18.725: ALGEBRAIC GEOMETRY I (FALL 2018)

Course Information

Lectures: TR 11am-12:30pm in 2-147
Lecturer: Aaron Pixton
E-mail: apixton@mit.edu
Office Hours: MW 3:30-4:30pm in 2-275 or by appointment
Grader: Kai Huang, kaihuang@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 before lecture). When submitting problem sets by e-mail, please send them to the grader (kaihuang@mit.edu) but also cc me (apixton@mit.edu) on the e-mail. Also, the subject line should be "18.725 - 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; 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.