Syllabus for Math 430, Abstract Algebra, Fall 2010

Instructor: Dr. Elizabeth Arnold
e-mail: arnoldea@math.jmu.edu
Phone: 568-6532
URL: www.math.jmu.edu/~arnoldea
Office: Roop 111
Office Hours: MWF 12:10-1:10 and by appointment.

COURSE DESCRIPTION: This is a one semester course of introductory abstract algebra covering groups, rings and applications. We will try to cover Chapters 0-17 of the text at the rate of approximately 1 chapter per week. Prerequisites are Math 238 and Math 245. This is a proof-based course.

TEXTS: Contemporary Abstract Algebra, J. Gallian, Seventh 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)
   245 Texts

GRADING: The grading will be assigned on the following 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. WF’s will not be assigned. Points are assigned as follows:
   Quizzes (10) - 100 points
   Midterm exams (3) - 100 points each
   Homework - 100 points
   Final exam - 100 points

QUIZZES: There will be a 10 point quiz at the beginning of class each Friday. This quiz will cover material through the previous class. Quiz questions will be similar (but certainly not limited) to homework questions. The 10 best quiz scores will be kept, and the rest will be dropped. There will be no make up quizzes given.

\LaTeX: As part of our objective to “write” mathematics (as well as to learn it and to speak it) we will learn to use the mathematical typesetting program \TeX. \TeX is the standard typesetting tool of mathematicians all over the world. Whether you will be teaching, working in business or in academia, \TeX will be useful for preparing mathematical documents. See my website for information on installing and running \TeX.
**HOMEWORK:** Homework will be assigned after each section. You are expected to do all of the homework. Each Friday, during the quiz, I will check your homework for completeness, not correctness. After the quiz, I will ask 3 or 4 of you to put the answer to a homework question on the board (or on the computer screen) and explain the answer to the class. You will be graded on your explanation. You will be given the assignment BEFORE class so that you can prepare a correct answer. You will be graded on this presentation. Throughout the semester you will also be asked to turn in certain homework problems for grading. These problems must be typed in \LaTeX. 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, however you should NEVER give your \LaTeX code to anyone else for any reason.

**MIDTERMS and FINAL:** There will be three midterms during the semester and a final exam worth 100 points each. The midterms will be given on Monday evening starting at 6pm or 7pm. The dates for the exams are listed below. Keep these dates in mind when scheduling work or extra curricular activities. If you cannot make it to a scheduled exam, you MUST contact the instructor BEFORE the exam if at all possible, or if an emergency, WITHIN 24 HOURS after the exam if you need to schedule a make up exam. Make up exams will only be given for extreme excuses. A doctor’s note or some other physical excuse is required.

- **Midterm I** - Monday September 27, Time: TBA, Place: TBA
- **Midterm II** - Monday October 25, Time: TBA, Place: TBA
- **Midterm III** - Monday December 6, Time: TBA, Place: TBA
- **Final Exam** - Wednesday, December 15, 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. When turning in homework or groupwork, you may work together and discuss the problems, but you must write up the homework to turn in by yourself. Every answer requires an explanation, and no two people’s explanations will be exactly the same. Copying someone else’s homework and putting your name on it is a violation of the Honor Code. Do not share your \LaTeX code with anyone. You are welcome to look at each other’s code, but do not share files, and do not copy code from someone else word for word.