

M333L, Spring 2005, Unique # 57170

## STRUCTURE OF MODERN GEOMETRY

Instructor: **John E. Gilbert**

Office: **RLM 12.134**

Office hours: **TTH 12:30-2:00pm**

Course Web Page: <http://www.ma.utexas.edu/users/gilbert>

**Course Goals:** To study Euclidean and Non-Euclidean geometry using a dynamic geometry software as an exploratory tool. This will enable us to arrive at conjectures, which we can then establish as theorems in the traditional axiomatic/proof way.

**Text:** None required. We will use the lectures notes written specifically for this course. They are available as PDF files for downloading from the Course Web Page.

**Software:** We will be using the software package *Geometer's Sketchpad* available for purchase from the Coop *etc.* You will need this for individual use in class as well as for homework assignments outside class.

**Class Format:** A typical class day will consist of part lecture, part computer demonstration by the instructor, part individual student computer exploration using the Sketchpad software, and part class participation.

**Homework:** There will be (approximately) 10 homework assignments distributed at roughly equal intervals throughout the semester. The assignments are already in the class notes. You will be encouraged to 'turn in' completed homework electronically to the grader. This will allow you to turn in Sketchpad files.

**Project:** You will be required to do a class project combining use of Sketchpad and traditional mathematics. Choice of topic can be based on major or general interest. Help in choosing a topic will be provided. Further details will be announced as the semester progresses.

**Course Grade:** Homework 50%, Project 50%

**TTH 11:00am-12:15pm, PHARMACY LAB PAR 2.116**