

MTE 405 Special Topics 2 credits Fall, 2008

The course: Our “topic” this semester is “Middle School Contest Math”. What this means is that the course will revolve around solving mathematics problems, using items from the MATHCOUNTS and AMC 8 competitions for middle school students as the vehicle. As we solve problems from these contests, we will be reviewing a lot of mathematics that you already know and learning a lot of new things as well. We will meet Tuesdays from 5:30 to 7:17 p.m., with a short break half-way through. The CRN is 40801, and the classroom is 268 SFH.

Instructor: Professor Jerrold W. Grossman, 346 SEB, (248) 370-3443. My preferred e-mail address is grossman@oakland.edu. Rather than listing set office hours, my policy is that I’m almost always around and you are encouraged to come for help or just to chat whenever you wish. You can also make an appointment, of course.

Website for the course: I have put some material that might be of interest on a course Web page (personalwebs.oakland.edu/~grossman/MTE405); please have a look at it. There is a forum posting on Moodle that also gives this address.

Prerequisites: The prerequisite for this course is formally MTE 211, although I will also assume that you know high school level mathematics through precalculus (MTH 141). The attitudinal prerequisite is to be excited about mathematics and solving math problems and have a desire to expand your mathematical knowledge.

Textbook: We have been given free materials from MATHCOUNTS. In particular, I will provide everyone with a copy of the *2007–2008 MATHCOUNTS School Handbook*, as well as some other materials. You can download a more recent version of this handbook from the MATHCOUNTS website, as well, if you wish (www.mathcounts.org). The AMC 8 website is www.unl.edu/amc/e-exams/e4-amc08/amc8.shtml. You might also want to see the Art of Problem Solving website (www.artofproblemsolving.com).

Calculator: You should have a calculator, preferably a graphing calculator, for this course. Familiarize yourself with its operation.

Homework: You will be expected to read assigned sections of the *MATHCOUNTS Handbook* between classes and work on the problems (individually or in small groups). Students will be called on to present solutions to problems in class, and then we will discuss the solutions. You will be asked to turn in some written assignments as well, which again can be completed individually or in small groups (no more than three per group, please).

Tests: We will have several fairly short tests during the semester, consisting of solving contest-type problems, and perhaps also asking for responses about the problem-solving process. I have not yet decided on the details. A final examination on Tuesday, December 9, 7:00–10:00 pm will be more of the same. Tests will be closed book, with calculators permitted.

Grades: The various written assignments will count 20% of your course grade, the totality of the in-class tests 40%, the final exam 20%, and class participation 20% (missing more than one class for whatever reason will impact negatively on the last of these). Make sure to focus on *clear and effective communication* in all your written and oral work in this class.