

The Department of Mathematics

2021–22–B term

Course Name Introduction to Ergodic Theory

Course Number 201.2.0141

Course web page

<https://math.bgu.ac.il/en/teaching/spring2022/courses/ergodic-theory>

Lecturer Prof. Tom Meyerovitch, <mtom@bgu.ac.il>, Office 313

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

Abstract

Requirements and grading¹

Course topics

- .1 Measure preserving systems for Borel group actions
- .2 Ergodicity, ergodic decomposition, mixing and weak mixing
- .3 Minimality and unique ergodicity
- .4 Mean and pointwise ergodic theorems for a single transformation
- .5 (*) Joinings
- .6 (*) Decomposition of a measure relative to a partition and conditional measures
- .7 (*) Entropy
- .8 (*) Ergodic theorems for general groups and amenability.

(*) denotes optional topics to be covered according to class level and teacher discretion.

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