Math 366 **Structure of Mathematics II** **Fall 2011**

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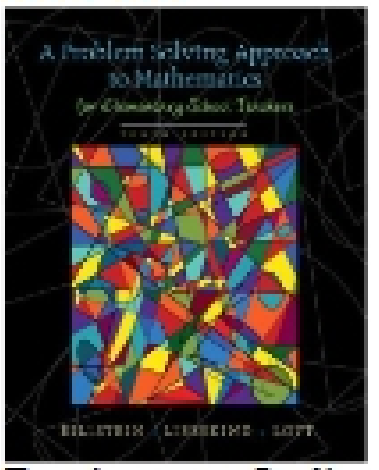
Office Hours: 12:30 – 2:00 pm TR
AND by appointment

Class Times & Locations:	**MATH 366-502**	**TR**	**2:20-3:35**	**BLOC 164**
	MATH 403-502	**TR**	**3:55-5:10**	**BLOC 120/BLOC 104**
	TQ Program	**M**	**7:00-9:15; S 8:30-1:30**	**online**

Text: *A Problem Solving Approach to Mathematics for Elementary School Teachers*, 10th Ed. by Billstein, Libeskind, and Lott ISBN 0321570553



Additional Requirement: Quality compass (uses screws to adjust), protractor.

Catalog Description: Geometry, measurement and coordinate geometry. Designed primarily for elementary teacher certification. Others must have consent of instructor. Prerequisite: MATH 365 or equivalent with a grade of C or better.

Homework:
Homework will be collected for this course the class period after the section has been covered. Homework problems are listed in a separate document on the course website. From the homework problems, I will usually choose 5-10 problems to grade. All homework will be due at the beginning of the class period. Homework turned in after class has started may be docked 10%.

Quizzes: There may be unannounced quizzes given in class. Quizzes cannot be made up without an official university excuse.

Exams: There will be three exams, covering chapters 11, 12, and 13 respectively, the dates of which will be announced in class. You must bring your student ID to each exam.

Activities/Projects: There will be in-class activities and a Sketchpad project. The Sketchpad project is GSP Labs 1-12 in Appendix III of the textbook. They are to be worked as we cover each chapter. Type or write the answers to all questions.

Grading: Points will be deducted on graded assignments for spelling and grammar mistakes. These points are refundable and can be redeemed by correcting the mistake(s) during office hours, within 3 days of the return of the assignment.

Calculators are not allowed for this course.

FINAL EXAM: The final exam is **COMPREHENSIVE**.

FINAL EXAM Schedule:

- **Section 502 is on Monday, Dec 12th** **1 – 3 PM**

Grades:

Major Exams (3)	50%
Final Exam	25%
Homework/Quizzes/Activities/Projects	25%

Note: In this class, you will develop mathematical rules and formulas. It is necessary to know the *why* of the mathematics involved. You are expected to learn the concepts as well as to become fluent in working the mathematics. Give exact answers, unless otherwise stated.

Policies: Policies pertaining to absences, scholastic dishonesty, and final exams are identical to TAMU regulations.

- **You are responsible for checking your TAMU email account.**
- Attendance is expected and will be used in conjunction with your final exam grade as a *consideration* in a case of borderline grades. Attendance means active class participation, not just showing up and sitting in the classroom.
- If you disagree with any deduction taken on your homework, quizzes or exams, you must bring it to my attention before your next class to be re-graded.
- Students with an official excused absence are permitted to make up work only for the dates of the absence. No make-up exams or quizzes will be given without a doctor's excuse. In the case of illness, a student MUST contact me within TWO working days and present a valid doctor's excuse before the make-up will be given.
- **SCHOLASTIC DISHONESTY**
  - **An Aggie does not lie, cheat, or steal, or tolerate those who do.**
  - For additional information on the Honor Council Rules and Procedures consult http://www.tamu.edu/aggiehonor/

A.D.A. Policy Statement: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services in Cain Hall, Room B118, or call 845-1637. For additional information visit http://disability.tamu.edu

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Personal Request: As a courtesy to me and all of the students in your class, please keep all cell phones muted during class and refrain from discussion not related to class. Thanks ☺

Course Learning Objectives:

- Students will be able to solve geometry problem, using a core set of problem solving strategies, including find a pattern, make a table, work backwards, guess and check, draw a picture, make a list, write an equation.
- Student will use logical reasoning to solve problems including perimeter, area, and volume of two-dimensional and three-dimensional geometric figures.
- Students will gain greater depth of knowledge about underlying geometric concepts and use that knowledge to explain and prove theorems.
- Students will be able integrate various mathematical content, solution methods, and strategies, especially geometric constructions, to solve problems.
- Students will connect mathematics, mathematical ideas and concepts, and applications, through connecting concrete activities to abstract mathematical notation. Examples include transformations of geometric figures and formulas involving linear, area, and volume measure.

Tentative Calendar:

Week	Sections	Topic(s)
1	Intro, 11.1-11.2	Basic Notions of Geometry; Polygons
2	11.3-11.4	Angles; Three-Dimensional Geometry
3	11.5; 12.1	Networks; Congruence Through Constructions
4	Review; Exam 1	Chapter 11 Review and Exam
5	12.2-12.3	More Congruent Properties; More Constructions
6	12.4-12.5	Similarity; Linearity and the Coordinate System
7	12.6; 13.1	Basic Trigonometric Triangle Ratios; Linear Measure
8	Review; Exam 2	Chapter 12 Review and Exam
9	13.2-13.3	Areas of Polygons; Pythagorean Theorem; Distance Formula; Circle Equations
10	13.4-13.5	Surface Area; Volume, Mass, & Temperature
11	Review; Exam 3	Translations and Rotations; Chapter 13 Review
12	14.1-14.2	Chapter 13 Exam; Reflections
13	14.3-14.4	Size Transformations; Symmetry
14	14.5, Review	Planar Tessellations; Chapter 14 Review
15	Final Exam	Final Exam