

## 18.725: ALGEBRAIC GEOMETRY I (FALL 2016)

### COURSE INFORMATION

**Lectures:** TR 12:30-2pm in 2-135

**Lecturer:** Aaron Pixton

**E-mail:** [apixton@mit.edu](mailto:apixton@mit.edu)

**Office Hours:** MW 3:30-4:30pm in 2-275 or by appointment

**Grader:** Vishal Arul, [varul@mit.edu](mailto:varul@mit.edu)

### COURSE WEBSITE

There is a course website at <http://math.mit.edu/~apixton/classes/18.725/>.

### COURSE DESCRIPTION

This course will introduce the basic notions and objects of modern algebraic geometry from a scheme-theoretic perspective. We will be (loosely) following Ravi Vakil's notes "Foundations of Algebraic Geometry" (available at <http://math.stanford.edu/~vakil/216blog/index.html>).

### PREREQUISITES

The most essential things to know for this class are basic ring theory (prime ideals, localization) and some topology (open covers, bases, etc). It will also be helpful to have some familiarity with basic category theory (see Chapter 1 of Vakil's notes).

### PROBLEM SETS

Problem sets will (usually) be assigned each Thursday and will be due on the following Thursday (in lecture or via e-mail).

You are encouraged to discuss the problems with your classmates, but you must write up your solutions independently. You must also include a written acknowledgment of everyone you worked with in your assignments, as well as any external sources you consulted.

There will be no exams; your final grade will be based on the problem sets.

### OFFICE HOURS

My current weekly office hours are MW 3:30-4:30pm in 2-275. These may be subject to change! You are also welcome to contact me to schedule an alternative meeting time.