אוניברסיטת
בן-גוריון בנגב

The Department of Mathematics

2024–25–A term

Course Name Introduction to Dffierential Topology

Course Number 201.2.7961

Course web page
https://math.bgu.ac.il//en/teaching/fall2025/courses/differential-topology

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Office Hours https://math.bgu.ac.il/en/teaching/hours

Abstract

Requirements and grading[1]

Course topics

Dffierential Topology studies topological and smooth properties of manfiolds. The first questions and ideas appeared at the end of 19th century, and the field flourished through the whole 20th century. Our course is a modest introduction to the area, starting from minimal prerequisites and with the goal towards some great results of the mid-20th century.

The (preliminary) syllabus:

1. Basics of manfiolds and smooth maps.

2. Regular values. Theorems of Sard and Brown.

3. Transversality and intersections. Degree of a mapping.

4. Morse theory, surgery, cobordisms, handle decomposition.

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[1]Information may change during the first two weeks of the term. Please consult the webpage for updates