The Hebrew University of Jerusalem

Syllabus

Valued Fields - 80583

Last update 02-05-2024

HU Credits: 3

Degree/Cycle: 2nd degree (Master)

Responsible Department: Mathematics

Academic year: 0

Semester: 2nd Semester

Teaching Languages: Hebrew

Campus: E. Safra

Course/Module Coordinator: Michael Temkin

Coordinator Email: michael.temkin@mail.huji.ac.il

Coordinator Office Hours: by appointment

Teaching Staff:

Prof Michael Temkin

Course/Module description:

We will study the theory of valuations and valued fields from the very basics to advanced topics which are subject of current research, such as the theory of transcendental extensions.
The only prerequisite is the Galois theory (Algebraic structures II).

Course/Module aims:

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

Not relevant

Attendance requirements(%):

Teaching arrangement and method of instruction:

Course/Module Content:

Valuation rings and valued fields;
rank and composition of valuations;
valued fields of height one and their completion; henselization of valued fields;
algebraic extensions of valued fields and basic ramification theory;
wild ramification,
different and Herbrand function;
transcendental extensions

Required Reading:

notes will be posted during the course; reading material before the lecture is mandatory; evaluation will be based on reading the notes and participation in class

Additional Reading Material:

Grading Scheme:

Active Participation / Team Assignment 100 %

Additional information: