



MAS 6932 Section 3F93 – Special Topics in Algebra – Spring 2019

Instructor: Dr. Richard Crew

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Office Hours: LIT 404, times TBA

Course meeting time and place: MWF6 in LIT 233>

Introduction

This course continues last semester's topics course, and will cover the following:

- Central simple algebras over local fields
- yet more group cohomology
- F-isocrystals and the slope decomposition
- The fundamental class and the reciprocity isomorphism
- Weil groups of local fields
- Lubin-Tate groups and the existence theorem.
- Explicit reciprocity laws

This will probably keep us busy for the whole semester, but if time permits we will cover some more advanced topics, such as perfectoid fields and Fontaine's theory of p-adic Galois representations.

There is no fixed text for this course. The lectures will be based on a set of notes currently in preparation. Much of the material will come from the following references, which are highly recommended:

Serre, Local Fields, Springer.

Cassels and Frohlich (eds.), Algebraic Number Theory, London Math. Soc.

Prerequisites

MAS 6331-2, MAS 6931 and a sense of adventure.

Course Format and Grading

The final course grade will be based on homework sets and class participation. We will probably have the same rigorous homework schedule as last semester.

Course Policies

Attendance is not mandatory but highly recommended. Print out the notes to class and bring them to class. If you miss a class, it is your responsibility to find out what happened. This policy is compatible with University regulations on attendance.

Students requesting accommodations for disabilities should register with the Disability Resource Center. Once registered, the student will be given a letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Students are expected to provide feedback on the quality of instruction by completing online evaluations. Typically this process takes place during the last weeks of semester. The results of the evaluations are available when they are tabulated.

Metadata

This web page is the authoritative source for the course syllabus and supersedes all previous versions.



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