

Math 322: Algebra I

Spring 2010

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Office Hours: Monday, 1:30–2:30 PM; Wednesday, 7:00–8:00 PM; Friday 12:00–1:00 PM

Course Web Page: <http://www.smcm.edu/users/sgoldstine/Math322s10.html>

Text: John B. Fraleigh, *A First Course in Abstract Algebra, Seventh Edition*

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Course Material

The focus of this course is ring and field theory, and we will cover much of Parts 4–6 of the text. The pace will be very roughly one section per week.

Course Goals

Together with Math 321:

- To give you a thorough grounding in the basic results and techniques of abstract algebra.
- To develop the skills required to study higher mathematics.

You have reached a point in your studies in which you should endeavor to grasp as much of the big picture as possible, both mathematically and educationally. On the mathematical side, work on understanding as thoroughly as possible the connections between different mathematical concepts and the motivation for each object or technique we discuss. In your study, work on getting as much as you can out of texts, out of exercises, out of fellow scholars; try to develop skills such as generating your own examples and counterexamples for new definitions and propositions; and practice communicating algebraic theorems and ideas formally and informally to others.

Homework

Homework will be assigned weekly and due in the box by my office on Fridays at 5:00.

Homework deadlines can be hard to meet, but it is vital that you keep up with the coursework. Therefore, late homeworks will be accepted up to a certain point without prejudice, but I will deduct 20% of the grade if the set is one class meeting late, 40% if it is two class meetings late, and will not accept any homework over a week past the deadline.

Exams

There will be two midterms. The first will have two parts: an in-class written portion and an oral follow-up. After the written section is graded and returned, I will arrange brief individual oral exams with each of you. The second midterm will be an open-book take-home exam.

There will also, naturally, be a final exam, which will have both in-class and take-home sections.

Grading

Homework	20%
Midterm I	25%
Midterm II	25%
Final	30%