

Math 301 Introduction to Abstract Algebra Spring 2002

Time: MWF 12
Classroom: Carver 002
Instructor: Dr. Alexander Burstein
Office: Carver 456
Office Hours: MWF 1:00–2:00 (subject to change), or by appointment
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Textbook: *Abstract Algebra*, 3rd edition, by I.N. Herstein

Grading

- Homework – 30%
- Lab Performance and Participation – 10%
- Two Midterm Exams – 15% each
- Final Exam – 30%

Midterm **exams** will be announced 1-2 weeks in advance. All exams will be cumulative, but with emphasis on new material.

The **homework** is the heart of this course. Every other week I will hand out an assignment due 2 weeks from that date – solutions being presented when it is due. The homework will usually consist of two parts: easier “A” problems, designed to test your understanding of the material being covered; and much harder “B” problems, designed to test your talent, your stamina, your courage, your fortitude. Even a good student should understand that *a substantial portion of each “B” problem will be undoable in the time you have*. This is the common lot of creative and original work in all areas – we always attempt things that are too hard for us. I understand this and allowance will be made at grading time. So forget grades; throw yourselves at these problems; surprise yourselves at how much you can accomplish.

The classes when assignments are due will be “the Lab,” where you will present your homework solutions to me and the rest of the class. *Only “B” problems will be presented during the Lab.*

I ask that you work together in small **groups** of your own choosing to solve these problems. There are two reasons:

1. The problems are simply too hard to do alone. You must learn to cooperate – not compete – with one another. A piece of an idea may germinate in one head, the rest of the solution in another – this is normal, it is the way the world works.
2. It is essential to develop critical faculties and to be able to explain things to each other – *clearly*. It is all too easy to think you have settled something only to find you have been deluding yourself. Here is where you can help one another to think more clearly.

If you work in a group (as I strongly urge), please hand in but *one* paper for the entire group. Everyone in the group will receive the same grade for that assignment. That brings us to the *two fundamental rules which experience shows govern groups*:

1. The best size for a group is four or five.
2. You are in the “correct” group if you are neither always giving nor always taking. Change groups if you are in the wrong one. Remember: *Give-and-take is what you want*.

One more remark on HW: No one will be able to do the problems if he or she begins on them 24 or 48 hours before they are due. You will need the entire two weeks to think about them. Within a day of receiving them, absorb them and let them cook in your head for the entire two weeks. **NO LATE HOMEWORK CAN BE ACCEPTED.**