

המחלקה למתמטיקה

סמסטר 2023-24 – ב

שם הקורס אלגברה הומוטופית

מספר קורס 201.2.2091

עמוד הקורס ברשת

<https://sites.google.com/view/amyekut-math/home/teaching/homol-alg-2023-24>

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שעות קבלה <https://www.math.bgu.ac.il/he/teaching/hours>

תקציר

דרישות והרכב ציון הקורס¹

נושאי לימוד

- modules ideals, noncommutative), (including Rings material. prior Recalling .1
tensor products, and sums direct infinite sequences, exact bimodules, and
rings. and modules of products
- categories Linear equivalences. functors, of Morphisms functors. and Categories .2
functors. of Exactness functors. linear and
- modules. flat and injective Projective, modules. Special .3
- products. tensor as realized categories module of Equivalences Theory. Morita .4
- long the homotopies, complexes, on Operations modules. of Complexes .5
sequence. cohomology exact
- uniqueness. and existence – resolutions flat and injective Projective, Resolutions. .6
- functors. Ext and Tor theory. general The functors. derived right and Left .7
- involving theorems, global and local Some algebra. commutative to Applications .8
functors. torsion and completion Derived functors. *Ext* and *Tor*

¹דרישות הקורס יכולות להשתנות במהלך השבועיים הראשונים של הסמסטר, ויש לשים לב להודעות באתר הקורס

geometry. in algebra homological of role the of survey A cohomology. Sheaf .9
 cohomology, Galois theorems: classification of survey A cohomology. Nonabelian .10
 bundles. vector

Bibliography

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- Yekutieli, A. (9) (Editor). Jong de J.A. reference, online an,²Project Stacks The .8
 prepublication Free .2019 Press, Univ. Cambridge Categories”, “Derived
 web course the to week every uploaded be to notes, Course (10) .³version
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²<http://stacks.math.columbia.edu>

³<https://arxiv.org/abs/1610.09640v4>