Syllabus: Math 303
Themes for Society
Spring 2006: CRN 22023

Instructor: Dr. Wayne Aitken. Office: SCI 327. Phone: 750-4155
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Meeting Time and Place: ACD 303. MW 11:30 – 12:45 PM

Office Hours:
Monday 4:00 – 5:00 PM
Tuesday 1:00 – 2:00 PM
Wednesday 4:00 – 5:00 PM

Course Description: This course gives descriptive overviews of selected areas of mathematics that are relevant to society. Topics include voting systems, apportionment and fair division, networks, the traveling salesman problem, population growth, and fractals. These topics are chosen for their direct applicability to the modern world, their accessibility (assuming a good algebra background), and their general interest. Many of the topics covered are fairly recent mathematical developments; some are less than 20 years old and most are still active areas of inquiry.

The course will be divided into three units.
UNIT 1. Chapters 1, 2, and 3.
UNIT 2. Chapters 4, 5, and 6.
UNIT 3. Chapters 7, 10, and 12.

Prerequisites: Completion of the lower-division General Education requirement in Mathematics/Quantitative Reasoning.

Required text:
Excursions in Modern Mathematics (fifth edition) by Peter Tannenbaum
ISBN: 0131001914
Publisher: Prentice Hall (5 edition, 2004)

Grading: Your total grade will be based on three unit grades.
Unit 1 1/3 of your grade
Unit 2 1/3 of your grade
Unit 3 1/3 of your grade

Each unit grade will be based largely on your performance on the unit test: depending on the unit, 70 to 90 percent each unit grade will be determined by your score on the unit test; the rest of the unit grade will depend on homework, quizzes and participation.

Exams: Exam dates will be announced at least two weeks in advance of the actual date. The final will be partially comprehensive. A preliminary, subject-to-change, schedule is as follows:
Unit 1 exam Feb 22
Unit 2 exam April 5
Unit 3 exam May 8

Assignments, Quizzes, and Class Participation: Part of the grade for the homework assignments will be based on the quality and clarity of the writing displayed. You are encouraged to discuss your ideas with classmates, but make sure that the work you turn in is
your own. Remember to write your work in complete, clear, and grammatically correct sentences. Of course, the work should be mathematically correct and clear as well. There will also be quizzes. Finally, the quality of your class participation may also affect your unit grades.

**Make-Up Work:** I will give make-up exams to students with excused absences. Make-up exams will often have an oral as well as a written component. Your lowest quiz or homework score will be dropped in each unit, so there will be no make-up quizzes. (Students with extended absences will be given make-up work to replace the quizzes, but only in the case of excused absences.)

**Math Lab:** The Math Lab is a useful resource for general education math courses such as Math 303.