

MATH 6118: Non-Euclidean Geometry

Jan 14	Day 1 a) Introduction and History b) Definitions
Jan 21	Day 2 No class
Jan 28	Day 3 a) Similar triangles b) Power of a point c) Centroid, incenter, Heron's formula
Feb 4	Day 4 a) Ceva's Theorem b) Triangle centers c) Euler line, Simson line, Pedal triangle
Feb 11	Day 5 Area
Feb 18	Day 6 Analytic Coordinate Geometry
Feb 25	Day 7 Transformation Geometry
Mar 3	UNC Charlotte Mid semester break
Mar 10	Day 8 Inversive Geometry
Mar 17	Day 9 a) Models of Hyperbolic Geometry b) Neutral Geometry c) AAA Congruence
Mar 24	Day 10 Poincaré Upper Half Plane
Mar 31	Day 11 a) Fractional Linear Transformations b) Cross Ratio
Apr 7	Day 12 Translations, Rotations & Reflections
Apr 14	Day 13 a) Hyperbolic metric b) Area of Triangles
Apr 21	Day 14 a) Poincaré Disk Model b) Circles, hypercycles, and horocycles
Apr 28	Day 15 Hyperbolic trigonometry
May 5	Final Exam (1700 – 1945)

Note: Spring Breaks:

March 24-28, 2008: Cabarrus County, Iredell County, Kannapolis City, Lincoln County, Mooresville GSD, Union County

April 7-11, 2004 CMS, Gaston County