

## ALGEBRAIC GEOMETRY - PREREQUISITES

Here we discuss prerequisites for notes in this directory. The classical book [Mac Lane, 1998] contains in our subjective opinion the great presentation of category theory. Topological notions that we need can be found in the very first chapters of monograph [Engelking, 1989]. For commutative algebra we recommend excellent book [Atiyah and MacDonald, 1969] with special emphasis on chapter on rings and modules of fractions. We also use some facts from the field of homological algebra. For this we recommend the reader of our notes to look in appropriate parts of [Weibel, 1995]. Exhaustive and excellent introduction to the language of schemes is [Grothendieck and Dieudonné, 1971] but the reader may want first to confer [Eisenbud et al., 2000], which does not cover the same amount of material but explains important intuitions behind abstract concepts.

### REFERENCES

- [Atiyah and MacDonald, 1969] Atiyah, M. F. and MacDonald, I. G. (1969). *Introduction to commutative algebra*. Addison-Wesley-Longman.
- [Eisenbud et al., 2000] Eisenbud, D., Harris, J., and Harris, J. (2000). *The Geometry of Schemes*. Graduate Texts in Mathematics. Springer.
- [Engelking, 1989] Engelking, R. (1989). *General topology*. Sigma series in pure mathematics. Heldermann Verlag.
- [Grothendieck and Dieudonné, 1971] Grothendieck, A. and Dieudonné, J. (1971). *Éléments de géométrie algébrique I*, volume 166 of *Grundlehren der Mathematischen Wissenschaften*. Springer-Verlag.
- [Mac Lane, 1998] Mac Lane, S. (1998). *Categories for the working mathematician*, volume 5 of *Graduate Texts in Mathematics*. Springer-Verlag, New York, second edition.
- [Weibel, 1995] Weibel, C. (1995). *An Introduction to Homological Algebra*. Cambridge Studies in Advanced Mathematics. Cambridge University Press.