

MATH 5305
Andreescu
Summer 05

Euclidean Geometry for Teachers Office: FN 3.308G

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Brief Overview

Schedule: Time: June 3 – July 8 MWF 9:00 a.m. – 11:45 a.m.

There is no class on July 4 and there might be other minor changes in the class schedule [TBA]

Office hours: 12:00 noon – 1:00 p.m. MWF and by appointment. Feel free to call me or e-mail me.

Textbook: Geometry for College Students [GC] by Martin Isaacs.

Organization: “**Let no one ignorant of geometry enter here**” read the sign placed by Plato over the door to his Academy in Athens in 387 BC. As this quote indicates, during Euclid’s and Plato’s days, geometry was the subject area of primary interest. In this course, we will recount some of the same topics in Euclidean Geometry explored by the Greek mathematicians and some which were not explored until much later. The course will be organized around three main themes:

1. An enhanced review of “High School” Geometry
2. Famous theorems in Euclidean Geometry
3. Some theorems in “Modern” Euclidean Geometry involving triangles, quadrilaterals, and circles, with applications

There will be an emphasis on the role of proof: proofs using synthetic methods, trigonometrical methods, area methods, and coordinate methods.

Assignments: Each assignment will contain both **Class Examples** and **Written Problems**. Class Examples will be either done in small groups in class or as investigations at home for the next class and “volunteers” will give brief oral reports of their discoveries. Everyone should volunteer from time to time..

Assessment: Class Examples and Written Problems: 35% , Quizzes and Tests: 65%. There will be three quizzes and two tests. Quizzes will last approximately 45 minutes and will occur on dates TBA. They will test simple computational problems and recognition of key theorems. Tests will also occur on dates TBA and will contain mostly “take home” problems. On both quizzes and tests, you may use your textbook, class notes, homework, and other geometry references. You are encouraged to work together on the written assignments.

Academic honesty: In this course students will conform to the University rules for academic honesty. For more information see <http://utdallas.edu/student/sliffe/dishonesty.html>

Students with disabilities: Information related to this course can be provided to students with disabilities through University services. For more information please see <http://www.utdallas.edu/student/sliffe/hcsvc.html>