

Mathematics 342, Section 201
Algebra, Coding theory and Cryptography
Term 2, 2021. TTh 9:30 - 10:50 on zoom

Instructor: Zinovy Reichstein

Course description: Math 342 is an introduction to abstract algebra and error-correcting codes. Both proof and algorithmic techniques will be emphasized. Topics will include coding and decoding schemes, coding bounds, perfect codes, finite fields, linear codes, syndrome decoding, Hamming codes and cyclic codes. If time permits, we will also discuss covering codes.

Homework: Homework will be assigned on a bi-weekly basis and collected on Canvas. The lowest homework grade will be dropped. Students are allowed to consult one another concerning homework problems, but solutions submitted for credit must be written by the student in his or her own words. Copying solutions from another student, from the web or from any other source, and turning them in as your own is a violation of the Academic Code.

Evaluation: Course mark will be based on the homework, three quizzes and the final exam. The total course mark will be the higher of the following:

Total1 := HW (25%) + Quizzes 1, 2, 3 (15% each) + Final exam (30%)

Total2 := HW (25%) + Best two quizzes (30%) + Final exam (45%)

The quizzes are scheduled for Tuesday, February 2, Thursday, March 4 and Tuesday, March 23. In calculating the homework total, I will drop the lowest homework score for every student.

Missed exam policy: You can miss one problem set or one quiz, no questions asked. (See the marking policy above.) Beyond this, there will be no make up or alternate problem sets or quizzes.

Missed finals are not handled by me or the Mathematics Department. Students with legitimate reasons for missing the final exam should request a “Standing Deferred” status through their faculty.

Students with disabilities: If you need special accommodations, please contact me early in the term.

Further information will be provided on Canvas.