

The Department of Mathematics

2017–18–B term

Course Name Vector Bundles in Geometry and Analysis

Course Number 201.2.5051

Course web page

<https://www.math.bgu.ac.il/en/teaching/spring2018/courses/vector-bundles-in-geometry-and-analysis>

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

Abstract

Requirements and grading¹

Course topics

- vector bundles and K -groups of topological spaces
- Bott's Periodicity theorem and applications to division algebras
- Index of Fredholm operators and K -theory
- If time permits: smooth manifolds, DeRham cohomology, Chern classes, Elliptic operators, formulation of Atiyah-Singer index theorem, relations to Gauss-Bonnet theorem

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