

COURSE OUTLINE WINTER 2011

1. **Course ID and number, Course Title:** Pure Mathematics 607 – Topology 2
Lecture/Time: TBA
Instructor/Office/Phone/Email: Dr. Kristine Bauer MS 578 / 403-220-7675 / kristine@math.ucalgary.ca
Office Hours: TBA
Blackboard course name: PMAT 607 – (WINTER 2011) – TOPOLOGY II (W2011PMAT607L01)

2. **Prerequisites:** PMAT 505
(see Section 3.5C of Faculty of Science www.ucalgary.ca/pubs/calendar/current/sc-3-5.html
and Course Descriptions: www.ucalgary.ca/pubs/calendar/current/course-desc-main.html)

3. **Grading:** The University policy on grading and related matters is described in 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:

<i>Assignments</i>	[6]	40 %
<i>Midterm Test</i>	[1]	20 % (March 4)
<i>Final Exam</i>		40 % (Take-home final due April 22)

The various components above will be assigned a percentage score and will be combined with the indicated weights to produce an overall percentage in the course. The conversion table between course percentage and letter grade will be provided at least one week before the withdrawal deadline.

A passing grade in the Final Examination is essential for an overall grade of C- or better.

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: www.ucalgary.ca/pubs/calendar/current/sc-3-6.html. It is the student's responsibility to be familiar with these regulations. See also www.ucalgary.ca/pubs/calendar/current/e-3.html.
5. **REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME ACTIVITY.** If you have a conflict with any out of class time activity, please inform your instructor at least one week in advance of the activity so that other arrangements may be made for you.
6. **Textbook:** *Topology*, by Andrew Hatcher.
7. **Examination Policy:** Study aids such as books, notes and calculators will not be permitted during in-class exams. Students should also read the Calendar, Section G, on Examinations: www.ucalgary.ca/pubs/calendar/current/g.html
8. **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 K. Student Misconduct (<http://www.ucalgary.ca/pubs/calendar/current/k.html>) 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 at <http://www.ucalgary.ca/emergencyplan/assemblypoints>.
- (c) **ACADEMIC ACCOMMODATION POLICY.** Students with documentable disabilities are referred to the following links: Calendar entry on students with disabilities: <http://www.ucalgary.ca/pubs/calendar/current/b-1.html>
Disability Resource Centre: <http://www.ucalgary.ca/drc/>
- (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:** suypaca@ucalgary.ca.
SU Faculty Rep. **Phone:** 220-3913 **Email:** sciencerep@su.ucalgary.ca **Website** www.su.ucalgary.ca/home/contact.html.
Student Ombudsman: <http://www.su.ucalgary.ca/services/student-services/student-rights.html>
- (g) **INTERNET and ELECTRONIC COMMUNICATION DEVICE Information.** You can assume that in all classes that you attend, **your cell phone should be turned off**. 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.

Calendar for PMAT 607

Date	Topics	Deadlines
January 10-14	Review: Topological spaces, quotient spaces, cell complexes.	
January 17-21	Chapter 0: Maps of spaces and cell complexes, deformation retracts, homotopy	HW 1 due January 21 in class
Jan. 24 – Jan. 28	The homotopy extension property	
Jan. 31 – Feb. 4	Chapter 1: Paths and homotopies	HW 2 due February 4 in class
February 7 – 11	Chapter 1: Fundamental group of S^1	
February 14 -18	Chapter 1: Free products of groups and Van Kampen's theorem	HW 3 due February 18 in class
February 21 – 25		Reading week – no lectures
Feb. 28 – March 4	Chapter 1: Covering spaces	Midterm Exam March 4 (in class)
March 7 - 11	Chapter 1: $K(G,1)$	HW 4 due March 11 in class
March 14 – 18	Chapter 2: Simplicial complexes	BIRS Homotopy meeting
March 21 – 25	Chapter 2: Chain complexes & homological algebra	
March 28 – April 1	Chapter 2: Simplicial and singular homology	HW 5 due April 1 in class
April 4 – 8	Chapter 2: Excision & relative homology	
April 11 – 15	Chapter 2: Equivalence of simplicial & singular homology	HW 6 due April 15 in class
April 18 – 22	Final Exam period	Take-home final due April 22
April 18 – 22	Final Exam period	Take-home final due April 22