



# UNIVERSITY OF CALGARY

## DEPARTMENT OF MATHEMATICS AND STATISTICS COURSE OUTLINE

1. **Course:** PMAT 607 L01, Topology II

MWF, 11:00-11:50, MS 452

Instructor: Kristine Bauer Office: MS 478 Phone: (403)220-7675 e-mail: [bauerk@ucalgary.ca](mailto:bauerk@ucalgary.ca)

Office Hours: by appointment

Desire 2 Learn (D2L) course name: PMAT 607 L01 – (Winter 2015) – Topology II

2. **Prerequisites:** PMAT 505 or consent of the department.

[http://math.ucalgary.ca/math\\_unitis/courses/w15/PMAT607?destination=courses%2Fw15](http://math.ucalgary.ca/math_unitis/courses/w15/PMAT607?destination=courses%2Fw15)

3. **Grading:** The University policy on grading and related matters is described sections [F.1](#) and [F.2](#) of the online University Calendar. In determining the overall grade in the course the following weights will be used:

Assignments (6)	40%
Midterm Quiz	20% (March 6)
Final Examination	40% (To be scheduled by the Registrar)

Each piece of work (assignment, midterm quiz or final examination) submitted by the student will be assigned a letter grade. The final grade for the course will be a weighted grade point average of the individual letter grades, using the weighting factors in the table above

4. **Missed Components of Term Work:** The regulations of the Faculty of Science pertaining to this matter are found in the Faculty of Science area of the Calendar in [Section 3.6](#). It is the student's responsibility to familiarize himself/herself with these regulations. See also [Section E.6](#) of the University Calendar

5. **REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME-ACTIVITY.** If you have a clash with this out-of-class-time-activity, please inform your instructor as soon as possible so that alternative arrangements may be made for you.

6. **Course Materials:** *Topology, Andrew Hatcher, Cambridge University Press, 2002.*  
Available for download <http://www.math.cornell.edu/~hatcher/AT/ATpage.html>

7. **Examination Policy:** The quiz and exam are closed book with no aids allowed. Students should also read the Calendar, [Section G](#), on Examinations.

8. **Writing across the curriculum statement:** In this course, the quality of the student's writing in assignments will factor in the evaluation of those reports. Students are strongly encouraged to develop familiarity with professional report standards. See also [Section E.2](#) of the University Calendar.

9. **OTHER IMPORTANT INFORMATION FOR STUDENTS:**

(a) **Academic Misconduct:** (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the University Calendar under [Section K](#). Student Misconduct to inform yourself of definitions, processes and penalties

(b) **Assembly Points:** In case of emergency during class time, be sure to FAMILIARIZE YOURSELF with the information on [assembly points](#).

(c) **Academic Accommodation Policy:** Students with documentable disabilities are referred to the following links: [Calendar entry on students with disabilities](#) and [Student Accessibility Services](#).

- (d) **Safewalk:** Campus Security will escort individuals day or night (<http://www.ucalgary.ca/security/safewalk/>). Call 220-5333 for assistance. Use any campus phone, emergency phone or the yellow phones located at most parking lot pay booths.
- (e) **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). As one consequence, students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information see also. <http://www.ucalgary.ca/secretariat/privacy>.
- (f) **Student Union Information:** [VP Academic](#) Phone: 220-3911 Email: [suvpaca@ucalgary.ca](mailto:suvpaca@ucalgary.ca).  
SU Faculty Rep. Phone: 220-3913 Email: [sciencerep@su.ucalgary.ca](mailto:sciencerep@su.ucalgary.ca); [Student Ombudsman](#)
- (g) **Internet and Electronic Device Information:** You can assume that in all classes that you attend, your cell phone should be turned off unless instructed otherwise. Also, communication with other individuals, via laptop computers, Blackberries or other devices connectable to the Internet is not allowed in class time unless specifically permitted by the instructor. If you violate this policy you may be asked to leave the classroom. Repeated abuse may result in a charge of misconduct.
- (h) At the University of Calgary, feedback provided by students through the Universal Student Ratings of Instruction (USRI) survey provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses ([www.ucalgary.ca/usri](http://www.ucalgary.ca/usri)). Your responses make a difference - please participate in USRI Surveys.

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# Calendar for PMAT 607 (SUBJECT TO CHANGE)

Date	Topics	Deadlines
January 12-16	Review: Topological spaces, quotient spaces, cell complexes, maps of cell complexes.	
January 19-23	Chapter 0: Deformation retracts, homotopy, the homotopy extension property	HW 1 due January 23 in class
Jan. 26 – Jan. 30	Chapter 1: Paths and homotopies	
Feb. 2 - 6	Chapter 1: Fundamental group of $S^1$ , Van Kampen	HW 2 due February 6 in class
February 9 – 13	Chapter 1: Covering spaces	
February 16 -20		Reading week – no lectures
February 23 – 27	Chapter 1: Covering spaces	HW 3 due February 18 in class
March 2 - 6	Chapter 1: $K(G,1)$ ?	Midterm Exam March 6 (in class)
March 9 - 13	Chapter 2: Simplicial complexes	HW 4 due March 13 in class
March 16 - 20	Chapter 2: Chain complexes & homological algebra	
March 3 - 27	Chapter 2: Simplicial and singular homology	
March 30 – April 3	Chapter 2: Excision & relative homology	HW 5 due April 3 in class No class April 3
April 6 - 10	Chapter 2: Equivalence of simplicial & singular homology	
April 13– 15	Additional topics.	HW 6 due April 15 in class
April 18 – 29	Final Exam period	