Syllabus

Math 551 Introduction to Topology

TuTh • 11:45 AM - 1:00 PM • 2102 SAS Hall

Instructor: Radmila Sazdanovic
Email: rsazdanovic@math.ncsu.edu
Office: SAS 3120
Office Hours: TBA or by appointment

Course materials:


Prerequisite: MA 426

Description: Topology focuses on qualitative rather than quantitative properties of (topological) spaces and how they change under natural maps. The first part of the course covers point-set topology, containing notions and core techniques useful in many areas of mathematics. The second part is an introduction to some really cool stuff, algebraic topology, the window to most of modern topology and its applications. Lectures will complement the perspective provided in the textbook and, in addition to the various proof techniques, support rigorous arguments with pictures when possible since topology is an inherently visual subject.

Some of the topics we will cover: Topological spaces, continuous functions, metric spaces, connectedness, compactness, quotients spaces, countability and separation axioms, Urysohn Theorem, manifolds, homotopy of maps, and, time permitting, the fundamental group and the classification of surfaces.

Structure:

- Homework: Homework assignments will be posted on the course webpage and/or distributed in class, typically every week. Problem sets are due on Tuesdays at the beginning of class. If you can not make it to class, put it in my mailbox before the due date.
  Each homework consists of a reading assignment from the book, a list of exercises, and a list of problems. You are expected to complete all the “exercises”. Doing the full assignment is absolutely crucial! Late homework is generally not accepted.
  You are welcome to work in groups, exchange ideas and help each other understand how to approach problems, but the work you turn in must be your own! You can use other resources to solve the problems, but all of them must be cited in your homework (this includes Wikipedia and Google as well as the names of other students you have worked with on an assignment).
  Homework must be legible, well-organized, and written in complete sentences. Handwritten work is fine, but you are strongly encouraged to type up the problems in LaTeX.
- Attendance Participation in class activities, group work, and class discussions will be a key contributor to your understanding of the material. Participation will be used to determine borderline grades.
Important dates:

- Midterm, Tuesday October 6, in class.
- Final exam, Tuesday, December 8, 2102 SAS Hall 8-11 AM.

Grading:

- 4%: Curious problem: long term project.
- 36%: Homework
- 25%: Midterm
- 35%: Final Exam: cumulative, comprehensive.

Regrades: All regrade requests should be directed in writing to Dr. Sazdanovic. Regrade requests will not be accepted more than one week after the relevant assignment was returned to you, nor will they be accepted after the final exam.

Accommodations for Disabilities: Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, student must register with the Disability Services Office [http://www.ncsu.edu/dso](http://www.ncsu.edu/dso), 919-515-7653. For more information on NC State’s policy on working with students with disabilities, please see the Academic Accommodations for Students with Disabilities Regulation at [http://policies.ncsu.edu/regulation/reg-02-20-01](http://policies.ncsu.edu/regulation/reg-02-20-01).

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Code of Academic Integrity: Students are required to comply with the university policy on academic integrity found in the Code of Student Conduct found at [http://policies.ncsu.edu/policy/pol-11-35-01](http://policies.ncsu.edu/policy/pol-11-35-01).

Class Evaluations: Online class evaluations will be available for students to complete during the last two weeks of class. Students will receive an email message directing them to a website where they can login using their Unity ID and complete evaluations. All evaluations are confidential; instructors will never know how any one student responded to any question, and students will never know the ratings for any particular instructors.

Modifications to This Document: This document may be modified as needed throughout the course. Changes will be announced.