

**MATH 4000, Sp 2003**  
**Modern Algebra**  
**1:25pm MWF**  
**Room 303 Boyd**

**Instructor:** Dr. Roy Smith, 448 Boyd, noon-1pm MWF, or appt; **ph:** (706)542-2595;  
**email:** roy@math.uga.edu, rcsmith9@earthlink.net, (always use both addresses) Email me today to give me your address. I use email to send information about the course, so check it daily.

**Book:** Abstract Algebra, a geometric approach, Theodore Shifrin, chapters 1-5.

**Prerequisite:** Math 3000(lin alg), Math 3200 (proofs) The main prerequisite is being able to understand, and write proofs.

**Course Objectives:** Become familiar with number systems, integers, rational, real, complex numbers, and their properties, including definitions, theorems, proofs, and computations. We also study polynomials and solutions of equations, and use abstract properties of number systems and polynomials to prove the impossibility of some ancient construction problems in plane geometry.

You are responsible for reading chapters 1-5, even sections not lectured on, and keeping up with the current lecture topic. This means you need to learn about 15 pages of new material each week, and practice numerous examples and problems.

**Tests (tentative):** 1st Mon 2/3, 2nd Fri 2/28, 3rd Mon 3/31, 4th Fri 4/25.  
Final Exam: Monday May 5, 7pm-10pm (in our room).

**IMPORTANT:** The final cannot be moved. There are no makeups of missed tests. Class attendance is Required. 3 unexcused absences and you may be dropped (with a WF if failing or after midpoint 3/4/03). If you have a valid medical reason that you cannot attend a test or a class, or if you are on a varsity team and must be out of town, tell me IN ADVANCE. No late homework is accepted. If you will have an excused absence, hand the work in early. The number and dates of tests, are tentative and may change, so it is unwise to plan to miss class, near a scheduled test date.

**GRADING FORMULA:** Your grade will not be lower than that given by the formula: 15% (HW, quiz, class) + 60% (Test Average) + 25% (FINAL EXAM). Letter grades (normally): 90-100 = A; 80-89 = B; 70-79 = C; 60-69 = D; 0-59 = F.

**MLK holiday:** January 20, 2003, and honors day: April 23, 2003, we do not meet.  
Thursday, May 1, 2003, we DO meet.

Homework and test problems must be written up clearly, legibly, in complete sentences, explaining your reasoning (not just calculations) for full credit.

**Academic Honesty:** In all work for credit, do your own research, thinking, computations and writeup. You may "brainstorm" with others and you should. Notes, books, and calculators are normally not allowed on tests. Read the University policy on academic honesty [[http://www.uga.edu/ovpi/academic\\_honesty/culture\\_honesty.htm](http://www.uga.edu/ovpi/academic_honesty/culture_honesty.htm)]. For example it is prohibited to: Present an idea, theory or formula originated by another person as the original work of the person submitting that work.

**NOTE:** This syllabus provides a general plan for the course; deviations may be necessary.