

The Department of Mathematics

2021–22–B term

Course Name Basic notions in geometry and topology 2

Course Number 201.2.0471

Course web page

<https://www.math.bgu.ac.il/en/teaching/spring2022/courses/geometry-topology-2>

Lecturer Dr. Michael Brandenbursky, <brandens@bgu.ac.il>, Office 306

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

Abstract

Requirements and grading¹

Course topics

- .1 Cohomology: definitions, Universal coefficient theorem, Orientation, Poincare duality, cap and cup products, cohomology ring, Kunneth formula
- .2 Review of (Smooth manifolds, differential forms, orientability, Stokes theorem), degree of the map, Sard theorem, De-Rham cohomology.
- .3 Isomorphism between De-Rham cohomology and singular cohomology.
- .4 (If time permits) additional topics according to the instructor preferences

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