האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

*Syllabus*

# *TOPOLOGICAL DYNAMICS - 80625*

*Last update 22-08-2023*

*HU Credits:* *2*

*Responsible Department:* *Mathematics*

*Academic year:* *0*

*Semester:* *2nd Semester*

*Teaching Languages:* *Hebrew*

*Campus:* *E. Safra*

*Course/Module Coordinator:* *Michael Hochman*

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

*Coordinator Office Hours:* *by appointment*

*Teaching Staff:*
*Prof Michael Hochman*

*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:*