Syllabus for Math 160, Introduction to Contemporary Mathematics  
Spring 2012, Ref. No. 12495, MWF 9:30, Cardwell 130

Professor: Todd Cochrane, CW 209
Office hours: MWF 10:30-11:30, and by appointment

Text Book: *Excursions in Modern Mathematics, Seventh Edition*, by Tannenbaum

Course Description: This course explores ways in which mathematics is used to understand and make decisions in the contemporary world. The goal of the course is twofold: first, to expose you to a number of applications of mathematics to real world problems so that you may gain a better appreciation and broader view of what mathematics is all about; and second, to help you improve your problem solving and critical thinking skills.

The course will start with topics in Graph Theory (Chapters 5,6,7 and 8) including Euler Circuits, Hamilton Circuits, the Traveling Salesman Problem, Spanning Trees, Directed Graphs and Scheduling. Next, we’ll explore Collecting and Describing Data (Chapters 13 and 14) followed by Combinatorics and Probability (Chapters 15 and 16). Then we’ll take a look at Voting Theory (Chapters 1 and 2), Fair Division (Chapter 3), Spiral Growth in Nature (Chapter 9), and the Mathematics of Money (Chapter 10).

Grading:

- Attendance and Classroom Participation: 12%.
- Homework: 20% Weekly homework assignments. The lowest score will be dropped.
- Three Hourly Exams: $3 \cdot 15\% = 45\%$.
- Final Exam: 23%

Make-up Exams: No make-up exams will be given. If you have an excused absence from a one-hour exam then your final grade will be based on your other exam scores. If you have excused absences from two hourly exams or the final exam then you will be given an incomplete and be required to complete the course the following semester. **You must** contact me before an exam in order to receive an excused absence.

Important Dates:

- Wednesday, January 18, First Day of Class
- Friday, February 17, Exam 1
- Friday, March 16, Exam 2
- March 19-23 Spring Break
- Monday, April 23, Exam 3
- Monday, May 7, 11:50 am to 1:40 pm, Final Exam
Disabilities: Any student with a disability who needs a classroom accommodation, access to technology or other academic assistance in this course should contact Disability Support Services (dss@k-state.edu) and/or the instructor. DSS serves students with a wide range of disabilities including, but not limited to, physical disabilities, sensory impairments, learning disabilities, attention deficit disorder, depression, and anxiety.

KSU Honor Policy: Kansas State University has an Honor & Integrity System based on personal integrity which is presumed to be sufficient assurance in academic matters one’s work is performed honestly and without unauthorized assistance. Undergraduate and graduate students, by registration, acknowledge the jurisdiction of the Honor & Integrity System. The policies and procedures of the Honor System apply to all full and part-time students enrolled in undergraduate and graduate courses on-campus, off-campus, and via distance learning.

A component vital to the Honor & Integrity System is the inclusion of the Honor Pledge which applies to all assignments, examinations, or other course work undertaken by students. The Honor Pledge is implied, whether or not it is stated: “On my honor, as a student, I have neither given nor received unauthorized aid on this academic work.”

In this class, all exam work will be accomplished individually. On homework, you are free to work together on problems and help each other, but each student must write-up their own solutions. No copying of another student’s homework is permitted. A grade of XF can result from a breach of academic honesty. The F indicates failure in the course; the X indicates the reason is an Honor Pledge violation. For more information, visit the Honor & Integrity System home web page at: http://www.ksu.edu/honor