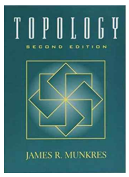
MAT4004: Topology 2 (2021 2nd Semester)	Instructor: Youngsik Huh yshuh@hanyang.ac.kr

Course Description : This course is designed to introduce the concept of homotopy(see wikipedia https://en.wikipedia.org/wiki/Homotopy for a brief introduction) and its applications, and targeted at 3rd or 4th-year undergraduate students. Among the topics are included *fundamental group*, *Jordan Curve Theorem* and *Seifert-van Kampen Theorem*. Finally we are going to see how the fundamental group can be used to distinguish geometric objects, for example surfaces, in topological sense.



Textbook :

Topology (2nd edition), James R. Munkres
(Mainly, Part II of this book will be covered)

Schedule and Topics

Week	Topics
1	Quotient Topology
2-6	Fundamental Group and applications
7	Jordan curve Theorem, Test-1
8-10	Seifert-van Kampen Theorem
11-12	Surfaces
13-15	Covering spaces
16	Discussion, Test-2

Evaluation

- Test1 (30%)+ Test2 (50%)+ Homework (20%)
- Any student checked to be absent **more than 5 times** will be **FAILED** in this course

Prerequisite: It will be assumed that the students have passed the courses "위상수학1(topology1)" and "현대대수1(modern algebra1)".