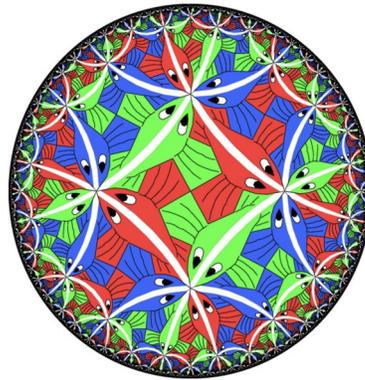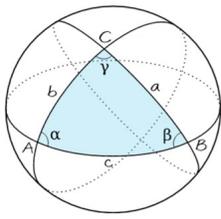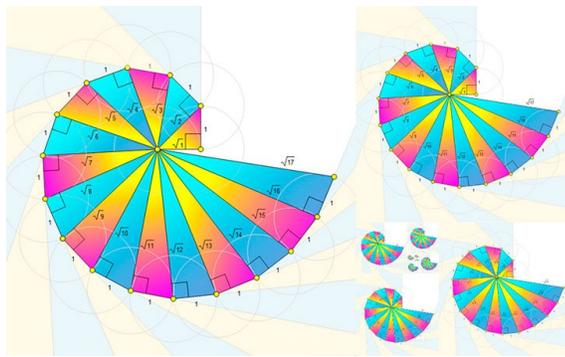# Geometry: Flat, Spherical, and Hyperbolic

Spherical

Hyperbolic

Flat

Geometry; Flat Geometry and Curved Geometries

In this course students will be introduced to the logic of Aristotle which helped lay the foundation for the geometry of Euclid. This is everything that can happen on a flat surface, like a table top or a sheet of paper, and has the fancy name of Euclidean geometry. For the first time ever, we will also have the option to also further explore two types of non-Euclidean geometry: what happens on the surface of a sphere (which answers the question of why it is faster to travel from Europe to Japan by flying North rather than East) and what happens on warped surfaces that curve inwards. We may also consider logical systems other than Aristotle, to see how different cultures gave rise to different ways of knowing.

When we focus on flat geometry, we will be reminded that the tree angles of all triangles add up to the same total number of degrees and we will explore some of the relationships between the sides and the angles of triangles. We will also explore how parallel lines have special features and how circles interact with lines and angles.

This class will meet on Thursday evenings, 6-9:30 pm
CRN: 30197