
Instructor:	Stefan Friedl	Time:	MWF 2:00 – 2:50
Office:	Herman Brown 426	Location:	Herman Brown 227
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Textbook: Euclidean and non-Euclidean Geometries: Development and History, 3rd. edition, by Marvin Jay Greenberg, has been ordered through the bookstore.

Course overview: One cornerstone of Euclidean geometry is the parallel line postulate: For each line l and each point p that does not lie on l , there exists a unique line m through p parallel to l . For thousands of years, it was expected (but not proven!) that this follows from the other axioms of geometry. In fact it does not, and there are non-Euclidean geometries with radically different notions of parallel lines. Two examples are spherical geometry and hyperbolic geometry. We will develop plane geometry using various sets of axioms, keeping careful track of which properties follow from which axioms. In particular, we will isolate the results that do not require the parallel axiom. Concrete models of non-Euclidean geometry will be constructed, e.g., the surface of a sphere can be interpreted as a non-Euclidean ‘plane’ with its great circles as ‘lines’.

Homework: Homework is particularly important in this course. Homework will be due every week on Friday and returned the following week. Homework assignments are not pledged. You are encouraged to discuss the homework problems with other students, but you have to hand in your own homework. Late homework will not be accepted.

Exams: There will one in class midterm on Friday 3/18.

Grades: The homework will count as 50% towards the final grade, the midterm counts 20%, and the final exam counts 30%.

Students with documented disability: Any student with a documented disability needing academic adjustments or accommodations is requested to speak with me during the first two weeks of class. All discussions will remain confidential. Students with disabilities will need to also contact Disability Support Services in the Ley Student Center.