האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

The Hebrew University of Jerusalem

Syllabus

TOPOLOGICAL DYNAMICS - 80625

Last update 21-09-2024

HU Credits: 2

Degree/Cycle: 2nd degree (Master)

Responsible Department: Mathematics

Academic year: 2025

Semester: 1st Semester

Teaching Languages: Hebrew

Campus: E. Safra

Course/Module Coordinator: Shahar Mozes

Coordinator Email: michael.hochman@mail.huji.ac.il

Coordinator Office Hours: by appointment

Teaching Staff:

Prof. Shahar Mozes

Course/Module description:

The course covers basic definitions and theorems in topological dynamics.
Among the topics will be:
1.Special classes like -
Kronecker systems, distal flows and symbolic shifts.
2. topological entropy.
3. some applications to number theory and combinatorics.

Course/Module aims:

To encounter basic definitions and examples from topological dynamics, special classes of dynamical systems שתג and the relations between them, and applications outside of dynamics.

Learning outcomes - On successful completion of this module, students should be able to:

The ability to understand more advanced material in topological dynamics.

Attendance requirements(%):

60

Teaching arrangement and method of instruction: lectures

Course/Module Content:

Basic definitions and theorems.

Recurrence and its applications: can der Waerden's theorem

Discrete spectrum and classification of isometries

Enveloping semigroup and distal systems

Topological entropy

Further topics

Required Reading:

There is no required reading.

Additional Reading Material:

Course notes will be published on the website.

Grading Scheme:

Essay / Project / Final Assignment / Home Exam / Referat 100 %

Additional information: