## Syllabus

## Category Theory - 80779

Last update 02-09-2021
HU Credits: 2

Responsible Department: Mathematics

Academic year: 0

Semester: 1st Semester

Teaching Languages: English

Campus: E. Safra

Course/Module Coordinator: Yoel Groman

Coordinator Email: ygroman@gmail.com

Coordinator Office Hours: By appointment

Teaching Staff:
Dr. Yoel Groman

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(\%):
0

Teaching arrangement and method of instruction: Lecture

## Course/Module Content:

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

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

## 4. Adjoint functors

We might also discuss some other topics and illustrations, for example abelian categories, sheaves, fundamental group, introduction to infinity categories, Morita equivalence.

Required Reading:
none

Additional Reading Material:

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:

Pay attention: The examination will be given as a home exam, for something like 1-3 days (starting from the exam date appearing in the Catalogue). In particular, there will be no "moed" b and special "moed".

