

## Syllabus for Math 431, *Abstract Algebra*, Spring 2006

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**Instructor:** Dr. Elizabeth Arnold

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**Office Hours:** M, W 1:30-2:30 T, Th 12:15-2 (but I will probably eat lunch in there sometime) and by appointment.

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**COURSE DESCRIPTION:** This is a one semester course that is a continuation of 430. We will cover rings and fields and special topics possibly including computer algebra or others.

**TEXTS:** *Contemporary Abstract Algebra*, J. Gallian, Sixth edition (required).

Supplementary Texts: (not required)

*A First Course in Abstract Algebra*, Fraleigh (undergrad, also used at JMU)

*Topics in Algebra*, Herstein (advanced undergrad)

*Algebra*, M. Artin (advanced undergrad)

*Abstract Algebra*, Dummit and Foote (advanced undergrad/grad - verbose)

*Algebra*, Hungerford (grad - terse)

**GRADING:** The grading will be assigned on a 10 point scale: A: 90-100, B: 80-89, C: 70-79, D: 60-69, F below 60. There will be no curves and no extra credit. I will assign +/- on an individual basis. Points are assigned as follows: Quizzes (10) - 100 points, Midterm exams (3) - 100 points each, Final exam - 100 points

**QUIZZES:** There will be a 10 point quiz at the beginning of class each Thursday. This quiz will cover material through Tuesday's class. Quiz questions will consist mainly of definitions, theorems, computations and short proofs based on the preceding lecture.

**HOMEWORK:** Homework will be assigned, but not collected. Homework, however, is of the utmost importance! You must keep up with the homework, and do it everyday. There will be opportunities to ask questions about the homework problems at the beginning of each class. However, there may not be time to answer everyone's questions, or go over every homework problem. You are encouraged to work together in groups on the homework problems.

**MIDTERMS and FINAL:** There will be three midterms during the semester worth 100 points each. The midterm will consist of an in-class part and a take-home part. The in-class part will consist mainly of questions based on definitions, theorems, computations and short proofs. The take home part will consist of more in-depth proof type questions. Please read the following carefully about collaboration/outside help on take home exams:

You may use your text book or any other books that you find in the library or on the internet. You may ask me for help outside of class. You may even discuss it with your classmates with this proviso: You may not write anything down in your discussions with classmates. You may discuss strategies, ideas and methods of proof, but you may not have a pencil and paper. You must write down all of your answers on your own, by yourself, in your own words. This eliminates discussing the problems by e-mail. Also, please do not ask other professors or other students. You may discuss the problems only with me or other students in the class.

The final exam is worth 100 points and will consist entirely of previously assigned homework problems.

**Final Exam** - Tuesday May 2, 10:30am-12:30pm

**HONOR CODE** You are to abide by the JMU honor code at all times. Ignorance of the law is no excuse. Cheating will not be tolerated and will be prosecuted to the fullest extent.