האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

# *Syllabus*

# *Introduction to Quantum Chaos - 80855*

*Last update 20-08-2020*

*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:* *דן מנגובי*

*Coordinator Email:* *dan.mangoubi@mail.huji.ac.il*

*Coordinator Office Hours:*

*Teaching Staff:*
*Prof Dan Mangoubi*

*Course/Module description:*
*How is Chaos in a dynamical system reflected in the corresponding quantum system?*

*Classical-Quantum correspondence (Egorov's Theorem).*

*Shnirelman's Theorem (1974)*
*describes the Laplace Eigenfunctions of an ergodic dynamical system.*

*Weyl's asymptotic of eigenvalues.*

*Tools: Microlocal analysis and pseudo-differential operators.*

*Course/Module aims:*

*Learning outcomes - On successful completion of this module, students should be able to:*
*First acquaintance with the field.*

*Attendance requirements(%):*

*Teaching arrangement and method of instruction:*

*Course/Module Content:*
ראו תיאור הקורס.

*Required Reading:*
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*Additional Reading Material:*
*Zworski, semi-classical analysis*

*Course/Module evaluation:*
*End of year written/oral examination 0 %*
*Presentation 0 %*

*Participation in Tutorials 0 %*
*Project work 0 %*
*Assignments 0 %*
*Reports 0 %*
*Research project 0 %*
*Quizzes 0 %*
*Other 100 %*
*unknown*

*Additional information:*