Math 901: Algebra I  
Fall 2015

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Web: http://www.math.unl.edu/~tmarley1/math901 I will post all handouts, homework, and exams (and sometimes solutions, when I can) on this page.


Prerequisites: Math 817–818 or equivalent. Essentially, I will assume you know the fundamentals of finite group theory up through the Sylow theorems. From ring theory I will assume you know the basics of ideals, quotient rings, PIDs, UFDs, Euclidean domains, and irreducibility criteria for polynomials in one variable over a field (e.g., Eisenstein’s criterion). From field theory I will assume knowledge of the elementary properties of algebraic extensions (degrees of extensions, minimal polynomials, etc.), splitting fields, algebraic closures, separability and normality.

Syllabus: My plan this semester is to cover most of the material found in Chapters V, VI, VIII and possibly parts of Chapter IX of Lang. If time remains, we’ll begin Chapter XVII.

Exams and Homework: We will have two exams during the semester in addition to the final exam. The format of the exams will be determined later, but the exams will likely be held in the late afternoon or early evening to allow adequate time. My intention is to have our first exam in early October and the second exam in mid to late November. In addition to the exams there will be weekly or biweekly homework assignments. The three exams will comprise approximately two-thirds of your grade and the homework one-third.