Department of Mathematics & Statistics
Concordia University

> **MAST 693 (MAST 833A)**
> Algebraic Number Theory
> ***Fall 2015***

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Textbook: *Number Fields* by Daniel A. Marcus, Universitext, Springer-Verlag.

Topics: Number Fields and Ideals. Dedekind domains, unique factorization of ideals, ideal class groups. Geometry of numbers, finiteness of the class number and the unit theorem. Special Fields (quadratic, cyclotomic, etc.), applications to Fermat's last theorem. Analytic Methods, Zeta and L-functions, analytic continuation, density theorems.

Evaluation: Assignments and presentation in class on a chosen topic.