

## Literature for Mathematical Foundations

As already said it is not so easy to give good recommendations for the algebra part of the foundations. The following is rather preliminary (as I did not have the opportunity to check the English literature).

As a general guide-line let me recommend books on **Linear Algebra** as a first starting point. Normally there the basic definitions on groups, rings, fields can be found. For more detailed information one has to get informations out of books on **Algebra**. But typically these books contain much more than the material of relevance for the course.

1. Fischer, Gerd: Lineare Algebra, vieweg studium, is not expensive, but unfortunately it is in German. Of special relevance are the pages 32–74, but also the basic definitions related to vector spaces (75–163)
2. van der Waerden, Algebra I, Springer (this book is in German, but there is also an English translation.) This is a classics. Not too difficult to read.
3. Wüstholtz, Gisbert: Algebra für Studierende der Mathematik, Physik und Informatik, vieweg studium (only in German).
4. Lang, Serge: Algebra, Addison-Wesley, (English) In some sense a standard book, but contains much more than is needed here.
5. Joseph Grifone, Algèbre linéaire, Cépaduès-éditions, Toulouse (this book is in French)

If I will find further information I will update this list.

The web-page of the course: <http://www.cu.lu/~schliche/cours-mics>