

The Graduate Center of CUNY
Ph.D. Program in Mathematics
Course Syllabus

Course Title: Topics in Algebraic Number Theory

Course #: MATH 87000

Time and Location: Fall 2016, Thursdays, 2:00pm-4:00pm , room 6417

Instructor Name: V. Kolyvagin

Contact Information: VKolyvagin@gc.cuny.edu

Pre-Requisites: _____

Office Hours: Thursdays, 1:00pm-2:00pm

Description:

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 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.