You are strongly encouraged discuss the problems with each other, but you must work on your own when you write them down. If you can see someone else's paper when you are writing your solutions, **you are not working on your own**. In particular, you should understand your answers well enough to reproduce them yourself, especially since similar problems and ideas are likely to appear in the exams.

We will also have extremely-short weekly homework assignments due Sunday, on the reading for the following week. These are designed to give the course staff information on how the reading is going, and let us know if certain concepts give you more trouble than we expect, not to test your performance.

Homework Policy: Weekly assignments will be posted on the course website due the following Wednesday in class. If you will not be in class, you must either arrange for another student to turn in your homework, or contact me about turning it in early. Homework is due at the beginning of class (before 9:35am); homework handed in at the end of class (anywhere between 9:35am–10:20pm) will result in a deduction of -10% . *Late homework **will not** be accepted* under any circumstances. To accomodate exceptional situations such as a serious illness, your lowest homework grade will be dropped.

Students are expected to take care in writing their assignments. For instance, assignments should be written neatly and contain clear, complete solutions; solutions sets which contain multiple pages should be stapled; and never forget to put your name on the top of your work.

You are not required to use LaTeX to write your solutions, but it can make your life a lot easier, and it is an important skill for any student continuing in math. You will need to use LaTeX or another comparable system to write your WIM paper.

Final grades: The grade for the course will be calculated as follows:

Homework:	25%
Short online assignments:	5%
Midterm — Tuesday, November 10, 7:00–9:00pm (time + room to be confirmed):	20%
Final exam (Take-home) — return by 11:30am on Tuesday, December 8:	35%
WIM paper:	15%

Friday, October 30: deadline for early feedback on first drafts
Friday, November 6 at noon: first drafts due
Wednesday, November 11: first drafts returned with feedback
Friday, November 20: final WIM papers due

Resources:

- Office hours are the best way to get individualized explanations of anything you are having trouble with. Students who attend office hours do better in Math 120. You are encouraged to attend any of the professor or TA's office hours for Math 120; no appointment is necessary.

Stanford Honor Code:

- a. The Honor Code is an undertaking of the students, individually and collectively:
 1. that they will not give or receive aid in examinations; that they will not give or receive unpermitted aid in class work, in the preparation of reports, or in any other work that is to be used by the instructor as the basis of grading;
 2. that they will do their share and take an active part in seeing to it that others as well as themselves uphold the spirit and letter of the Honor Code.
- b. The faculty on its part manifests its confidence in the honor of its students by refraining from proctoring examinations and from taking unusual and unreasonable precautions to prevent the forms of dishonesty mentioned above. The faculty will also avoid, as far as practicable, academic procedures that create temptations to violate the Honor Code.
- c. While the faculty alone has the right and obligation to set academic requirements, the students and faculty will work together to establish optimal conditions for honorable academic work.

Students with Documented Disabilities: Students who may need an academic accommodation based on the impact of a disability must initiate the request with the Office of Accessible Education (OAE). Professional staff will evaluate the request with required documentation, recommend reasonable accommodations, and prepare an Accommodation Letter for faculty dated in the current quarter in which the request is made. Students should contact the OAE as soon as possible since timely notice is needed to coordinate accommodations. The OAE is located at 563 Salvatierra Walk (phone: 650-723-1066, studentaffairs.stanford.edu/oae).