Timetable: 20-24 hours. First lecture on January 22, 2018, 11:00 (dates already fixed, see the calendar), Torre Archimede, Room 2BC/30.

Course requirements: Elementary notions of rings and modules
(Diciamo il contenuto del mio corso di algebra al primo anno di laurea magistrale.)

Examination and grading:

SSD: MAT/02

Aim: This course provides an introduction to some notions of rings, modules and categories.

Course contents:
Goldie dimension of lattices and modules Dual Goldie dimension of a module
Semilocal rings
Local morphisms
Modules with semilocal endomorphism rings
Preadditive categories
Ideals in a preadditive category
The Krull-Schmidt property
Annihilating a class of objects
Semilocal categories
The spectral category of a Grothendieck category
Nonsingular modules
The functor P and its right derived functors
First applications of spectral categories
Finitely copresented objects
The dual construction to the construction of the spectral category
Applications of the category $(\text{Mod-}R)'$
Finitely presented modules over a semilocal ring