

University of Regina
MATH 842
Algebraic Topology
Winter 2017

Lectures: Monday-Wednesday-Friday 1:30 – 2:20 pm in CW 307.14.3

Instructor: Paul Arnaud Songhafouo Tsopmene, Office: CW 307.26, Phone: 306-585-4422, E-mail: pso748@uregina.ca
(please write Math 842 in the subject line of your emails)

Office hours: Wednesday 11:00 am– 12:30 pm or by appointment.

Course Description: A course intended to introduce students to algebraic topology. Topics include the fundamental groups, and homology and cohomology groups of topological spaces.

Textbook/References: (1) *Algebraic Topology*, by Allen Hatcher (Chapters 1, 2 and 3). (2) *A concise Course in Algebraic Topology*, by J. P. May (only Chapter 1). Those books are available online. You can find the first one by following the link:

<https://www.math.cornell.edu/hatcher/AT/AT.pdf>

For the second one you can use the link:

<https://www.math.uchicago.edu/may/CONCISE/ConciseRevised.pdf>

Chapters covered: Chapter1: Point-set Topology(a brief recall) and Homotopy Type; Chapter2: Fundamental Group; Chapter3: Homology. If time allows, we will cover or start one more chapter entitled: Cohomology.

Assignments, Presentations, Final Exam: Six assignments will be given and will be marked (one assignment every two weeks). You will have one week to give me back your assignment. There will be n (n stands for the number of students) presentations (20 minutes each) at the rate of one per person. Presentations will be also marked. I will let you know by email who presents what, and the date as well. The final will be on April 28 from 2:00 to 5:00 pm. (location TBA). Examination is closed-book tests. Calculators are not permitted.

Course grade: Your course grade will be computed using the following weights.

Assignments Presentation Final Exam

$\frac{6}{14} \approx 43\%$ $\frac{1}{14} \approx 7\%$ $\frac{7}{14} = 50\%$

Assignments and solutions to assignments will be posted on UR Courses.

University's Mental health information: Posted on UR Courses. Any student with a disability who may need accommodations should discuss these with the course instructor after contacting the Coordinator of the Centre for Student Accessibility, RC 251, at 306-585-4631.