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
Office Hours: MW 3:30-4:30pm in 2-275 or by appointment
Grader: Dmitry Kubrak, 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: quasicoherent 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) but also cc me (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.