

MATH 6302 – Modern Algebra – Fall 2015
Syllabus

Instructor: Dr. Gordon Heier

Contact Information:

Office: 666 PGH

Office Hours: M 3:30pm-5:00pm, or by appointment

Email: heier@math.uh.edu

Web: www.math.uh.edu/~heier and www.math.uh.edu/~heier/teaching.html

Lecture: MW 1:00pm - 2:30pm in C 110

Prerequisites: Graduate standing or consent of the instructor

Exams: Midterm Exam: Wednesday, Oct. 28, during regular class

Final Exam: Monday, Dec. 14, 2pm-5pm¹

Text: *Abstract Algebra* by David Dummit and Richard Foote, 3rd Edition

Homework in the form of problem sets will be assigned on a regular basis and will be due as described on each set. Late homework will not be accepted.

Attendance: Attending classes and exams is mandatory for all students. Missing class makes a student liable to missing important information. Substantial documentation is necessary to receive any kind of excuse or make-up privilege.

Grades: The homework and midterm exam will each account for 30 percent of your grade, the final exam for the remaining 40 percent.

Disability: If you think or know that you have a disability that needs special accommodation, please see me at the beginning of the semester so that the proper steps can be taken.

Academic Dishonesty will not be tolerated and dealt with appropriately.

Course Content: This is the first course in the two course sequence Math 6302-6303 which covers the material relevant for our departmental Preliminary Examination in Algebra.

Topics likely to be discussed are:

- Group theory: introduction to group theory, subgroups, quotients and homomorphisms, group actions, semidirect products, Sylow theorem, finitely generated abelian groups.
- Ring theory: introduction to rings and ideals, Euclidean domains, principal ideal domains (PIDs), unique factorization domains (UFDs), integral domains, polynomial rings.
- A few additional topics might also be covered, depending on time and audience interest.

¹ Exam dates are subject to change. Please listen carefully to announcements made in class.