Department of Mathematics
University of Houston

MATH 3330 - 02 (25798) Abstract Algebra
Syllabus Fall 2009

Instructor: Dr. Gordon Heier

Contact Information:
>Office: 666 PGH
>Office Hours: T 11:45am-12:45pm, R 1pm-2pm, or by appointment
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Lecture: TR 10am-11:30am in SW 219

Exams: Two in-class midterm exams: Oct 8, 2009, Nov 3, 2009
>Final exam: Dec 17, 2009, 11am-2pm

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. Time permitting: complex and algebraic geometry emphasizing its computational character. This part of the course apart from possibly introduction to complex numbers will be excluded from tests.

Homework will be assigned on a regular basis. However, it will not be graded for credit. Instead, solutions to selected problems will be discussed in class.

Grades: The better of your midterm exams will account for 50% of your grade. The final exam will account for the other 50%.

Disability: If you think/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.