Math 423/502 - Spring 2014
Algebra II

Time and Location: MWF 1:00-2:00, MATH 204.

Instructor: Kalle Karu.
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Office Hours: Monday 2-3, Thursday 11-12.

Textbook: *Elementary Algebraic Geometry* by Klaus Hulek.

Course website: `www.math.ubc.ca/~karu/m423`

Course description.
This is an introductory course in commutative algebra/algebraic geometry. We will use algebraic geometry to motivate theorems in commutative algebra, such as Hilbert Basis Theorem, Hilbert Nullstellensatz and others. In the algebraic geometry side we will introduce the basics of affine and projective varieties, study their properties, such as irreducibility, smoothness, dimension. In all cases we try to relate the geometric ideas with notions in algebra.

Prerequisites. Some background from ring theory will be assumed: polynomial rings, ideals, quotient rings.

Exams and homework. We will have one midterm exam, on Wednesday March 5, in class. The final exam will be a take-home exam. Homework will be handed out weekly.

Marking. Your course mark will be based on your homework (40%), midterm (20%) and final exam (40%).