Math 961 – Algebraic Topology II
MSU – Spring 2019

Syllabus Addendum

As of March 11, 2020, MSU has decided that all courses will meet online until at least April 20, 2020. Our final course meeting is scheduled for April 24, 2020, therefore, since this course does not have a final exam, we will meet online for the *duration* of the semester.

I will primarily communicate with you all via email. Course notes and information will be posted on D2L. We will have live course meetings via Zoom.

Below I have outlined how I intend this course to run online.

> **Guiding philosophy:**
> - Meet regularly via Zoom
> - Cover through Chapter 16 of Milnor-Stasheff

Course Meetings

We will meet via Zoom **Mondays and Wednesdays at 1:30 pm**. These meetings will include some lecture and discussion. I will try to keep the length of the lecture to 45 minutes. Discussion may run longer if students wish.

- A link for each meeting will be posted on D2L.
- After lecture, I will post pdf notes on D2L.
- Lectures will be more summary and include fewer proofs; students will be responsible for reading and filling in details of arguments.
- I will assign reading for each lecture.
- I will assign exercises more frequently; assignments will be posted on D2L.
- Lectures may occasionally be replaced by pre-recorded videos for students to watch.

If you need to miss a lecture here or there I understand and the course can accommodate this. However, running successful online lectures will require a critical mass of participation from students. If you are having difficulties participating for any reason, e.g. lack of reliable internet, unstable living situation, general stress, please reach out to me and we will work together to find an appropriate solution.

Students who are *not registered* for the course are not obliged to continue; however, please let me know if you *do not* intend to continue so that I can drop you from the email list and I don't worry about you.

If you *are registered* I would like to see some effort made to participate. Attending the Zoom lectures regularly is one way to do this. However, participation could take different forms if need be. Specifically, if you cannot find a way to join the live lectures on Zoom, we can find an alternative method of participation.

The current situation with regard to COVID-19 is changing daily; I hope that our meetings can be a source of some stability in uncertain times. As the situation evolves, we may need to make adjustments to the format of the course. I am open to your suggestions and I hope we can work together to be productive.

Most importantly, this transition to online lectures is going to be a bit experimental. Technology can be finicky and not always reliable. I will do my best; but please let me know what is working or not working for you! I believe the key to success will be communication, so please stay in touch!

Tentative Calendar

Here is a tentative list of topics and dates for the rest of the semester. Reading assignments are indicated for the first four weeks. This is subject to change.

3/16   Hatcher, Algebraic Topology, Chapter 4 – Section 4.1, pages 337-348

3/18   Hatcher, Algebraic Topology, Chapter 4 – Section 4.2, pages 365-373

3/23   Davis & Kirk, Lecture Notes in Algebraic Topology, Chapter 7– Sections 7.1-7.4, pages 167-177

3/25   Davis & Kirk, Lecture Notes in Algebraic Topology, Chapter 7 – Sections 7.5-7.7, pages 177-185

3/30   Davis & Kirk, Lecture Notes in Algebraic Topology, Chapter 7 – Section 7.10, pages 190-193
        and Milnor & Stasheff – Chapter 12, pages 139-143;
        you may also want to read about fibrations and homology with local coefficients (these topics are
        covered in Hatcher's Algebraic Topology and in Davis & Kirk's Lecture Notes in Algebraic Topology.)

4/1   Milnor & Stasheff – Chapter 12, pages 143-148

4/6   Milnor & Stasheff – Chapters 13 &14

4/8   Milnor & Stasheff – Chapter 14

4/13   Milnor & Stasheff – Chapter 15

4/15   Milnor & Stasheff – Chapter 16

4/16   Milnor & Stasheff – Chapter 16

4/20   Milnor & Stasheff – Chapter 17 (if we get there)