

## Math 342: Abstract Algebra

*Instructor:* Joan E. Hart  
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*Office Hours:* MW 10:20 - 11:20 am  
Tues. 9:10 - 10:10 am  
You are also welcome to make appointments for other times.

*Course:* This is a survey course in modern algebra. Topics covered include properties of the integers, and properties, examples, and applications of groups, rings, and fields. Prerequisite: Mathematics 222 with a grade of C or better. Credit: 3 sem. hrs.

*Text:* *Abstract Algebra* by I. N. Herstein, 3rd Edition (1999), John Wiley & Sons.

*Goals:*

- Pursue a rigorous study of the fundamental concepts of abstract algebra.
- Continue to acquire mathematical sophistication.
- Develop the ability to deal successfully with complex, abstract material.
- Lay a foundation for other courses (e.g. linear algebra, number theory).

*Course Structure:*

Daily homework  
5 collected problem sets  
1 quiz  
2 midterm exams, each 60 minutes long  
1 final exam, 60 minutes long

*Grading:* Your work will be distributed as follows:

	<u>portion of grade</u>
2 midterm exams	$\frac{1}{3}$
Cumulative final exam	$\frac{1}{4}$
1 quiz = $\frac{1}{2}$ of a midterm exam	$\frac{1}{12}$
4 problem sets (The one due when you feel the worst is dropped.)	$\frac{1}{3}$
A = 90-100% of the total points, B = 80-89%, C = 70-79%, D = 60-69%	

*Make-Ups:* **NO** make-ups for exams or the quiz will be given unless I have agreed to give you one **before** the scheduled exam or quiz time.

*Problem sets:* **NO** late problem sets will be accepted.

*Homework:* It is very important to do the daily homework exercises. We will go over questions from these exercises in class, and you will profit from working on the problems before we give away their punchlines in class.

*Attendance:* A passing grade normally requires attendance at no fewer than 80% of the classes held.

**Important Dates:**

*Note: all except Exam #2 are on Fridays.*

<i>Exams:</i>	Exam 1	March 3
	Exam 2	April 19 (Wednesday)
	Final Exam	May 12
<i>Quiz:</i>		March 31
<i>Problem set due dates:</i>	February 10,24; March 24; April 7; May 5	

“Do not be discouraged if the initial exposure leaves you in a bit of a fog. Stick with it, try to understand what a given concept says, and most importantly, look at particular, concrete examples of the concept under discussion.”

– Herstein

“... we wish all ... a happy voyage on the mathematical journey they are about to undertake into this delightful and beautiful realm of abstract algebra.”

– Herstein