

Survey of Contemporary Mathematics

Syllabus

Instructor: Michael Henle
Office Hours: T, Th 3:00-5:00 P.M. in King 202
Phone: x8383 or 775-7676

Text: **For All Practical Purposes** by COMAP Ninth Edition, W.H. Freeman 2013

Course Objectives:

- 1) To experience mathematics: as abstract theory applied to social problems.
- 2) To practice problem solving in an abstract context.
- 3) To practice communication in a technical language.
- 4) To experience jumping into the unknown.

Evaluations:

Written problem solutions (due every class)	200
Weekly Quizzes (on Fridays)	100
Two Hour Exams (October 4 and November 16)	200
Final Exam (Friday, December 20 at 9 AM)	100
Two Writing Projects (due November 1 and December 16)	<u>200</u>
TOTAL:	800 points

Outline of the Semester:

Week of	Topics	Reading
September 3	Modeling: Using a spreadsheet	Chapter 21
September 9	Voting Systems	Chapter 9
September 16	Weighted Voting Systems and Measuring Power	Chapter 11
September 22	Modeling: Personal Finance	Chapter 22
September 30	Identification Numbers	Chapter 16
October 7	Binary Codes	Chapter 17
October 14	Modeling: Resource Growth and Decay	Chapter 23
Fall Break		
October 28	Fair Division	Chapter 13
November 4	Game Theory	Chapter 15
November 12	Modeling: Epidemiological Models	
November 18	Growth and Form	Chapter 18
November 25	Symmetry	Chapter 19
December 2	Modeling: Miscellaneous Models	
December 9	Modeling: Miscellaneous Models	Chapter 19