

MAST 699 (MAST 833), Sec. D
Topics in Algebra
Winter 2021

Note: All lectures and office hours will be held online.

- Instructors:** Dr. G. Rosso
Email: giovanni.rosso@concordia.ca
- Office Hours:** By Zoom appointment, email instructor for an appointment.
- Class Schedule:** Wednesday--Friday, 12:30-13:45 via Zoom; link will be available on Moodle. The lecture will be recorded and available on Moodle.
- Textbook:** Silverman *"The Arithmetic of Elliptic Curves"* and *"Advanced (suggested) Topics in the Arithmetic of Elliptic Curves"*.
- Final Grade:** **For Masters:** assignments 100% (Will be available on Moodle).
For PhD: assignments 75%; final Zoom Presentation 25%.
- If the grading scheme for this course includes graded assignments, a reasonable and representative subset of each assignment may be graded. Students will not be told in advance which subset of the assigned problems will be marked and should therefore attempt all assigned problems.
- Topics:** Reminder about elliptic curves (as C modulo a lattice and as projective curve), and some chosen topics among: Complex multiplication and abelian extension for CM fields; the formal group at the origin and ordinary/supersingular curves; Tate uniformisation for elliptic curves over a local field; Selmer groups; Heegner points; the Neron model; BSD conjecture for elliptic curves over function fields. Subject to modification according to the taste of the audience.

Academic Integrity and the Academic Code of Conduct

This course is governed by Concordia University's policies on Academic Integrity and the Academic Code of Conduct as set forth in the Undergraduate Calendar and the Graduate Calendar. Students are expected to familiarize themselves with these policies and conduct themselves accordingly. "Concordia University has several resources available to students to better understand and uphold academic integrity. Concordia's website on academic integrity can be found at the following address, which also includes links to each Faculty and the School of Graduate Studies: concordia.ca/students/academic-integrity." [*Undergraduate Calendar, Sec 17.10.2*]

Behaviour

All individuals participating in courses are expected to be professional and constructive throughout the course, including in their communications.

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Extraordinary circumstances

In the event of extraordinary circumstances and pursuant to the [Academic Regulations](#) the University may modify the delivery, content, structure, forum, location and/or evaluation scheme. In the event of such extraordinary circumstances, students will be informed of the change.