Math 237B: Algebraic Geometry  
Winter, 2016  
Syllabus

Instructor. David R. Morrison. Email: drm@math.ucsb.edu.

Meeting time. MWF 10:00–10:50 in HSSB 1236.

Secondary meeting time. Beginning on February 9, we will have a “secondary” meeting time for optional additional lectures. TTh 11:00–12:15 in South Hall 6635.

Course description (from the UCSB Catalog). Affine/projective varieties, Hilbert’s Nullstellensatz, morphisms of varieties, rational maps, dimension, singular/nonsingular points, blowing up of varieties, tangent spaces, divisors, differentials, Riemann-Roch theorem. Special topics may include: elliptic curves, intersection numbers, Bezout’s theorem, Max Noether’s theorem.

Gauchospace. This course has a Gauchospace site, available to enrolled students and invited guests at https://gauchospace.ucsb.edu. The site contains a week-by-week schedule of which chapters I intend to cover. The schedule is subject to change.

Textbook. We will use “The Rising Sea: Foundations of Algebraic Geometry” by Ravi Vakil (Stanford University) as our primary textbook. This book is published online (no hardcopy available), and we will continue to use the September 2015 edition, available at http://math.stanford.edu/~vakil/216blog/FOAGsep1815public.pdf. I will post the textbook on the course’s Gauchospace page for your convenience. The main website for the textbook is located at https://math216.wordpress.com.

Office Hours. I will hold office hours in South Hall 6708 on Mondays and Wednesdays 2:00-3:00 and also by appointment at other times.

Grading. The textbook has lots of exercises and there will be a weekly assignment. Your course grade will be based on these weekly assignments (65%) and on a final exam (35%).

Pass/No Pass policy. Students taking this course on a Pass/No Pass basis will be required to do a reasonable number of the problems on the weekly assignments. The instructor will inform students if he feels that they are not doing a reasonable number. Such students are not required to take the final exam.

Final Exam. The final exam is scheduled for 8–11 a.m. on Monday, March 14. The exam will be an individual oral examination lasting approximately 20 minutes. The exam question is: “What did you learn in this course?”