Rings and Modules
Anelli e Moduli

For students of the Master's degree in Mathematics
(Laurea Magistrale),
students of the Master Mundus ALGANT program,

Spring semester/ secondo semestre:
Total number of hours: 48 (6 credits).
Schedule:
   Monday: 14,30 - 16,15
   Tuesday: 14,30 - 16,15
   (Wednesday: 16,30 - 18,15)
Exame: written/oral.

Description of the course

This is a course on Abelian Categories and Homological Algebra with emphasis on Homological Dimensions.

Program

   Additive and Abelian categories
   Functor categories.
   Exact Categories.
   Limits and colimits.
   Adjoint functors.
   Chain complexes, homotopy theory.
   Left and right derived functors:
   Tor and flatness.
   Ext and extensions.
   Homological dimensions.

References

- B. B. Stenström, Rings of quotients, Grundleheren der Math., 217, Springer-Verlag, (1975).

- C.A. Weibel, An Introduction to Homological Algebra, Cambridge studies in Ad. Math., 38 (1994).

- J. Rotman, An introduction to Homological Algebra, Second edition. Universitext. Springer, New York, 2009.

- Notes of the lectures with exercises at the link:

http://elearning.math.unipd.it/moodle/ Anelli e Moduli 2019/2020