האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

The Hebrew University of Jerusalem

Syllabus

Asymptotic methods in analysis - 80557

Last update 12-09-2024

HU Credits: *2*

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

Responsible Department: *Mathematics*

Academic year: *2025*

Semester: *2nd Semester*

Teaching Languages: *Hebrew*

Campus: *E. Safra*

Course/Module Coordinator: *Prof Alexander Sodin*

Coordinator Email: *Alexander.sodin@mail.huji.ac.il*

Coordinator Office Hours:

Teaching Staff:

Prof. Alexander Sodin

Course/Module description:

The seminar will provide an introduction to several asymptotic methods having wide applications in mathematics.

Course/Module aims:

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

Compute various kinds of asymptotics.

Attendance requirements(%):

Teaching arrangement and method of instruction: Seminar (presentations by students)

Course/Module Content:

Asymptotics of
– implicit functions
– sums
– integrals: Laplace method
– integrals: saddle point method
– integrals: stationary phase
– functions: Tauberian methods
and more.

Required Reading:

N.G. de Bruijn, "Asymptotic Methods in Analysis"

Additional Reading Material:

Grading Scheme:

Presentation / Poster Presentation / Lecture/ Seminar / Pro-seminar / Research

proposal 100 %

Additional information: