Number theory I

MATH-GA 2210.001

Spring Semester 2014

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Time and place: Wednesdays, 7:10 – 9:00 PM, CIWW 517.

Exams: There will be one in-class midterm and a final.

Program: This course is a graduate level introduction to algebraic number theory, in which we will cover fundamentals of the subject. Topics include: rings of integers, Dedekind domains, factorization of prime ideals, ramification theory, Minkowski's theorem, the theory of the valuation...

Textbook: Neukirch. Algebraic number theory

Prerequisites: Undergraduate elementary number theory, Abstract algebra, including groups, rings and ideals, fields, and Galois theory; e.g. undergraduate algebra I and II.

All course numbers in the above list should be followed by "or equivalent" especially the algebra's courses.

Practical matters. I will make use of my website. In particular, problem sets will be posted there and not distributed in class. I plan to give weekly homework assignments, to be posted on Wednesdays and due to the next Wednesday. Problem sets will be challenging; you will be expected to cope with this in appropriate ways, such as forming study groups.