MA 564, Spring 2023 (TTh 11:00AM–12:15PM @ PSY B37)

- **Instructor: Yu-Shen Lin**
  Office: CCDS 507
  Office hours: Tue 3-4pm, Wed 9:30-11:30, Thu 1-2:30pm.
  Email: yslin@bu.edu

- **Tutor room:**
  Please find the schedule below:
  http://www.bu.edu/math/undergraduate/resources/tutoring-room-schedule/

- **TextBook:**
  Title: Introduction to Topology: Pure and Applied, 1st Edition
  ISBN-13: 9780131848696

- **Homework:**

  1. There will be biweekly homework assignments (except for the first two weeks). You will have to turn in HW on Blackboard. **Late assignments will not be accepted for full credit unless with letter from dean/doctor due to family/medical emergency.** A late homework homework within a week will be multiplied by a factor of 75% and a homework with further delayed will be reduced to 40%. The lowest homework grades will be dropped.
  2. Every two weeks, I will send out an email about homework and the homework will be found on Blackboard (content).
  3. You are encouraged to discuss/work on the homework together, but you must write up your final answers by yourself. You are also encouraged to come to office hours for discussion of homework.

- **Exams:**

  1. There are one midterm and one final. All the exams will be held online and more information will be announced two week before the exams. **Midterm is on Feb 16**. The final is TBD by the University.

- **Grades:**
  The grades will be calculated base on the following: **Homework (40%), Midterm (20%) and Final exam (40%)** One can do

extra credit project for an additional 5% due May 4th with no further extension.

Syllabus The following is the topic we will cover this semester and the corresponding sections in the textbook (subject to change).

wk	Date	Topic
1	1/19	1.1-1.3 Topology and their basis
2	1/24, 1/26	2.1-2.3 Limit Points, Interior & Boundary
3	1/31, 2/2	3.1-3.2 Subspace & Product Topology
4	2/7, 2/9	3.3 Quotient Topology
5	2/14, 2/16	Midterm, 4.1 Continuity
6	2/23	4.2 Homeormophisms
7	2/28, 3/2	5.1-5.3 Metric Spaces
8	3/14, 3/16	6.1-6.2 Connectedness
9	3/21,3/23	6.3-6.4 Intermediate Value Theorem & Path Connectedness
10	3/28, 3/30	7.1-7.2 Compactness
11	4/4, 4/6	7.3-7.4 The Extreme Value Theorem and Limt Point Compactness
12	4/11, 4/13	9.1 Homotopy and the First Fundamental Groups π_1
13	4/18, 4/20	Some Properties of π_1 and Examples
14	4/25, 4/27	Applications of Topology