

Syllabus for Math 568 Fall 2014

Instructor: Tom Tucker.

Text: Janusz, *Algebraic Number Fields*. There will also be class notes posted on the web.

Prerequisites: A basic understanding of commutative algebra (commutative rings, ideals, prime ideals, localization) and Galois theory.

The course will cover: The theory of rings of integers in number fields. The main goals in this course are to prove (a) that the integral closure of a Dedekind domain in a finite separable closure is itself a Dedekind domain, (b) the Minkowski theorem on the finiteness of the class group and the (c) Dirichlet unit theorem.

Homework: There will be weekly homework assignments.

Grading: The grades will be determined as follows: 1/3 homework presentation, 1/3 take-home midterm, 1/3 take-home final.

Office hours: MW 10:30 – 11:50, 918 Hylan.