האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

The Hebrew University of Jerusalem

Syllabus

Quantum Mechanics Foundations and Philoso Phical Problem - 15431

Last update 14-08-2023

HU Credits: *2*

Degree/Cycle: *1st degree (Bachelor)*

Responsible Department: *Philosophy*

Academic year: *0*

Semester: *1st Semester*

Teaching Languages: *Hebrew*

Campus: *E. Safra*

Course/Module Coordinator: *Orly Shenker*

Coordinator Email: *orly.shenker@mail.huji.ac.il*

Coordinator Office Hours: *by email*

Teaching Staff:
Prof Orly Shenker

Course/Module description:
Foundations of non-relativistic quantum mechanics, accessible to philosophy students with no background in physics nor mathematics. focusing on some of its riddles and mysteries, with emphasis on philosophical problems.

Course/Module aims:
to be acquainted with the foundations of quantum mechanics and its philosophical assumptions and implications, as an excercise in metaphysics.

Learning outcomes - On successful completion of this module, students should be able to:
to be acquainted with the foundations of quantum mechanics and its philosophical assumptions and implications, as an excercise in metaphysics.

Attendance requirements(%):
100

Teaching arrangement and method of instruction: lectures and exercises in class.

Course/Module Content:
quantum phenomena
superpositions
the mesurement problem
quantum entanglement
quantum non locality
Examples of "interpretations".
If time permits - quantum computation, quantum cryptography.

Required Reading:
David Albert: quantum mechanics and experience
and papers that will be given in the moodle

Additional Reading Material:
will be presented in the moodle page

Grading Scheme:

Essay / Project / Final Assignment / Home Exam / Referat 100 %

Additional information: