

MATH 413: INTRODUCTION TO TOPOLOGY

Instructor:

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Office Hours: Thursday 3.00 – 5.00

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Topology begins with the study of geometric objects up to continuous deformation. In systematizing this notion, 20th century mathematicians discovered a remarkable array of structure that underlies diverse types of mathematics. The *topology* of an object is its primordial essence. We will proceed axiomatically and study the basic properties of topological objects. The major portion of the content of this course is known colloquially as “point-set topology,” since it involves careful analysis of topologies in terms of their set of points. Perhaps we will begin to explore the wide world of algebraic topology towards the end of the term.

Text. Topology, 2nd ed., James R. Munkres, Prentice-Hall (ISBN 0-13-181629-2)

Fun, but not required: Counterexamples in Topology, Lynn Arthur Steen and J. Arthur Seebach Jr., Dover (ISBN 978-0486687353)

Assignments, Exams. There will be weekly homework assignments. You are encouraged to work on homework together, but you must write up your homework individually. There will be a midterm exam and a final exam.

Grading. Your grade will be determined by the following weighting scheme:

35% – Homework and Participation

20% – Midterm Exam

45% – Final Exam

I expect you to comport yourself with honor, as derived from respect for the academic program, your peers and your instructors. Academic dishonesty will be punished severely.