

# The Hebrew University of Jerusalem

Syllabus

**ERGODIC THEORY - 80615** 

Last update 14-04-2020

HU Credits: 3

<u>Degree/Cycle:</u> 2nd degree (Master)

Responsible Department: Mathematics

Academic year: 0

Semester: 2nd Semester

<u>Teaching Languages:</u> English and Hebrew

Campus: E. Safra

Course/Module Coordinator: Prof. Elon Lindenstrauss

Coordinator Email: elon@math.huji.ac.il

Coordinator Office Hours:

Teaching Staff:

### Prof Benjamin Weiss

Course/Module description:

An introductory course in ergodic theory

Course/Module aims:

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

The students will be able to take advanced courses in ergodic theory

Attendance requirements(%):

Teaching arrangement and method of instruction:

#### Course/Module Content:

motivation, Poincare recurrence, mean and pointwise ergodic theorems, mixing and weak mixing, invariant measures, ergodic decomposition, entropy, Shannon-McMillan-Breiman theorem, Pinsker factor and K-systems

#### Required Reading:

None

#### Additional Reading Material:

Ergodic theory with a view toward number theory, Einsiedler- Ward

Ergodc theory, Petersen

Course notes

<u>Course/Module evaluation:</u>
End of year written/oral examination 0 %
Presentation 0 %
Participation in Tutorials 0 %
Project work 66 %

Assignments 34 % Reports 0 % Research project 0 % Quizzes 0 % Other 0 %

## Additional information: