

Syllabus  
Algebraic Geometry  
Fall 2007

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Topics to be covered: Schemes – affine, projective and abstract, morphisms – affine, projective, flat, proper etc., cohomology theory of schemes, tangent space & singular locus, some classical varieties – Grassmannians & their Schubert varieties, determinantal varieties.

Pre-requisites: Basic algebra and basic topology.

Suggested texts: Instructor's in-class lecture notes may be supplemented with the following:

1. D. Eisenbud and J. Harris, The geometry of schemes, Grad. Texts in Math #197., Springer.
2. R. Hartshorne, Algebraic geometry, Grad. Texts in Mathematics, 52.
3. D. Mumford, The red book of varieties and schemes, Lecture Notes in Math, #1358.