

Course description
8/25/09

Math 5200/7200, Foundations of Geometry I, Fall 2009
(T & Th, 11:00-12:15, Room 303, Boyd Graduate Studies Bldg.)

Instructor: Robert Varley, Department of Mathematics, office 446 (Boyd Graduate Studies Bldg.)
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Texts:

- Euclid's Elements (all thirteen books complete in one volume, The Thomas L. Heath Translation, Dana Densmore, editor), Green Lion Press, Santa Fe, New Mexico, 2003 (2nd ed. with minor revisions).
- Robin Hartshorne, Geometry: Euclid and Beyond, Springer-Verlag, 2000.

Approximate Syllabus: Material from Books I-IV of Euclid's Elements and Chapters 1-3 of Hartshorne's book. We will study Euclidean plane geometry from the viewpoints of Euclid's Elements, Hilbert's axioms, high school curriculum, and current university treatments. We will also notice the possibility of other two-dimensional geometries, such as neutral geometry and non-Euclidean geometry.

[From the course bulletin: Advanced elementary geometry for prospective teachers of secondary school mathematics: axiom systems and models; the parallel postulate; neutral, Euclidean, and non-Euclidean geometries. Prerequisite: (MATH 3000 or MATH 3500) and (MATH 3200 or MATH 3610).]

Grading: Homework & Quizzes 35 %, Tests 40 % (4 tests, drop 1), Final Exam 25%.

Test dates: #1) Sept. 15 (Tues.), #2) Oct. 13 (Tues.), #3) Oct. 29 (Thurs.), #4) Nov. 19 (Thurs.).

The Final Exam is Friday, Dec. 11, noon-3:00pm.

Office hours:

Mondays 8:15-10:45

Wednesdays 11:30-1:00

Fridays 8:15-8:45

Other items: Regular attendance is expected. Roll is not usually taken but you are responsible for the material covered in class and all assignments and tests. All work for the class is subject to the Academic Honesty Policy of the University.