McGill University
Department of Mathematics and Statistics
MATH 582 Algebraic Topology
Winter 2023

Instructor: Piotr Przytycki
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Office hours: TBA

Textbook: Allen Hatcher: Algebraic Topology

Prerequisites: Math 576 or equivalent or permission of instructor

Syllabus: CW-complexes, cellular approximation theorem. Homotopy groups, long exact sequence for a fiber bundle. Whitehead theorem. Freudenthal suspension theorem. Singular and cellular homology and cohomology. Hurewicz theorem. Mayer–Vietoris sequence. Universal coefficients theorem. Cup product, Kunneth formula, Poincare duality.

Half of the class time will be devoted to the lecture per se. The other half will be devoted to solving together the weekly problems from the homework assignment (they will not be due in writing, but students will be expected to show the solutions on board during the class).

Assessement:
75% final exam from the proofs.
25% two midterms from the problems similar to homework assignments, where solving at least half of the midterm problems suffices to obtain the maximal score.

Midterm dates: February 14 and March 30

The final grade will be increased for students presenting regularly good solutions of homework assignments.

Academic Integrity: McGill University values academic integrity. Therefore all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see http://www.mcgill.ca/integrity/ for more information).

Language Policy: In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit in English or in French any written work that is to be graded.

Extraordinary Circumstances: In the event of extraordinary circumstances beyond the University's control, the content and/or evaluation scheme in this course is subject to change.