MATH 427 & 527, SECOND WINTER TERM, 2018-2019

1. Contact information

The instructor for this course is me, Ben Williams. I may be reached at `tbjw@math.ubc.ca`.

The course website is `http://www.math.ubc.ca/~tbjw/527/index.html`.

Office Hours:

By appointment, in MATX 1205.

2. Meeting Times

The course meets Mondays, Wednesdays and Fridays at 10 in MATH 105.

3. Textbook

The textbook for this course is *Algebraic Topology* by A. Hatcher. A free online pdf version is available.

4. Homework and exams

Homework will be assigned throughout the course, at a rate of approximately one assignment every two weeks. The first assignment will be due on Friday 11 January, in class. There will be a final exam.

5. Overall Course Grade

The overall course grade will be assigned based on homework and exams. The homework will be worth 40% of the overall grade and the final 60%

6. List of Topics

The following is a provisional list of topics that will be covered.

(1) The topology of CW complexes
(2) Cellular and axiomatic homology
(3) Singular homology
(4) The Künneth formula
(5) Universal coefficients for homology.

(6) Cellular Cohomology.
(7) Manifolds and Poincaré duality.
(8) (time permitting) Sheaf cohomology.

Applications will be considered alongside the theory.