

SYLLABUS – MATH 721
Fall 2013

Dr. J. Shapiro

Office: Exploratory Hall, Room 4413
Hours: MW 1:00 - 2:00 and by appointment
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Text: “Algebra: Chapter 0”, by P. Aluffi,
Web: math.gmu.edu/~jshapiro/721/

Prerequisite: The prerequisite for this course is Math 621 or its equivalent. It is assumed that you have some familiarity with rings, fields, and quotient objects (such as quotient groups or rings), ideals, and ring homomorphisms.

Material to be covered: We will cover Field Theory and Galois Theory (Chapter 7 of the text). Included in this will be splitting fields, finite fields, answers to certain classical geometric questions and the insolvability of quintic equations. We will then do module theory (Parts of Chapters 6 & 8).

Grading: There will be a midterm and a final. In addition, you will also have approximately six or seven homework assignments to turn in. Since the hand-in homework counts toward your grade, you will do these on your own, though you are allowed to ask me questions on the work. While on occasion, given a good reason, I will accept a late assignment, I reserve the right to refuse any work submitted after the due date.

Homework assignments and announcements about the exams will be posted throughout the semester on the course web page. The page can be accessed from the math department home page or directly at the URL listed above.

Your homework assignments will in general consist of two parts; hand-in and additional work. The latter is for your own enrichment.