

MATH 8000, Algebra I, Fall 2009

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Office Hours: MWF Noon-1PM

Text: Abstract Algebra, 3rd edition, Dummit and Foote

Course Description from the bulletin: Groups and rings, including Sylow theorems, classifying small groups, finitely generated abelian groups, Jordan-Holder theorem, solvable groups, simplicity of the alternating group, euclidean domains, principal ideal domains, unique factorization domains, noetherian rings, Hilbert basis theorem, Zorn's lemma, and existence of maximal ideals and vector space bases.

Prerequisite: MATH 4010/6010 or permission of department

Topical Outline: groups, rings, fields, modules and Galois theory

Course Objective: to provide the foundation in algebra necessary to pursue a Ph.D. in mathematics. The course is designed largely but not exclusively as preparation for the Ph. D. algebra qualifying exam.

Grading: Homework will be assigned and collected weekly, usually on Fridays.

Your grade will be determined on the following basis:

Homework	50%
Midterm exam	25%
Final exam	25%

Exam Dates:

Midterm exam: Friday, October 9
Final exam: Wednesday, December 16, 8am

[Homework Assignments](#)

Academic Honesty: As a University of Georgia student, you have agreed to abide by the University's academic honesty policy, "A Culture of Honesty," and the Student Honor Code. All academic work must meet the standards described in "A Culture of Honesty" found at: www.uga.edu/honesty. Lack of knowledge of the academic honesty policy is not a reasonable explanation for a violation. Questions related to course assignments and the academic honesty policy should be directed to the instructor.

Disclaimer: The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.