האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

Syllabus

Differential Topology - 80576

Last update 30-12-2023

HU Credits: *3*

Responsible Department: *Mathematics*

Academic year: *0*

Semester: *1st Semester*

Teaching Languages: *Hebrew*

Campus: *E. Safra*

Course/Module Coordinator: *Yoel Groman*

Coordinator Email: *yoel.groman@mail.huji.ac.il*

Coordinator Office Hours:

Teaching Staff:
Dr. Yoel Groman

Course/Module description:
We will focus on the H-cobordism theorem, which leads to the proof of the

generalized Poincare conjecture in higher dimensions. We follow the text by Milnor. This is a beautiful excursion into analyzing topology via Morse theory.

Course/Module aims:

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

To implement the ideas they've encountered. in the class

Attendance requirements(%):

Teaching arrangement and method of instruction:

Course/Module Content:
Topics: Smooth manifolds, the cobordism category, Gradient flows and Morse functions, handle attachement, Cancellation Theorems, the H-Cobordism Theorem, Poincare conjecture in higher dimensions.

Required Reading:
Lectures on the h-Cobordism Theorem, John Milnor

Additional Reading Material:

Grading Scheme:
Essay / Project / Final Assignment / Home Exam / Referat 100 %

Additional information: