

Introduction to Algebraic Geometry

MATH 60710

TIME AND PLACE (LECTURES): M-W-F 1:55p-2:45p, Pasquerilla Center 116

INSTRUCTOR: **Claudia Polini**

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OFFICE HOURS: M-F 12:50–1:40 in Hurley 272

TEXTBOOK: *Algebraic Curves: An Introduction to Algebraic Geometry* by Fulton and
Commutative Algebra with a View Toward Algebraic Geometry by Eisenbud

OTHER TEXTS: *Introduction to Commutative Algebra* by Atiyah and MacDonal
Algebraic Geometry by Hartshorne
A Geometry of Syzygies by Eisenbud
Commutative ring theory by Matsumura
Cohen-Macaulay rings by Bruns and Herzog

Course Outline

This course will be an introduction to Algebraic Geometry. I will develop the Commutative Algebra that is needed along the way. I will assume knowledge of groups, rings, ideals, modules and isomorphisms.

Assignments

I will assign every week a set of homework assignments. The homework will not be collected but selected homework assignments will be presented by the students on class on Fridays. I strongly advise you to do the assignments for a better understanding of the material.

An important component of the course will be the presentations (done by each one of you) from the book *A Geometry of Syzygies* by Eisenbud. The presentations will take place during the Student Algebraic Geometry/Commutative Algebra Seminar.

Student AG/CA seminar

The Student Algebraic Geometry/Commutative Algebra Seminar will meet on the following Mondays: Sept 14, Sept 28, Oct 12, Nov 2, Nov 16 and Nov 30 at 4pm in Hurley 258. The students that will not present in the AG/CA seminar will present selected homework assignments or background material for *A Geometry of Syzygies* by Eisenbud on class on Fridays.