

**MATH 3330 - 02 (12644) - Abstract Algebra – Spring 2015
Syllabus**

Instructor: Dr. Gordon Heier

Contact Information:

Office: 666 PGH

Office Hours: M 3:30-4:30pm, F 1:30-2:30pm or by appointment

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TAs: Nishant Suri

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Da Zheng

Contact Information:

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Office Hours: TTh 2:30-4:30pm at CASA

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Lecture: MW 1-2:30pm, in CBB 108

Exams: Midterm exam: March 25, 2015, in-class (subject to change)

Final exam: May 13, 2015, 2-5pm (subject to change)

Text: Gilbert/Gilbert, Elements of Modern Algebra, 7th edition

Course Purpose: An introduction to abstract algebraic structures, emphasizing group and ring theory

Course Objectives: Upon completion of this course, students may take Advanced Abstract Algebra (Math 4333) or Graph Theory with Applications (Math 4315)

Course Content: Sets, Cartesian products and binary operations, Properties of Integers including Principle of Mathematical Induction, Congruences, Division and Euclidean Algorithms and the Fundamental Theorem of Arithmetic;

Groups, cyclic and normal subgroups, isomorphisms and homomorphisms. finite permutation groups, normal subgroups and quotient groups;

Rings, integral domains and fields.

Homework will be assigned every Monday on my web site and will be due the following Monday. Late homework will not be accepted.

Quizzes: Several unannounced in-class pop-quizzes will be given throughout the semester.

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

Grades: The homework and the midterm exam will each account for 25 percent of your grade. The pop-quizzes will account for 15 percent, and the final exam will account for 35 percent. Your two lowest homework scores and your two lowest pop-quiz scores will be dropped.

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.