

Spring 2010, Course 18.706, Noncommutative algebra

MW 3–4:30, Room 2-146

Instructor: Roman Bezrukavnikov

The course will be based on lecture notes by Michael Artin and Pavel Etingof available at the course webpage

<http://math.mit.edu/~bezrukav/fall10.html>

The beginning covers general topics relevant to anyone with an interest in things algebraic: Morita theory, Jordan-Hoelder and Krull-Schmidt Theorems, Ore localization, central simple algebras and Brauer group etc.

The course then proceeds to more specialized topics, with a view towards (what some people call) noncommutative algebraic geometry – PI rings, Gelfand-Kirillov dimension and growth of algebras. See Artin's notes for more details.

Biweekly homework assignments will be given.