



## *The Hebrew University of Jerusalem*

### *Syllabus*

## **LIE ALGEBRAS - 80869**

*Last update 04-09-2021*

*HU Credits:* 2

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

*Responsible Department:* Mathematics

*Academic year:* 0

*Semester:* 2nd Semester

*Teaching Languages:* English and Hebrew

*Campus:* E. Safra

*Course/Module Coordinator:* Prof Aner Shalev

*Coordinator Email:* [shalev@math.huji.ac.il](mailto:shalev@math.huji.ac.il)

*Coordinator Office Hours:*

*Teaching Staff:*

---

Prof Aner Shalev

Course/Module description:

*A relatively elementary introduction to Lie Algebras*

Course/Module aims:

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

NA

Attendance requirements(%):

Teaching arrangement and method of instruction:

Course/Module Content:

*Lie rings and Lie algebras, examples, derivations, ideals, homomorphisms, nilpotent Lie algebras and Engel's theorem, solvable Lie algebras and theorems of Lie and Cartan, semisimple Lie algebras, introduction to representation theory*

Required Reading:

NA

Additional Reading Material:

*Humphreys: Introduction to Lie Algebras and Representation Theory*

Course/Module evaluation:

End of year written/oral examination 100 %

Presentation 0 %

Participation in Tutorials 0 %

Project work 0 %

Assignments 0 %

Reports 0 %

Research project 0 %

Quizzes 0 %

---

*Other 0 %*

*Additional information:*