Mathematics 322
Introduction to group theory
Section 101
Mathematics Building 104, MWF 14:00-15:20

- Instructor: Z. Reichstein
- Office: 1105 Math Annex
- Phone: 2-3929
- Course website: `http://www.math.ubc.ca/~reichst/322syll.html`

Textbook: D. S. Dummit, R. M. Foote, Abstract algebra, 3rd edition.

Course description: This year the department is introducing a new two term undergraduate algebra sequence, Math 322-323. (Previously only one term of abstract algebra, Math 322, was offered.) Starting this term, Math 322 will be devoted entirely to group theory, with an emphasis on finite groups. Topics will include:

- Definition of a group.
- Permutation and linear groups.
- Subgroups, cosets, Lagrange's Theorem.
- Homomorphisms, normal subgroups and quotients.
- Direct and semi-direct products.
- Group actions, p-groups and Sylow Theorems.
- Composition series, Jordan-Holder theorem.
- Solvable and nilpotent groups.
- Free groups; generators and relations.
- Finitely generated abelian groups.

Evaluation: Homework assignments will be posted on the course website and collected in class. Late homework will not be accepted. The solutions you turn in should be your own, written in your own words. There will be two midterms and a final exam. The midterms are scheduled for Thursday, October 11 and Thursday, November 8. The final exam will be scheduled by UBC; its time and place will be announced later in the term. I will compute the total term mark in two ways,

Homework 20%, First midterm 20%, Second midterm 20%, Final exam 40%, and

Homework 20%, Best midterm 20%, Final exam 60%,

and will use whichever of these two numbers is higher.

Students with disabilities: Students with documented disabilities who may need special accommodations should make an appointment with me early in the term.