Math 679V	**Topics in Topology: Hyperbolic Geometry**	Summer 2016
Section: 012	MTWThF 2:30 – 4:00	Prof. Matthew Clay
	SCEN 322	

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Course Website: `http://comp.uark.edu/~mattclay/Teaching`

Office Hours: Drop-in or schedule an appointment

Texts: We will be using material from several sources:
- *Notes on Word Hyperbolic Groups*, by J. Alonso et al., World Scientific
- *Metric Spaces of Non-positive Curvature*, by Martin Bridson and André Haefliger, Springer
- *Hyperbolic Geometry*, by James Cannon et al., MSRI Publications
- *Automorphisms of Surfaces after Nielsen & Thurston*, by Andrew Casson and Steven Bleiler, Cambridge University Press
- *Fuchsian Groups*, by Svetlana Katok, University of Chicago Press
- *Three-Dimensional Geometry and Topology*, by William P. Thurston, Princeton University Press

Reserves of these items are in the Mullins Library and on Blackboard.

Objectives: For the first half of the course, we will investigate different models of hyperbolic geometry focusing most of our attention on the Poincaré disk model and the upper half-plane model. We will prove the Gauss–Bonnet theorem and the classification of isometries among other things. In the second half of the course we will investigate a combinatorial version of negative curvature in groups, called (δ/Gromov/word)–hyperbolicity. We will prove the invariance of this property, classification of centralizers in such groups and investigate isoperimetric properties in such groups.

Academic Honesty Policy: As a core part of its mission, the University of Arkansas provides students with the opportunity to further their educational goals through programs of study and research in an environment that promotes freedom of inquiry and academic responsibility. Accomplishing this mission is only possible when intellectual honesty and individual integrity prevail. Each University of Arkansas student is required to be familiar with and abide by the University's "Academic Integrity Policy" which may be found at `http://honesty.uark.edu`. Students with questions about how these policies apply to a particular course or assignment should immediately contact their instructor.

Course Grade: Participation – 100%

Important Dates

Tuesday, July 5	Classes Start
Thursday, July 7	Last day to drop without W
Wednesday, July 27	Last day to drop with W
Friday, August 5	Last day of classes

See `http://calendars.uark.edu` *for the complete academic calendar and final exam schedule.*

Special Accommodation: Students who are registered with the Center for Educational Access must notify the instructor in writing by the end of the first week of class, or within one week of registering with CEA.

Inclement Weather Policy: Class will be held if the University is officially open. Allowances will be made if you are unable to safely reach the campus, but, bravely, class will go on! Do not call the Math office for inclement weather information. Instead, you should call the following telephone number: 575-7000.

Disclaimer: Information on this syllabus is subject to change. Any change will be announced in lecture.