

## COURSE INFORMATION

### MATH 5035/7035 Algebra for Middle School Teachers

PROFESSOR: Elliot C. Gootman  
Room 502, Boyd Graduate Studies Building  
Phone: 542-2637 (my office), 542-2211 (math. dept. office)  
Email: [gootman@math.uga.edu](mailto:gootman@math.uga.edu)  
Office Hours: TBA

DESCRIPTION: The course, designed partly to reflect CTL (Contextual Teaching and Learning) principles, will deal with the use of techniques of algebra, various classes of functions (linear, quadratic, polynomial, exponential), and basic statistics to both model and solve real life problems. Emphasis will be placed upon the use of real data, multiple modes of solution, and multiple problem-solving tools (paper and pencil, graphing calculator, spreadsheet, etc.) The course will also include several components designed to strengthen the connection between content knowledge, the middle-school classroom, and the real world:

(a) students will be expected to write-up and present a project involving the application of middle school mathematics to a real-life problem; (b) students will be expected to participate in the preparation and coaching of middle school students for the MathCounts competition (in ways to be discussed at the beginning of class) and to write up their experiences and reflections on the value of this activity; (c) students will analyze and diagnose actual middle school student work, both incorrect and correct but non-standard.

ASSESSMENT: The assessment will involve both traditional and non-traditional components. The traditional format will include homework (10%), two hour exams (10% each), and a final exam (30%). The non-traditional component will involve a final portfolio of student work (40%) to consist of 4 equally weighted components: writeups of a number of homework problems of above average difficulty; analysis and diagnosis of actual middle school student work; the real world project; description of and reflections upon the MathCounts experience.