



## *Syllabus*

### **ERGODIC THEORY - 80615**

*Last update 09-01-2022*

HU Credits: 3

Responsible Department: Mathematics

Academic year: 0

Semester: 2nd Semester

Teaching Languages: English and Hebrew

Campus: E. Safra

Course/Module Coordinator: Prof. Benjamin Weiss

Coordinator Email: [weiss@math.huji.ac.il](mailto:weiss@math.huji.ac.il)

Coordinator Office Hours: By appointment

Teaching Staff:  
Prof Benjamin Weiss

Course/Module description:  
*An introductory course in ergodic theory*

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Course/Module aims:

*To learn the basics of ergodic theory*

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

*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*

*Ergodic theory, Petersen*

*My notes that are on the university site*

Course/Module evaluation:

*End of year written/oral examination 0 %*

*Presentation 0 %*

*Participation in Tutorials 0 %*

*Project work 100 %*

*Assignments 0 %*

*Reports 0 %*

*Research project 0 %*

*Quizzes 0 %*

*Other 0 %*

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*Additional information:*