

**Algebraic Geometry and Commutative Algebra. Part 1.
Syllabus.**

Affine algebraic varieties

Zariski topology

Noether's normalization lemma

Hilbert's basis theorem and Nullstellensatz

Projective varieties and general algebraic varieties

Products of algebraic varieties

Separated and complete varieties

Decomposition into irreducible components

Dimension

Smooth points and tangent spaces

Degree

Classical examples of algebraic varieties

Syllabus of the second part of the course