Discrete dynamical geometry studies eventual behavior of iterated geometric figures such as triangles and polygons. We have developed a course on dynamical geometry at the University of Southern Mississippi for the training of secondary mathematics teachers as well as mathematics majors who have studied elementary linear algebra. This course combines basic theory of stochastic matrices, modern ideas of chaos and fractals, and web-based demonstration. We present the philosophy behind the course and outline its contents. (Received July 18, 2012)