

STEVENS INSTITUTE OF TECHNOLOGY
MATHEMATICS IMMERSION PROGRAM (IMP)

SYLLABUS: MATHEMATICS
Summer 2009 (July 13th - July 31st)

Instructor: Dragos Bozdog
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Time: Mon - Fri (10:40am-12:40am)
Mon - Thu (1:30pm-2:30pm)

Room: Pierce 220

Textbook: *Precalculus Demystified* by Rhonda Huettenmuller, McGraw-HillMyers, 2005.

Objective: To provide skills and knowledge necessary in calculus. Topics include: linear, polynomial, and rational functions, as well as exponential, logarithmic, and trigonometric functions, Newton's Quotient, the average rate of change, increasing/decreasing intervals of a function, and optimizing functions.

Attendance: A record of attendance will be kept and absences will decrease your grade.

Course program:

1. **The Slope and Equation of a Line** (Reading pages 1-23)
2. **Introduction to Functions** (Reading pages 24-41)
3. **Functions and Their Graphs** (Reading pages 42-63)
4. **Combinations of Functions and Inverse Functions** (Reading pages 64-87)
5. **Translations and Special Functions** (Reading pages 88-103)
6. **Quadratic Functions** (Reading pages 104-133)
7. **Polynomial Functions** (Reading pages 134-184)
8. **Rational Functions** (Reading pages 185-200)
9. **Exponents and Logarithms** (Reading pages 201-261)
10. **Systems of Equations and Inequalities** (Reading pages 262-302)
11. **Matrices** (Reading pages 303-329)
12. **Conic Sections** (Reading pages 330-363)
13. **Trigonometry** (Reading pages 364-414)
14. **Sequences and Series** (Reading pages 415-438)

Grading Policy: The grading for this course will be determined by quizzes, homework, and class participation:

Grade Element	% of Total Grade
(3) Quizzes	60%
Homework	30%
Participation	10%

The basis will be on 100 points. The following letter grade will be assigned to point values:

A	>90	B-	70-74	D	50-54
A-	85-89	C+	65-69	F	<50
B+	80-84	C	60-64		
B	75-79	C-	55-59		