Syllabus for MTH 532/632: Topology II (Differential Topology)

University of Miami, Spring 2023

www.math.miami.edu/~cscaduto/teaching/532-spring-2023/

Instructor:
Prof. Christopher Scaduto
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Office: Ungar 525
Office hours: TBD, or by appointment

- Class time and location: Tuesday and Thurday at 11:00-12:15, Ungar 406

References:
Differential Topology by Guillemin and Pollack. Other references may given throughout the course.

Description:
Differential topology is the study of smooth manifolds, and focuses on the qualitative, i.e. topological, properties of such spaces. Specific topics covered include: Differential and topological manifolds, classical groups and associated manifolds, tangent and tensor bundles, vector fields, differential forms, transversality, Sard's theorem, Stokes' Theorem. Other fun topics will be included time-permitting.

Homework:
Each week I will assign some homework problems. The problems will be listed on the course webpage. Your lowest homework grade will be dropped. Collaborating with your peers on homework assignments is permitted, but your solutions must be written up in your own words; identical homeworks will not receive credit. No late homework will be accepted.

Exams:
There will be two midterms and a final exam.

Grading:
Homework is 25 % and each exam is 25 %.

Standard university policies are assumed for this course. See for example
https://bulletin.miami.edu/general-university-information/graduate-policies-and-procedures/academic-policies/