MATH 151A, TOPOLOGY I
FALL 2014

Instructor: Arunima Ray
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Course website: http://people.brandeis.edu/~aruray/151aF14
Lecture Time: MWTh 10-10:50a
Office: Goldsmith 205
Office Hours: M 11a-12noon, W 3-4p, and by appointment

Textbook: *Algebraic Topology* by Allen Hatcher
   The book is available online at http://www.math.cornell.edu/~hatcher/AT/ATpage.html. However, the physical copy is quite inexpensive and worth adding to the library of any mathematician.

Additional References:
Elements of Algebraic Topology by James Munkres
Introduction to Topological Manifolds by John M. Lee
Algebra by Serge Lang

Prerequisites: Basics of point-set topology and algebra

Course outline: This is an introductory course in algebraic topology. We will talk about the fundamental group, covering spaces, homology and (time permitting) cohomology. This translates to Chapters 1–3.1 of Hatcher.

Grading: Your grade will be determined as follows.

Problem sets: 60%
Midterm: 20%
Final: 20%

If there are any concerns about grading, please see me within one week of getting the assignment/exam back, and before the final. *You must hand in both exams and a majority of the problem sets to receive a passing grade.*

Problem sets: Problem sets will be posted online at regular intervals. There will be roughly 5 problem sets, usually due at the beginning of class on a Thursday. Assignments turned in late are subject to a late penalty, and in no case will homework be accepted more than one week after it is due.

Homework is a very important part of this course. I encourage you to work together on problem sets; however, your write-up should be your own. It is not acceptable to look up solutions to homework problems in any written form; in particular, *you are not allowed to look up solutions online.*

Exams: There will be two exams in this course: a midterm and a final. The midterm will be around the middle/end of October and either in-class or take-home (I will let you know at least a week before the exam date). The final will be comprehensive and take-home.

Expectations: I don't expect you to follow all the details of a math lecture in real time, but I do expect you to go home and fill in the gaps in your understanding between lectures. In particular, I expect you to supplement my lectures with reading the textbook, which is extremely well-written and readable.

My goal is to distill a large amount of information into a concise presentation, and you should pay attention to my advice about what's important and what isn't.

I also expect you to attend lecture and arrive on time. Regularly missing class puts you at a real disadvantage for effectively learning the material.

Disability support: If you are a student with a documented disability on record at Brandeis University and wish to have a reasonable accommodation made for you in this class, please see me immediately.

Academic Integrity: You are expected to be familiar with, and to follow, the University?s policies on academic integrity. Please consult Brandeis University Rights and Responsibilities for all policies and procedures. All policies related to academic integrity apply to in-class and take home projects, assignments, exams, and quizzes. Students may only collaborate on assignments with permission from the instructor. Allegations of alleged academic dishonesty will be forwarded to the Director of Academic Integrity. Sanctions for academic dishonesty can include failing grades and/or suspension from the university.

Disclaimer: I reserve the right to make changes to this syllabus and to course policies during the semester. Such changes will be announced in lecture and/or by email when they are made. A copy of this syllabus will be available on my website and will be kept up to date.

Last updated: August 12, 2014