V63.0349 Undergraduate Honors Algebra II, Spring 17

Time       Monday, Wednesday 11:00-12:15
Location   TBA
Instructor Prof. Joel Spencer, wwh 829
Phone      x8-3219
email      lowercaselastname@cims.nyu.edu
Office Hours TBA
Text       Algebra
Michael Artin

Website:   http://www.cs.nyu.edu/cs/faculty/spencer/algebra/index.html
T.A.       TBA
TA Session Time TBA
TA Session Place TBA
Midterm    TBA (in Class)
Final Exam As scheduled by University
Final Exam place TBA

This is basically a course in Ring Theory Field Theory with Galois Theory a highlight. (Note: Group Theory was covered in Undergraduate Honors Algebra I. The few students who haven’t taken that course – e.g., visiting students – must be sure they have a good background in Group Theory.) We begin with elements of Rings and of Linear Algebra over arbitrary fields. We consider field extensions of the rationals by irrationals such as $\sqrt{2}$. We also study Finite Fields. Throughout, number theory provides a wealth of examples and applications. Very roughly, we shall cover chapters 11-16 in Artin’s book. However, for the Galois Theory, notes specially prepared by Prof. Spencer will be made available.

Submission of assignments (unless clearly marked otherwise) will be mandatory.

Special note: Collaboration on the assignments is encouraged. Each student must submit the assignment separately and must note on the assignment the names of other students with which he/she has collaborated.

The final grade will be based 60% on the Final Exam, 30% on the Midterm, and 10% on the Homework. But grades are not determined by an algorithm, subjective factors such as class participation are a “fudge factor” that can carry great weight.