The Department of Mathematics

2022–23–A term

Course Name Introduction to Topological Dynamics

Course Number 201.1.0611

Course web page
https://www.math.bgu.ac.il//en/teaching/fall2023/courses/introduction-to-topolog

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Office Hours https://www.math.bgu.ac.il/en/teaching/hours

Abstract

Requirements and grading[1]

Course topics

- The notion of a Dynamical system, background, motivating examples.

- Limit Sets and Recurrence, Van der Varden's theorem as an application.

- Basic notions in topological dynamics: Topological transitivity, minimality, topological Mixing, Expansiveness, Equicontinuity.

- Circle rotations, homeomorphisms of the circle, rotation numbers and Denjoy's theorem.

- Topological entropy.

- Automorphisms of the torus, automorphisms of compact groups.

- Shfit spaces and shfits of finite type

- Brief introduction to ergodic theory: Equidistribution, unique ergodicity.

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[1]Information may change during the first two weeks of the term. Please consult the webpage for updates