האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

The Hebrew University of Jerusalem

Syllabus

Advanced research seminar in Homotopy theory - 80791

Last update 30-04-2015

HU Credits: *2*

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

Responsible Department: *Mathematics*

Academic year: *0*

Semester: *1st Semester*

Teaching Languages: *Hebrew*

Campus: *E. Safra*

Course/Module Coordinator: *Prof Emmanuel Farjoun*

Coordinator Email:

Coordinator Office Hours:

Teaching Staff:
Prof Tomer Schlank

Course/Module description:
The seminar aims at getting a handle on a homotopy version of the concept of 2-category via simplicial spaces.
We will begin with reading several sections of a paper by Rezk on "complete Segal spaces" This paper gives a good framework to work with infty categories via simplicial spaces.
We will continue by reading a part of the work of Rezk on n-categories with the emphasis on 2-categories.
We can then consider the infty category "all categories" which can be regarded first as a model category and then as a 2-category. This allows good approach to adjoint functors, duality and other basic concepts.

Course/Module aims:
Same as in learning outcomes.

Learning outcomes - On successful completion of this module, students should be able to:
Ability to prove and apply the theorems presented in the course.

Ability to apply correctly the mathematical methodology in the context of the course.

Acquiring the fundamentals as well as basic familiarity with the field which will assist in the understanding of advanced subjects.

Ability to understanding and explain the subjects taught in the course.

Attendance requirements(%):

Teaching arrangement and method of instruction: Lecture

Course/Module Content:
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Required Reading:
none

Additional Reading Material:
none

Course/Module evaluation:
End of year written/oral examination 0 %
Presentation 0 %
Participation in Tutorials 0 %
Project work 100 %
Assignments 0 %
Reports 0 %
Research project 0 %
Quizzes 0 %
Other 0 %

Additional information: