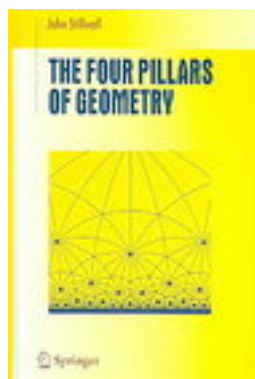


Geometry - Math 329-6937: Fall 2007 Syllabus



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Course Time and Place: Mondays and Wednesdays, 4:40pm - 6:20pm in 1S-218

Textbook: [The Four Pillars of Geometry by John Stillwell.](#)

Goals: The primary goal of this course is to understand geometry from different viewpoints, both classical and modern. Another goal is to learn how to write concise but complete arguments, and how to present to others what you have learned.

Homework: Assignments will be announced in class, sometimes referring to this website. Incomplete work with good progress will be rewarded. *I highly recommend working jointly on homework problems with fellow students, but in the end you must hand in your own work.*

Grading: The course grade is determined by homework, midterm exam, final in-class presentation and written report.

Help: My office hours are before class on Mondays 2:30-4:30pm and Wednesdays 3:30-4:30pm, or by appointment, in my office, 1S-209.

Optimal Method of Study: (1.) Come to class (attendance is mandatory). (2.) Read the relevant sections after class. (3.) Do the homework. Leave time to think--do not put homework off until it is due! (4.) Compare your solutions with other students to improve what you hand in. (5.) Come to office hours with any remaining questions.

Topics and related links:

- General links about geometry: [Cut the knot](#) and [Geometry Junkyard](#), and also [related branches of math](#).
- Euclidean geometry, compass and straightedge constructions: [Euclid's *Elements* online](#), [constructible regular polygons](#) (scroll down).
- From an excellent [website on the history of mathematics](#), the three famous unsolved problems of Greek mathematics: [Doubling the cube](#), [squaring the circle](#), [trisecting any angle](#).
- [Pythagorean triples](#).
- [Another construction for squaring a rectangle](#) (compare with the construction on p.34 and p.38 of our textbook).
- [Construction of a regular pentagon in a given circle](#) (shown with a nice applet). A related link is [Approximate Construction of Regular Polygons: Two Renaissance Artists](#).
- Dissections (project idea): [Swing-hinged dissection of triangle to square](#) and [Chemical Dissections](#).
- [Multiplication table of isometries](#) and to illustrate the example we did in class, [Applet that shows product of rotations is a rotation](#)