Algebraic Geometry and Commutative Algebra

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This is the second part of year long a basic course for toar sheiny in algebraic geometry complemented by necessary facts from commutative algebra.

The main (interrelated) topics of the second part of the course are:

(i) Theory of algebraic curves (including Riemann-Roch theorem)
(ii) Sheaf theory and its applications in Algebraic Geometry

Books

I will mostly follow the book by
G.R.Kempf "Algebraic varieties, Cambridge University Press
(London Math. Society, Lecture Notes Series, v.172)"

Sometimes for exercises I will use the book by
M.F. Atiyah, I.G.MacDonald "Introduction to commutative algebra".

Home works.

I will be giving problem assignments. These problem assignments are the integral part of the course - they will contain many important points for which there is not enough time in the course itself.

Homeworks will be graded by Dmitry Gurevich (he is currently a Ph. D student at the Weizmann Institute).