

Syllabus
Mathematics 305
Fall 2005
9:30-10:45 Tuesday & Thursday
Oxford, Tupelo, Desoto

Instructor: William Staton

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Office Hours MWF 10:00-11:00 and more to be announced.

Textbook: none

The primary purpose of this course is to introduce undergraduate mathematics students to what one might call an "everything must be proven" mentality. It will not be our purpose to use known mathematical tools to solve practical problems. Rather, we will use the wonderful cerebrum, a gift of God, the gods, or evolution, to prove mathematical theorems. Much of what we prove will be very elementary material you have "known" since grade school. Eventually we will be proving things you have perhaps never seen before.

Grades will be assigned according to the following scheme:

Homework 25%
3 Tests 75%

There will be no comprehensive final exam. Each of the 3 tests will cover about 1/3 of the course. Test dates will be announced well ahead of time. On the tests I will ask you to reproduce proofs we have studied in class and I will ask you to use the techniques we have developed to prove some (easier) things you haven't seen explicitly before. I will not announce a numerical grading scale for a test until after I have graded every paper. If a test turns out more difficult than I had intended, I may well decide that 75% is an "A" and 65% is a "B", for example. When I return graded tests to you, I will tell you exactly the grade demarcations.

Material for this course is not pre-programmed. I know with what material we will begin, but my choice of where to procede will depend to some extent on your responses and homework performance. I plan to use material from set theory, combinatorics, algebra, number theory, topology, and plain old grade school arithmetic.