



# *The Hebrew University of Jerusalem*

## *Syllabus*

### *Category Theory - 80779*

*Last update 13-09-2024*

*HU Credits:* 2

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

*Responsible Department:* Mathematics

*Academic year:* 2025

*Semester:* 2nd Semester

*Teaching Languages:* Hebrew

*Campus:* E. Safra

*Course/Module Coordinator:* Shaul Zemel

*Coordinator Email:* [shaul.zemel@mail.huji.ac.il](mailto:shaul.zemel@mail.huji.ac.il)

*Coordinator Office Hours:* By appointment

*Teaching Staff:*

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Dr. Shaul Zemel

Course/Module description:

Introductory course in category theory for 3rd year undergraduate students and 1st year graduate students.

Course/Module aims:

Familiarity with the basic concepts and theorems of category theory and proficiency in the categorical language with emphasis on examples.

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

See course aims.

Attendance requirements(%):

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Teaching arrangement and method of instruction: Lecture

Course/Module Content:

In the course we will discuss the basics of the language of categories, tentatively:

1. Categories, functors, natural transformations, equivalence of categories
2. Universal properties, representable functors, Yoneda lemma.
3. Limits and colimits
4. Adjoint functors

Notice! Additional, or other, topics might be taught.

Required Reading:

none

Additional Reading Material:

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Grading Scheme:

Written Exam % 100

Additional information: