

San Francisco State University
Department of Mathematics
Course Syllabus

MATH 565
Concepts of Geometry, Measurement, and Probability

Prerequisites

Grade of C or better in MATH 165 or consent of instructor..

Bulletin Description

Designed for prospective multiple subjects credential candidates. Spatial relationships and inductive reasoning in geometry, measurement emphasizing the metric system, and elementary statistics and probability.

Course Objectives

- ⑩ Help you learn and explore the geometry, probability and measurement strands for the elementary curriculum.
- ⑩ Help you see math as interesting and relevant.
- ⑩ Help you see yourself as capable of learning mathematics and solving mathematical problems on your own.
- ⑩ Introduce you to materials to teach content in the geometry, probability and measurement strands to elementary school students.
- ⑩ Convince you that math is not a bunch of formulas to be memorized but problems to solve and patterns to find.

Evaluation of Students

There will be a Midterm and a Final Exam. Weekly homework will be assigned and there will be two projects required.

Course Outline

Topics	Weeks
Polygons, Polyhedra, Concrete Representations, Nets, Euler's Rule	2
Angle, Angles of Polygons, Regular Polygons	2
Platonic Solids, Tangrams, Tessellations (last two optional)	1
Probability, Counting Possibilities	1
Joint Probability, Counting Choices, Pascal's Triangle	2
Assessing Randomness (optional)	1
Mean, Median, Mode, Midrange (optional)	1
Measurement, Metric Units, Linear Units, Scales	1
Area units, areas of rectangles, Pick's Theorem, Pythagorean Theorem (last two optional)	1.5
Volume units, volumes of prisms	1.5
Tests and Projects	2

Textbooks and Software

None. There will be handouts in class.

Submitted by: Eric Hsu

Date: April 29th, 2003