

Course: MATH 030-01, Topics in Contemporary Math **CRN:** 9978
Time: MWF 1:30 – 2:20 p.m., King 237 **Instructor:** Michael Raney
Office: King 204 **Phone:** 775-5706
Email: mraney@oberlin.edu
Office hours: T 3:00 – 4:00 p.m., W 3:00 -- 4:00 p.m., R 3:00 – 5:00 p.m.,
or by appointment

Textbook: COMAP, *For All Practical Purposes: Mathematical Literacy in Today's World*, 9th edition

Prerequisite: A working knowledge of elementary algebra and geometry. Note: This course does not count toward a major in Mathematics (it is not open to any student who has received credit for a mathematics course numbered 131 or higher.) It is intended for students who have not satisfied the quantitative proficiency requirement.

Course overview: The interaction of mathematics with the social sciences is the central theme. Topics are drawn from: graph theory, voting systems, discrete models, coding theory, exploratory data analysis, and combinatorics. Applications are given to social choice, decision-making, management and ecological modeling.

Worksheets: On some days I may lecture for the full 50 minutes, but often after some introductory material I'll ask you to break up into groups to tackle some problems collectively. The group assignments will change from worksheet to worksheet, so hopefully you'll get to work with everyone else in the class at least once! I won't be collecting the worksheets, but I'll post my solutions on Blackboard as a resource. I will, however, evaluate your participation subjectively (under the Course Participation heading), so missing classes habitually wouldn't be the most advisable strategy!

Homework: Homework will be collected approximately once per week. You will be given handouts (on Blackboard) containing reading assignments and both practice problems and problems to be collected. You are encouraged to try as many of the practice problems as it takes to ensure that you understand the material. You may work with other members of the class on all homework problems, but not to the extent that you simply copy another's work. Please note that *late assignments will not be accepted*. If you anticipate that there may be a justifiable obstacle (such as a verifiable illness) that will prevent you from finishing an assignment on time, then

contact me *before* the assignment is due so that we can work something out. I will drop the lowest homework assignment percentage when calculating your course homework component.

Exams: There will be three midterm exams and a final exam. The midterm exams will occur on Friday, September 28, Friday, November 2, and Friday, November 30. The cumulative final exam will take place on Thursday, December 20 from 7:00 – 9:00 p.m. Please let me know if there is a problem with any of these dates.

Grading scheme:

Course Participation: 10%

Homework: 15%

Midterm 1: 15%

Midterm 2: 15%

Midterm 3: 15%

Final Exam: 30%

Letter grade percentages:

A 94-100

A- 90-93

B+ 86-89

B 82-85

B- 78-81

C+ 74-77

C 70-73

C- 66-69

D 60-65

F 0-59

Honor System: You are urged to review the Honor Code and Honor System at <http://new.oberlin.edu/students/policies/#honor>. You will be expected to adhere to the Honor Code and Honor System with respect to all of your work in this class.

Disabilities: Students with documented disabilities are encouraged to contact me so that reasonable accommodations may be made.