

## 18.726: ALGEBRAIC GEOMETRY II (SPRING 2019)

### COURSE INFORMATION

**Lectures:** TR 11am-12:30pm in 2-136

**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:** Dmitry Kubrak, [dmkubrak@mit.edu](mailto:dmkubrak@mit.edu)

### COURSE WEBSITE

There is a course website at <http://math.mit.edu/~apixton/classes/18.726/>.

### COURSE DESCRIPTION

This course will cover some of the basic topics in modern algebraic geometry from a scheme-theoretic perspective: quasicohherent sheaves, line bundles, sheaf cohomology, algebraic curves. We will primarily be using Ravi Vakil's notes "Foundations of Algebraic Geometry" (available at <http://math.stanford.edu/~vakil/216blog/index.html>).

### PREREQUISITES

I will assume general familiarity with Chapters 1-12 of "Foundations of Algebraic Geometry", as covered in 18.725 in the fall semester.

### PROBLEM SETS

Problem sets will be assigned on many (not all) Thursdays and will usually be due on the following Thursday (in lecture or via e-mail before lecture). When submitting problem sets by e-mail, please send them to the grader (Dmitry Kubrak, [dmkubrak@mit.edu](mailto:dmkubrak@mit.edu)) but also cc me ([apixton@mit.edu](mailto:apixton@mit.edu)) on the e-mail. Also, the subject line should be "18.726 - Problem Set N", where N is the number of the problem set.

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. Undergraduates will be expected to write a final paper on some topic related to the class (25% of final grade), and aside from that your grade will just 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/cancellation, but the course website will be kept up to date. You are also welcome to contact me to schedule an alternative meeting time.