Complements on Monoids, Rings and Modules

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Timetable: 20 hrs. Lectures on April/May (see the calendar), Torre Archimede, Room 2BC/30.

Course requirements: Standard notions on rings and modules, at the level of the course "An Introduction to Ring Theory" for the Master Course Algant in Padua.

Examination and grading: Oral examination.

SSD: MAT/02 Algebra

Aim: To improve the mathematical knowledge of the student in commutative monoids and noncommutative rings.

Course contents:

Commutative monoids. Pre-ordered groups, positive cones. The monoid V(C), discrete valutations. Essential morphisms. Further results on Krull monoids. Sets and classes. Semisimple rings and modules. Free rings and free algebras. Free modules. Projective modules and radical. Projective covers, injective envelopes. The monoid V(R).