

MAT 738 Introduction to Algebraic Geometry, Spring 2017

Instructor: Professor Steven P. Diaz

Office: Carnegie 317C

Office Hours: Tuesday 11:15-12:00 noon, Wednesday 1:00-2:00 pm, Thursday 2:15-3:00 pm.

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Text: Algebraic Geometry by Robin Hartshorne, GTM 52, Springer-Verlag.

Final Exam: Tuesday, May 9, 2017 3:00-5:00 pm.

I hope to cover Chapter I Sections 1,2,3,4,5,7, Chapter II Sections 1,2, and Chapter III Section 4. Additional material may be covered if time allows.

Requirement for an A: Hand in correct solutions to at least 10 homework problems, including at least one from each of the following sections Chapter I Sections 1,2,3,4,5,7, Chapter II Sections 1,2. You may discuss homework problems with each other (in fact I encourage you to do so); however, you should not hand in a problem unless you feel you contributed to its solution (do not simply copy someone else's solution). You may consult other books or publications except that you may not consult any source that specifically solves problems from the Hartshorne text.

Learning Outcomes: Learn the material in the indicated sections of the textbook. Become familiar with the basic objects in algebraic geometry: algebraic varieties in affine and projective space, Zariski topology, dimension of algebraic varieties, regular and rational maps between algebraic varieties, singular and nonsingular algebraic varieties, tangent spaces to algebraic varieties, basic intersection theory, sheaves, schemes, and cohomology.

**Students with Disabilities:** If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS), <http://disabilityservices.syr.edu>, located in Room 309 of 804 University Avenue, or call 315-443-4498 for an appointment to discuss your needs and the process for requesting accommodations. ODS is responsible coordinating

disability-related accommodations and will issue students with documented Disabilities Accommodation Authorization Letters, as appropriate. Since accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible. You are also welcome to contact me privately to discuss your academic needs although I cannot arrange for disability-related accommodations.

**Academic Integrity:** The Syracuse University Academic Integrity Policy holds students accountable for the integrity of the work they submit. Students should be familiar with the Policy and know that it is their responsibility to learn about instructor and general academic expectations with regard to proper citation of sources in written work. The policy also governs the integrity of work submitted in exams and assignments as well as the veracity of signatures on attendance sheets and other verifications of participation in class activities. Serious sanctions can result from academic dishonesty of any sort. For more information and the complete policy, see <http://academicintegrity.syr.edu>. In this course could result in the grade penalty of receiving a F for the course.

**Religious observances policy.** SU religious observances policy recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holidays according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to are religious observance provided they notify their instructors before the end of the second week of classes. For fall and spring semesters, an online notification process is available through MySlice (Student Services -> Enrollment -> My Religious Observances) from the first day of class until the end of the second week of class.

