

ALGEBRA II CLASS FALL 2011 AND SPRING 2012

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This will be a class on **introduction to Algebraic Geometry**. It is for students who followed Algebra I in 2010-2011.

_ Zariski topology

- Affine Schemes

-Projective schemes

-Line bundles and linear systems

-Curves and Surfaces

-Riemann Roch

-Algebraic dynamics

The course will not hesitate to have rigorous commutative algebra when needed. It will also emphasize the parallels between Number Theory and Algebraic Geometry (comparison Number fields and function fields for example)

References:

I Shafarevich :Basic Algebraic Geometry

R.Hartshorne:Algebraic Geometry

D Eisenbud, J Harris :Schemes

A Grothendiek : Elements de geometrie Algebrique