

Math 87000: ALGEBRA II COURSE - SPRING 2008 [91876]

Meets W, 4:15 - 6:15pm

Prof. Lucien Szpiro

The course will cover commutative algebra for number theory and algebraic geometry. In particular, Tensor products, localisation, flatness; Projective modules, rank, invertible modules, Grothendieck K- groups, Picard group, Universal algebras, Kähler differentials, discriminant, different, duality, Zariski topology, $\text{Spec}(A)$, sheaves, coherent sheaves, schemes, projective schemes, heights of points, Metrized line bundles.

The basic books are:

1-Athiah, Mac Donald

2-Matsumura

3-Eisenbud

4-Notes on my web site (the beginning is translated into English; the whole thing is in French)

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