MAT 415-001
Fall 2007
Abstract Algebra II (3 credits)

INSTRUCTOR: Chris Christensen
Office phone: 572-6672 Office: ST 353
E-mail: christensen@nku.edu
Website: http://www.nku.edu/~christensen/

OFFICE HOURS: MWF 12:00 – 12:50, T 12:00 – 1:00, R 3:30 – 4:30, by appointment, and by capture.

CLASS TIME: MWF 8:00 – 8:50. ST 245.

PREREQUISITE: C or better in MAT 410.

TEXT: *Abstract Algebra* by Dummit and Foote.

TOPICS: We will cover most of the material in chapters 7, 8, 9, 13, and 14.

GRADING: **The three tests and the final exam will be "take home."**

Three tests worth 100 points each	300
Comprehensive final exam	200
	500

Work missed during excused absences may be made up without penalty.

Test grading scales will be announced when tests are returned.

ATTENDANCE: You are responsible for all material assigned or covered in class. Attendance will not be taken.

WITHDRAWAL: The deadline for withdrawing from this course with a grade of W is Monday, October 29. Withdrawal after that date is not likely to be permitted.

Mid-Term grades for freshmen will be entered October 8 – October 22.

The instructor reserves the right to alter the syllabus if circumstances dictate.

The work you will do in this course is subject to the Student Honor Code. The Honor Code is a commitment to the highest degree of ethical integrity in academic conduct, a commitment that, individually and collectively, the students of Northern Kentucky University will not lie, cheat, or plagiarize to gain an academic advantage over fellow students or avoid academic requirements.

Course learning objectives:

- The student will know the mathematical definition, ideas, and theorems of rings and fields needed to have a reasonable expectation of success in a graduate algebra course.
- The student will be able to write clear and correct mathematical proofs. The student will be able to clearly express mathematical ideas orally.
- The student will apply theorems from group theory and linear algebra to the study of rings and fields. The student will understand how ring theory is used in number theory, how field theory is used to show that the three Greek construction problems are impossible, and how Galois theory models the solution/non-solution of algebraic equations.
- The student will be able to recognize algebraic patterns. The student will be able to correctly apply algebraic theorems to construct proofs.

Attainment of course learning objectives will be measured by the three tests and the comprehensive final exam.