

Fall 2014

CUNY Ph.D. Program in Mathematics

MATH 87000: Topics in Algebraic Number Theory [25211]

Meets Thursdays, 2:00pm - 4:00pm, 3 credits. Rm. TBA

Prof. V. Kolyvagin

ABSTRACT:

The course will be concentrated around study of arithmetic of global and local cyclotomic fields.

Main topics will include: ideal class group, analytical class number formula, Kummer method for study Fermat's equations over cyclotomic fields and its further developments, ABC conjecture for number fields and its applications for study Fermat's equations over cyclotomic fields.

It is supposed that students have had a 1-year algebra course and are familiar with the theory of divisors in number fields.

The book to be used: Number Theory by Borevich and Shafarevich.