Instructor

朱一飞 ZHU Yifei

Huiyuan 3-419

8801 5911

zhuyf@sustech.edu.cn

Office hours: Monday 2:30-4:00 pm, Thursday 10:00-11:30 am

Grader: 徐若予 XU Ruoyu

Prerequisites

Abstract Algebra (MA214/219) or consent of the department.

Objectives

This course introduces basic notions and examples in general topology and algebraic topology, with a view towards more advanced analysis, (algebraic and differential) geometry, and topology courses.

References

[Y] 尤承业，基础拓扑学讲义，北京大学出版社，1997. (The main textbook, minimum requirement; good organization.)

[M] James R. Munkres, *Topology*, Prentice Hall, Inc., Upper Saddle River, NJ, 2000, Second edition of [MR0464128]. MR3728284 (A classic textbook; many in-depth, elaborate discussions and examples; somewhat old-fashioned; mostly optional reading on selected topics and mathematical exposition in general.)

[BBT] Tai-Danae Bradley, Tyler Bryson, and John Terilla, *Topology—a categorical approach*, MIT Press, Cambridge, MA, 2020. MR4232168 (A new textbook; supplementary with categorical perspectives.)

[B] 包志强，点集拓扑与代数拓扑引论，北京大学出版社，2013. (A recent textbook; supplementary with selected topics.)

[A] Mark Anthony Armstrong, *Basic topology*, Undergraduate Texts in Mathematics, Springer-Verlag, New York-Berlin, 1983, Corrected reprint of the 1979 original. MR705632 (For additional perspectives.)

Exams

There will be one in-class midterm exam, on November 16, and one final exam. Each of these exams is worth 30% of your final grade.

Homework

The assigned problems for each week are due each Friday in-class at 2 pm, listed on the Assignments page. Homework is worth 40% of your final grade. Students must make arrangements in advance if they will not be handing in homework on time. We encourage you to discuss homework problems with your classmates, including strategies for solving different kinds of problems. However, when you actually write up your solutions, you must do this on your own.