האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

The Hebrew University of Jerusalem

Syllabus

Additive Combinatorics - 80654

Last update 03-10-2017

HU Credits: *4*

Degree/Cycle: *2nd degree (Master)*

Responsible Department: *Mathematics*

Academic year: *0*

Semester: *1st Semester*

Teaching Languages: *Hebrew*

Campus: *E. Safra*

Course/Module Coordinator: *tamar ziegler*

Coordinator Email: *tamarz@gmail.com*

Coordinator Office Hours:

Teaching Staff:

Prof. Tamar Ziegler-Lehavi

Course/Module description:

Discrete Fourier analysis, Roth's theorem on 3 term progressions, Freiman-Ruzsa-Sanders theorem, Gowers theorem on 4 term progression,
Inverse theorem for the Gowers U3 norm, decomposition theorems and combinatorial factors, transference principle and Green Tao theorem (taking the number theoretic part as black box), bias and high rank for polynomials over finite fields.

Course/Module aims:

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

Attendance requirements(%):

Teaching arrangement and method of instruction:

Course/Module Content:

Inverse theorem for the Gowers U3 norm, decomposition theorems and combinatorial factors, transference principle and Green Tao theorem (taking the number theoretic part as black box), bias and high rank for polynomials over finite fields.

Required Reading:
none

Additional Reading Material:

Grading Scheme:

Additional information: