Fall 2018
MATH 60710
Title: Introduction to Algebraic Geometry
Instructor: Eric Riedl
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Office hours: TBA
Textbook: *Algebraic Geometry* by Robin Hartshorne

Course description: Algebraic geometry is an old branch of mathematics that still remains an active field of study today. With connections to number theory, complex geometry, commutative algebra, complex analysis, algebraic topology and more, algebraic geometry sits at the intersection of many different fields, and its study is useful in pursuit of many different fields of mathematics.

This course will be an introduction to algebraic geometry and the theory of schemes, the first half of a year-long sequence. The goal this semester is to cover the first two chapters of Hartshorne, introducing some of the classical notions of varieties and then beginning to develop the language of schemes, which is the modern formulation of algebraic geometry. The main prerequisite for this course will be graduate algebra, although some basic knowledge of commutative algebra (rings, modules, the notion of Noetherianity) will be useful.

The course grade will be based on weekly homework. If there is interest, we will organize problem sessions where we present/work through some of the problems.