



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: 0

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: