

**201.1.0091. INTRODUCTION TO TOPOLOGY.
BGU, SPRING 2016.**

The site of the course: *www.math.bgu.ac.il/~kernerdm*

Lecturer: Dmitry Kerner, [58], (217).

The lectures will be on Mondays, 10:00-12:00, and Wednesdays, 11:00-13:00.

The structure of the final grade

There will be about 8-12 homeworks. Though the submission is not obligatory, the homeworks form the important part of the course.

There will be one midterm (29.05.2016).

The final mark is computed as: $10\%(\text{midterm}) + 90\%(\text{final exam})$.

The final exams are: Moed A (July 8) , Moed B (??).

The textbooks:

- J.R.Munkres, *Topology, A First Course*, Prentice-Hall, 1975.
- B.T.Sims, *Fundamentals Of Topology*, Collier Mcmillan International Editions, 1975.
- J.L.Kelly, *General Topology*, Springer-Verlag, Graduate Texts In Mathematics, 1975.
- O.Ya.Viro, O.A.Ivanov, N.Yu.Netsvetaev, V.M.Kharlamov, *Elementary topology. Problem textbook*. American Mathematical Society, Providence, RI, 2008

The program of the course

- (1) Topological spaces and continuous functions (product topology, quotient topology, metric topology).
- (2) Connectedness and Compactness.
- (3) Countability Axioms and Separation Axioms (the Urysohn lemma, the Urysohn metrization theorem, Partitions of unity).
- (4) The Tychonoff theorem and the Stone-Cech compactification.
- (5) (Time permitting) Metrization theorems and paracompactness.
- (6) The fundamental group and covering spaces.