MATH 538: Algebraic Number Theory

Sujatha Ramdorai

2014W Term 2 (January-April, 2015)

T Th 2:00-3:30 p.m.

MATX 1102

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Office Hours: By appointment

Course Outline: This will be a standard graduate course in Algebraic number theory. We shall study global fields, rings of integers, ideal theory and the class number. We will then move on to study completions and local fields and valuation theory. Subsequently, we shall move on Ramification theory, the discriminant and different and prove Dirichlet's unit theorem.

The pre-requisites are basic algebra (323) and basic number theory (312).

Textbook: J. Neukirch: Algebraic Number Theory.

Evaluation: There will be periodic assignments. Each student is expected to give 1-2 lectures on an assigned topic within the framework of the course. The final grade will be based on these and classroom participation. There will be no final exam for the course.