PURE MATH 945: ARITHMETIC DYNAMICS

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Text: Course notes to be distributed

Material

Overview of the dynamical Mordell–Lang problem, linear recurrence sequences, polynomial–exponential Diophantine equations, background from algebraic geometry, valuations, the Skolem–Mahler–Lech theorem, étale maps and a geometric reformulation of the Skolem–Mahler–Lech theorem, Noetherian topological spaces, automata and Derksen's positive characteristic analogue of the Skolem–Mahler–Lech theorem.

Depending on how the course goes, some topics may be omitted or additional topics may be added.

Determination of grades

Grades will be determined from the following:

- Assignments (80%)
- Final exam (20%)

Assignments will be posted on Learn. Your assignment grade will be determined by averaging the grades from all assignments. Assignments are to be handed in via Crowdmark.