

MATHEMATICS TECHNOLOGY & PROBLEM SOLVING SYLLABUS

Instructor: Dr. Chuck Garner

Texts:

1. Tobias Oetiker, Hubert Partl, Irene Hyna, and Elisabeth Schlegl. *The Not So Short Introduction to L^AT_EX 2_ε (Or L^AT_EX 2_ε in 139 Minutes)*, Version 4.24, February 8, 2008.
2. Paul Zeitz. *The Art and Craft of Problem Solving*, second edition, Wiley & Sons, 2006. \$56.95

Additional Resources:

1. The Art of Problem Solving website: <http://www.artofproblemsolving.com>
2. The Comprehensive T_EX Archive Network: <http://www.ctan.org>
3. The web version of *The Not So Short Introduction to L^AT_EX 2_ε*:
<http://tug.ctan.org/tex-archive/info/lshort/english/lshort.pdf>
4. The web version of *L^AT_EX Tutorials – A Primer*: <http://sarovar.org/projects/ltxprimer>
5. The Maple Student Help Center: <http://www.maplesoft.com/studentcenter/index.aspx>
6. The Magnet Math Team Website: <http://web.me.com/drcgarner/MathTeam>

Evaluation:

FIRST SEMESTER.		SECOND SEMESTER.	
Kennesaw State Contest (Nov 4)	50	AMC (Feb 9, Feb 24)	100
Math League (Oct 20, Nov 17, Dec 14), each 24 pts	72	Math League (Jan 6, Feb 23, Mar 22), each 24 pts	72
Mandelbrot (Nov 5, Dec 2), each 28 pts	54	Mandelbrot (Jan 8, Feb 4, Mar 3), each 28 pts	84
Rockdale Math Competition (Oct 24)	74	Mandelbrot Team (Jan 14, Feb 12, Mar 11), each 28 pts	84
Math Team Tournaments, each 50 pts	100	Math Team Tournaments, each 50 pts	100
Homework/Classwork, each 10 pts	250	AIME (Mar 16)	100
Speed Tests	100	Homework/Classwork, each 10 pts	160
Contest/Tournament Practice, each 20 pts	100	AMC/AIME practice, each 20 pts	100
TOTAL	800	TOTAL	800

As always, the Final Average is 80% of the above grades plus 20% of the exam grade.

Students are required to keep track of their own grades. You may compare your grade calculations with me after school; I will not discuss grades during the school day.

One goal for the course is to work through the material contained in chapters 1-8 of Zeitz's text by the end of first semester. The Homework/Classwork category includes all problem solving assignments as well as L^AT_EX and Maple assignments. Second semester we will concentrate more on learning L^AT_EX and Maple, as well as math contests and competitions. The second semester exam will consist of a L^AT_EX project.

Make-Up Work:

Homework/Classwork There is no make-up homework and no late homework accepted. Classwork may be made up as the following night's homework in most cases.

Contests If the Kennesaw Contest, a Math League, or a Mandelbrot individual is missed, you may make it up at the next scheduled Math Team meeting. If a Mandelbrot Team round is missed, your points from the previous Mandelbrot individual round are used. The Atlantic-Pacific Math League Contest is offered as extra credit to make-up for poor Math League or Mandelbrot scores.

AMC/AIME There are two AMCs given; you are required to take both, and the higher of the two will count towards your grade. If the AIME is missed, there is a make-up AIME on March 31.

Math Tournaments You are required to attend a minimum of two Math Team tournaments each semester. These may be any two that best fit your schedule. You may (and should!) attend more; however, only your two best results each semester will count towards your grade. *Your attendance is required on Saturday, October 24 for the Rockdale Math Competition; this is an ACT day, so plan accordingly.*

This syllabus provides a general plan for the course; deviations may be necessary.