

Syllabus

Abstract Algebra II
Math 4120/8126, Spring 2009

MW 4:00–5:15pm, DSC 109

Dr. Griff Elder 554-2842 (office)
DSC 230 *elder@unomaha.edu*

Important! Stop by during office hours of the first week of class for a chat

Office Hours:

MW 5:15–6:15pm or *by appointment*

Materials:

Contemporary Abstract Algebra 6th Ed. – Gallian

Requirements:

3 Exams (incl. Final): 50 points each	=	150
Proof Sets: 6 problems, each 4 pts. Average out of 100	=	$\frac{+100}{250}$

Grading Scale: 97 – 100% A+, 93 – 96.9% A, 90 – 92.9% A-, etc.

Purpose of Course:

The topics usually covered by a course in Algebra are: *Groups*, *Rings* and *Fields*. In Algebra I we studied *Group Theory*. In Abstract Algebra II will cover *Rings* and *Fields*.

Description of Work

We will cover approximately one chapter each week. You are expected prepare by reading each chapter over the weekend. I will generally spend one day clarifying certain topics/issues. We will spend the other day in a *problem session*.

Important: This class requires your **active** participation. You **must** read the material beforehand. You must work out problems in preparation for the *problem sessions*.

Proof Sets:

The language of mathematics is proof, a highly efficient method of communication. It does not require repetition, nor does it leave room for debate. Naturally there is a cost for such efficiency. A proof is often difficult to discover and then articulate.

Each week you will turn in six proofs (Graduate Students – seven proofs). You are welcome to discuss these with each other and with me. However you *must* turn in your own work. During the first 1/3 of the semester, after I receive your proof set I will assign a grade (3 pts) to each correct problem and return the assignment to you – giving you another chance to rework any problems that were incorrect or incomplete. The second time I grade an assignment I will assign a grade out of a max 2 pts. Late assignments will be treated as though I am seeing them for the second time. This policy will change for the last 2/3 of the semester.

Problem Sessions:

Our text contains a number of wonderful problems. So, in addition to the *Proof Sets*, we will spend one day each week discussing other problems. We will begin each *problem session* by creating a list of problems from your suggestions. I will function as your “session leader”, and either wipe the board in preparation for one of you to present your solution or facilitate the classroom discussion.

Exams:

Exams are a necessary *evil*. Each exam will have an in-class and a take-home part. (Graduate Students will take a different exam.)

Important: **You may discuss exam problems with no-one, but me.**

Finally:

- (1) If you have a question, ask immediately.
- (2) I will *not* accept late work, unless prior arrangements have been made. In an emergency, you should phone my office and leave a message.
- (3) You are expected to attend regularly. If you miss class, it is your responsibility to be fully aware of everything discussed in class and to turn all work in when due.
- (4) **Academic Honesty is expected. Any student caught cheating will receive an F for the course.**
- (5) It is my intention to create an exciting and enjoyable class. I hope that you have fun and enroll for Abstract Algebra II.

Reasonable accommodations are provided for students who are registered with Disability Services and make their requests sufficiently in advance. For more information, contact Disability Services (EAB 117, Phone: 554-2872, TTY: 554-3799) or go to the website: www.unomaha.edu/disability

Schedule
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	Monday	Wednesday
Week 1 12-Jan	Chapter 12	Chapter 13
Week 2 19-Jan	Holiday	Problem Session
Week 3 26-Jan	Chapter 14	Problem Session
Week 4 2-Feb	Chapter 15 & 16	Problem Session
Week 5 9-Feb	Chapter 17	Problem Session
Week 6 16-Feb	Chapter 18	Exam #1
Week 7 23-Feb	Unique Factorization	Problem Session
Week 8 2-Mar	Chapter 19	Problem Session
Week 9 9-Mar	Chapter 20	Problem Session
Week 10 16-Mar	Holiday	Holiday
Week 11 23-Mar	Chapter 21	Problem Session
Week 12 30-Mar	Chapter 22	Exam #2
Week 13 6-Apr	Chapter 32	Problem Session
Week 14 13-Apr	Problem Session	Problem Session
Week 15 20-Apr	Chapter 23	Problem Session
Week 16 27-Apr	Chapter 33	Problem Session
FINALS 4-May		Final Exam 4:00-6:00