MAT 360: Geometric Structures Stony Brook, Spring 2009

Text: *Euclidean and Non-Euclidean Geometries: Development and History*, (4^{th} ed.) by Marvin Greenberg. Note that the third edition edition of the text can also be used (although the 4^{th} has some additional material). There is also an electronic version of the text.

About this course: This is a course in planar geometry, covering both Euclidean and non-Euclidean geometries. It is assumed that you have already had a high-school course in Euclidean geometry (more precisely, know the geometry covered in MAT 200). Our approach will be primarily axiomatic. We will be doing a lot of proofs, so it is crucial that you be familar with basic logic and proof techniques (again, as covered in MAT 200). We will likely have some work involving technology such as Geometer's Sketchpad or Cinderella.

Reading: The textbook is intended to be read. There is a lot of material in the text that can not be covered in class, and reading the relevant sections will greatly increase your comprehension, and enable you to ask intelligent questions in class. One of the goals of this course is to help sharpen your abilities at reading and creating mathematical arguments. If you are having trouble reading the text, please discuss this with me!

Examinations and grading: There will be one midterm exam in late March, weekly homeworks, and a final exam. Each is worth 1/3 of your final grade. There will be a few projects which will be factored into the homework part of the grade.

Mathematics is not a spectator sport; you must work problems in order to fully understand[1] the material. Consequently, homework will be collected and graded, and your grade on the homework is a significant piece of your final grade.

Webpage: `http://www.math.sunysb.edu/~scott/mat360.spr09/`

Homework and Schedule: The list of homework assignments and the most current schedule of topics can be found on the class web page. It will change, so check it regularly.

Homeworks will be due in class on the thursday following the week they are assigned. The homeworks will be graded giving 5 points per problem (so a long homework set counts more than a short one), plus up to 10 points per assignment for effort. Since the solutions will be posted, late homeworks (which lose the 10 "effort points") cannot be accepted after friday. Additional homework problems will be assigned but not collected. You should confirm that you can do these problems.

Instructor: Prof. S. Sutherland / Math 5-112 / 632-7306 / `scott@math.sunysb.edu`
Office hours: Mon, Wed, Thu 10-11, and by appointment. Note that I can often be found around the department most days. Send me an email or phone first if you want to be sure I'm around, or just come by and take your chances. I'm around a lot, though sometimes you'll have to wait a bit.

Grader: Zhiyu Tian, Math 2-116, `ztian@math.sunysb.edu`

Disabilities: If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact Disability Support Services at `http://studentaffairs.stonybrook.edu/dss/` or (631) 632-6748. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Disability Support Services. For procedures and information go to the following website:

`http://www.stonybrook.edu/ehs/fire/disabilities.shtml`

Academic Integrity: Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty are required to report any suspected instances of academic dishonesty to the Academic Judiciary. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website at `http://www.stonybrook.edu/uaa/academicjudiciary/`

[1] "One learns by doing a thing; for though you think you know it, you have no certainty until you try." (Sophocles)