

Math 6336, Section 01: Algebra II

Spring 2015 Syllabus

1 Course Information

- Location and Time: MW 3:00–4:20pm, 204 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: Tuesday 2–5pm, and by appointment.
- Required Materials:
 - Textbook: Abstract Algebra, 3rd edition, by Dummit and Foote

Catalog Course Description: This course is the second half of the graduate algebra sequence. The algebra sequence will include Group and Ring theory. Special topics include groups, group actions, the Sylow Theorems, rings, modules, fields, field extensions, and an introduction to Galois Theory. Credit 3.

Course Objectives/Learning Outcomes: This semester we will cover the essentials of ring theory and module theory at the graduate level. While other topics will also be covered, a successful student will attain mastery of the following topics.

- Euclidean domains, principal ideal domains, and unique factorization domains
- Polynomial rings
- Modules, submodules, quotient modules, and module homomorphisms
- Vector spaces
- The structure theory for finitely generated modules over PIDs
- The rational canonical form
- The Jordan canonical form

2 Grading Policy

Your grade in this course will be based on the following items.

Homework	50%
Midterm Exam	25%
Final Exam	25%

I expect you to treat this class as a professional obligation. If you need to miss class, please e-mail me.

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: For homework, you may consult any source you wish. **However**, if you consult any source other than me or your textbook, you must acknowledge it in your homework write-up. This includes working with other students in the class—if you collaborate with another student in the class on a homework problem, please acknowledge them in your solution.

All work that you turn in in this class *must be written alone, in your own words*. Turning in work that is copied from others is 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. For take-home exams, the only sources you may consult are me and your textbook.

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

Homework: I will assign written homework on a regular basis. Here are some guidelines for writing up your homework.

- Write legibly! Using L^AT_EX (the industry standard for mathematical typesetting) is optional, but encouraged. If you turn in sloppy homework, you will receive a warning. If you do it again, I will require that all future work you turn in in the class be typeset with L^AT_EX.
- Write on only one side of the paper.
- State all claims you intend to prove and justify all your calculations. Write up each problem in such a way that the reader does not need the textbook to understand the problem statement or its solution. You may (and should!) state problems in your own words.
- Don't use paper with ragged edges (like paper torn from a spiral).
- Staple your papers together in the correct order.
- Most importantly, you must write up your work **by yourself, in your own words.**

Exams: There will be a midterm exam and a cumulative final exam. You must work these exams on your own.

Make-up policy: Barring exceptional documented circumstances, no make-ups for missed homework assignments or exams will be available.

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: Wednesday May 6, 5pm–7pm

3 Classroom Policies

Attendance Policy: I expect you to attend every class. If you miss a class, then I expect you to email me and get the 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.

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

Ring theory and intro to module theory	Jan 14–Mar 5
Midterm Exam	On or around Mar 16
More module theory	Mar 16–May 1
Final Exam	Wednesday May 6, 5pm–7pm

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.