

# Math 4377, Section 01: Algebraic Structures

## Spring 2012 Syllabus

### 1 Course Information

- Location and Time: TuTh 2:00–3:20pm, 215 Lee Drain Building
- Professor: Dr. Martin Malandro
- Department: Mathematics and Statistics
- Office: 409 Lee Drain Building
- E-mail (preferred method of contact): malandro@shsu.edu
- Phone number: (936) 294–1580
- Office Hours: TuTh noon–1:30pm, and by appointment
- Required Materials:
  - Textbook: Modern Algebra, An Introduction, 6th edition, by John R. Durbin.

**Catalog Course Description:** Topics include groups, rings, fields, finite groups and Abelian groups. Writing Enhanced. Prerequisite: C or better in MATH 3300. Credit 3.

**Course Objectives/Learning Outcomes:** A successful student will be able to write clear and correct mathematical proofs (including direct, contrapositive, contradiction, induction, and case-by-case proofs) and will gain an understanding of groups, rings, and fields, and their role in higher mathematics.

### 2 Grading Policy

Your grade in the course will be calculated using the following weights.

Reading assignments	15%
Written homework	50%
Midterm Exam	15%
Final Exam	20%

Grading Scale:

A	90% or better final average
B	80–89% final average
C	70–79% final average
D	60–69% final average
F	59% or lower final average

**Academic Honesty Policy:** The *only* sources you may consult in this course are me, other students currently enrolled in the course, and your textbook. That's it. Consulting any other source, including other professors, the Internet, or anyone who has already completed the course, is considered cheating.

You may work with other students in the class to find solutions to homework problems. However, when it comes time to write up your work to be turned in, *you must write it alone, in your own words*. Doing otherwise is considered cheating. Here is a good guideline for avoiding cheating when working with others: Anything you write down together should be erased or thrown away before you go off on your own to write up the work you'll turn in for credit.

Exams are individual endeavors, where no help is to be given or received. Cheating on an exam includes, but is not limited to, sharing answers or using any form of cheat sheet.

Cheating is punishable with an F in the course and a referral to the Dean of Students on academic dishonesty charges.

**Reading assignments:** Your textbook is pretty good, and I expect you to read it! I will assign reading on a near-daily basis. You must read with an aim for understanding. Class time will not be spent rehashing the reading. Rather, we will spend our class time discussing the reading and extensions of the reading. You must do the reading to be prepared for class. I will give you an assignment with each reading, to be turned in the following class period. These assignments are meant to guide your reading and to get you started thinking about the aspects that we will discuss in class.

*You must write up your answers to each reading assignment alone, in your own words.*

I'll drop your (1) lowest reading assignment score over the course of the semester.

**Written homework:** I will assign written homework on a regular basis. Homework is the most important part of this course, and the grading scale reflects that. Your learning should be steady over the course of the semester. Note that you'll need to do the reading to be able to do the homework. Here are some guidelines for writing up your homework.

- Write legibly! If I can't read it, I can't grade it. If you want to impress me,  $\text{\LaTeX}$  your work.
- Write on only one side of the paper.
- State all claims you intend to prove. This includes writing each problem statement. You may (and should!) state problems in your own words.
- Don't use paper with ragged edges (like paper torn from a spiral). It just aggravates me. Use high quality paper instead, like printer paper.
- Staple your papers together in the correct order.
- Most importantly, you must write up your work *\*by yourself, in your own words.\**

It's ok if you work together in coming up with solutions to problems. However, I recommend you work alone on the problems for the most part, only consulting your friends or me when you're stuck. When you work in a group it's easy to miss important details, whereas working alone forces you to master the material. You may even find you work and learn faster on your own.

Regardless of how you work on the problems, *you must write up your solutions alone. The work you turn in must be your own, in your own words.*

Each homework problem will be graded out of 3 points. Roughly speaking, here are the guidelines I will follow in assigning grades.

- 3 = This is clearly written and correct mathematics!
- 2.5 = This is good but there is some gap, either in the mathematics or in the exposition.
- 2 = There is good intuition here, but there is at least one major flaw.
- 1 = I don't understand this, but I can see you've worked on it. Please come see me!
- 0 = I don't think you've worked on this problem enough.

I'll drop your (1) lowest written problem set over the course of the semester.

**Exams:** Many exam problems will be similar to homework problems or examples worked in class. The final exam will be cumulative. Exams should be relatively routine and straightforward, provided you've been keeping up on your homework.

If you arrive late to an exam, you may still take the exam in the remaining time as long as nobody has finished the exam yet.

**Make-up policy:** No make-ups for missed homework assignments or reading assignments will be available.

If you miss an exam, you will be expected to show appropriate cause in writing. If you must miss an exam, I expect you to contact me beforehand. If that is impossible, then you must contact me no later than 24 hours after the exam. If you miss an exam and have not contacted me by this time, you forfeit your right to a make-up.

**Grade Dispute Policy:** All grade issues need to be brought to my attention within one week of having your grade returned/posted.

**Final Exam Schedule:** Thurs May 10, 2pm–4pm

### 3 Classroom Policies

**Attendance Policy:** I expect you to attend every class. If you miss a class, then I expect you to get notes from a classmate. I expect you to arrive to class on time.

**Classroom Rules of Conduct:** Students must refrain from behavior in class that disrupts the learning process. Students are prohibited from using tobacco products in class, making offensive remarks, reading newspapers, sleeping, talking at inappropriate times or about inappropriate things, wearing inappropriate clothing, using cellphones, or engaging in any other form of distraction. Inappropriate behavior in the classroom shall result in a directive to leave class. Students who are especially disruptive also may be reported to the Dean of Students for disciplinary action in accordance with university policy.

Math-related questions and math-related discussion in the classroom are encouraged. However, chatter is disruptive to the learning process and will not be tolerated under any circumstances. Furthermore, any variation of the question “do we need to know this for the test?” is banned.

**Use of Telephones and Text Messengers in Class:** Generally speaking, you may not use cell phones, computers, or other devices capable of communication in class. The one exception is that during lecture periods, you may keep your cell phone on vibrate so that you can receive text messages in case of an emergency. You may not, however, be distracted or distracting to others in checking your text messages in class, and you may not send text messages in class. All messengers must be put away for exams. SHSU Academic Policy Statement 100728 states that *even the visible presence of such a device during the test period will result in a zero for that test. Use of these devices during a test is considered de facto evidence of cheating and could result in a charge of academic dishonesty.* I have no choice in this matter, so if your phone goes off during a test, please don’t answer it or even pull it out to look at it.

### 4 Tentative Schedule

Groups	Jan 18–Mar 7
Midterm Exam	Mar 8 (The Thursday right before spring break)
Rings and Fields	Mar 19–May 3
Final Exam	Thurs May 10, 2pm–4pm

The date/time of the final exam is set by official SHSU policy. All other dates in this list are tentative and subject to change.

### 5 Additional Information

All information on this syllabus is subject to change. All changes will be announced in class. Further university policies regarding academic dishonesty, student absences on religious holy days, disabilities, and visitors in the classroom which apply to this course may be found at <http://www.shsu.edu/syllabus/>. If there is a conflict between information on this syllabus and official university policy, university policy takes precedence.