MTH 628 - Spring 2019

SYLLABUS

Contact information
Cagatay Kutluhan
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Office: Math 117
Office hours: TR 3:00 - 4:00 pm

Lectures
Time: TR 12:30 - 1:50 pm
Place: Math 235

Course description: This is a first course in algebraic topology introducing algebraic invariants of topological spaces. The goal is to cover Chapters 2 and 3 of [2] which concern homology and cohomology of spaces. More specifically, topics to be covered include but are not limited to simplicial, singular, and cellular homologies, exact sequences and excision, Mayer–Vietoris sequences, cohomology, the universal coefficient theorem, cup product and the cohomology ring, Künneth formulae, orientations of manifolds, and Poincaré duality.

Prerequisities: MTH 427/527 and MTH 428/528.

Grading: Your final grade for the course will depend on your performance in biweekly homework assignments from [2]. The first homework will be assigned on February 8 and it will be due on February 22.

Course objectives: To build a background in algebraic topology.

References

1. Glen E. Bredon, *Geometry and Topology*, Springer, Graduate Texts in Mathematics **139**.
2. Allen Hatcher , *Algebraic Topology*, Cambridge University Press. **(Required Text)**