MAT 118: Mathematical Thinking   Spring 2003

Text: *Mathematics: Beyond the Numbers* by Gilbert and Hatcher.

About this course: There is much more to mathematics than just calculations and solving equations. In this course we will examine several mathematical topics accessible to students with an understanding of high-school mathematics. These will be selected from among the following: voting methods; the mathematics of money; probability; graphs, paths, and networks; tilings and polyhedra; game theory.

Reading: The textbook is intended to be read. Read the assigned sections before the lecture. This will greatly increase your comprehension, and enable you to ask intelligent questions in class.

Homework and Quizzes: You can not learn mathematics without doing mathematics. Each week a homework assignment will be posted on the course web page at

$$\texttt{http://www.math.sunysb.edu/}{\sim}\texttt{scott/mat118.spr03}$$

These will be due the following week in recitation. While you may work together with other students on the homework assignments, write up your own solutions in your own words. The goal of the homework is for you to understand the material, not to merely hand in some paper. Late homeworks will *not* be accepted.

In addition, most fridays there will be a very short quiz (about 10 minutes) given during the lecture. These quizzes should be very easy for someone who has been paying attention and doing the homeworks.

Examinations: There will be two in-class exams, and the ever-popular final exam. The specific dates and times will be announced on the class web page.

Make sure that you can attend the exams at the scheduled times; **make-ups will not be given**. If one midterm exam is missed because of a serious (documented) illness or emergency, the semester grade will be determined based on the balance of the work in the course.

Grading: The various graded items in the class total 1000 points. Your grade in the course will be based solely on the total number of points you accumulate. The minimum number of points needed for each grade given below:

F	D	D+	C-	C	C+	B-	B	B+	A-	A
0	460	500	540	580	630	680	730	780	840	900

Each midterm will be worth 175 points, the final worth 250 points, and the remaining 400 points will be from quizzes and homeworks. In addition, there will be several opportunities for extra credit.

Disabilities: If you have a physical, psychological, medical or learning disability that may impact on your ability to carry out assigned course work, I strongly urge that you contact the staff in the Disabled Student Services office (DSS), room 133 Humanities, 632-6748/TDD. DSS will review your concerns and determine, with you, what accommodations are necessary and appropriate. All information and documentation of disability is confidential. Such arrangements should be made early in the semester (well before the first exam) so that we can accommodate your needs.

Lecturer: Prof. S. Sutherland   / Math 5D-148 / 632-7306 / `scott@math.sunysb.edu`
Office hours to be announced.

Schedule: The list of homework assignments and the most current schedule of topics can be found on the class web page. It will change, so check it regularly.