Math 231br, Algebraic Topology

M/W 9:00 AM – 10:15 AM

WINTER 2024

Instructor: Hana Jia Kong   **Email**: canvas
Office Hours: TBD   **Location:** SC 310

Textbook: *Lectures on Algebraic Topology*, Haynes Miller [online version]

Class Policy:

1. **Grades** Biweekly Problem Sets: 100%

   (a) You can submit a final expository paper on a topic related to this course instead of one of the problem sets. The submission deadline is Apr 30th.

   (b) Biweekly problem sets will be distributed on Wednesdays (1.31, 2.14, 2.28, 3.20, 4.3, 4.17) and will be due in two weeks. The last problem set does not count towards the total grades.

   (c) Late submissions will not be accepted.

   (d) Collaboration on problem sets is allowed, but everyone must write up their solutions independently.

   (e) Any additional resources or references used for problem-solving should be cited.

   (f) Give credit to AI tools whenever used, even if only to generate ideas rather than usable text or illustrations.

2. **Office hours**

   (a) Office hours are held in SC 237.

   (b) You are welcome to stop by anytime for quick questions.

   (c) Email me to schedule a time if you want a one-on-one meeting.

Syllabus: We will follow the textbook from Lecture 54.

1. Vector bundles and principal bundles

2. Classifying spaces.

3. Spectral sequences.

4. Characteristic classes

5. Steenrod operations

6. Cobordism and applications