Topology

Northern Michigan University

Winter 2021

Course Instructor

Daniel Rowe
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euclid.nmu.edu/∼darowe/

Learning Outcomes

This is an advanced course in topology. Topology is a fundamental mathematical subject that possesses connections with many different areas of mathematics.

The instructor will cover the following topics: topological spaces, continuous functions, compactness, connectedness, the fundamental group, and homology. Additionally, the instructor may focus on topics such as: the classification of surfaces, cohomology, the Lefschetz fixed-point theorem, the Borsuk-Ulam theorem, or topics from knot theory.

After completion of this course, a graduate student will have sufficient experience with, and knowledge of topology, and be capable of performing calculations and proving theorems within the discipline. For example, they will have the skill to determine if a topological space is compact or connected, describe the continuous functions on a particular topological space, compute the fundamental group, and homology groups of particular spaces, and prove the classification of two dimensional surfaces.

Course Meeting Times

ma516-01
MWRF 9:00-9:50
JXJ 1315
live-stream

Course Webpage

http://euclid.nmu.edu/∼darowe/w21_ma516.html

Textbook

Peter Saveliev, *Topology Illustrated*.
https://calculus123.com/wiki/Topology_Illustrated

Grade Categories and Weights

Problem Sets	30%
Test(s)	20%
Project	10%
Presentation	10%
Final	30%

Grade Scale

92-100%	A
90-91%	A-
86-89%	B+
82-85%	B
80-81%	B-
76-79%	C+
72-75%	C
70-71%	C-
66-69%	D+
62-65%	D
60-61%	D-
0-59%	F

Late Policy

All submissions of your work will be electronic, and they will have very clear due dates. My late policy will be exponential ($-5 \cdot 2^{n-1}$ %), capping out at -60%, i.e. -5% one day late, -10% two days late, -20% three days late, -40% four days late, and -60% five days late and thereafter.

Accessibility

If you have a need for disability-related accommodations or services, please inform the *Coordinator of Disability Services* in the Dean of Students Office at 2001 C. B. Hedgcock Building (906-227-1737 or disserv@nmu.edu). Reasonable and effective accommodations and services will be provided to students if requests are made in a timely manner, with appropriate documentation, in accordance with federal, state, and University guidelines.