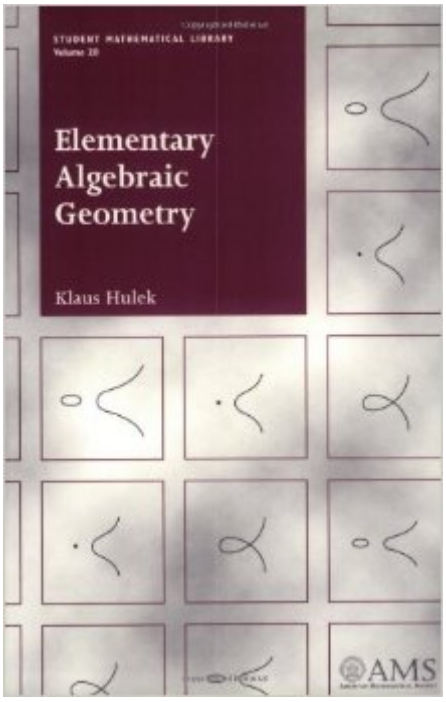
Elementary Algebraic Geometry (Student Mathematical Library, Vol. 20) (Student Mathematical Library, V. 20)



Synopsis

This is a genuine introduction to algebraic geometry. The author makes no assumption that readers know more than can be expected of a good undergraduate. He introduces fundamental concepts in a way that enables students to move on to a more advanced book or course that relies more heavily on commutative algebra. The language is purposefully kept on an elementary level, avoiding sheaf theory and cohomology theory. The introduction of new algebraic concepts is always motivated by a discussion of the corresponding geometric ideas. The main point of the book is to illustrate the interplay between abstract theory and specific examples. The book contains numerous problems that illustrate the general theory. The text is suitable for advanced undergraduates and beginning graduate students. It contains sufficient material for a one-semester course. The reader should be familiar with the basic concepts of modern algebra. A course in one complex variable would be helpful, but is not necessary. It is also an excellent text for those working in neighboring fields (algebraic topology, algebra, Lie groups, etc.) who need to know the basics of algebraic geometry.

Book Information

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Customer Reviews

First, a calibration: I am a total neophyte to algebraic geometry, and haven't taken a university algebra course since a few decades ago when I was a physics major. This book is one of several on the subject (along with some books on commutative algebra) that I'm using to get an amateur's orientation.As so often happens, this book looked great in the bookstore. It is thin, reasonably well-illustrated compared to other books in the field, and even helps you gets your toes wet in

sheaves, category theory and some other neat topics.That said, I believe the prerequisites in the preface (university algebra, with a complex variables course optional) are understated; e.g. it helps to know something about fibres, lifts and other topics from geometry. It might be relevant that these notes were prepared at a German university; you should consider that "undergraduates" there are heading toward the equivalent of a US M.S. degree, not B.S./B.A.More detrimental is that the presentation slogs from one proof to another and too rarely pauses for breath to consider the "big picture" significance of what you're proving. Notwithstanding that Joe Harris's "Algebraic Geometry: A First Course" is even less of a piece of cake for me than it might be for you, his style is a breath of fresh air when it comes to enlightening you as to some geometric context and payoff for all this effort. Other supplements I found helpful include Reid and Schenck.PS in 2008: I very belatedly found the terrific "An Invitation to Algebraic Geometry," by Karen E. Smith &al. (Springer 2000, corrected printing 2004). This is the hands-down best introduction to the subject, IMHO.

I had success with this book as a visiting student in one of Prof. Tom Hales graduate courses at U Pitt in 2005.Hartshorne, while I'd attempted to read for a while, is very dense for a beginner. It's still the goal.Hulek's errata below.http://www.ams.org/bookpages/stml-20/stml-20-errata.pdf&ved=0CDAQFjADahUKEwjS4vGZpNzIAhWBGT4KHSdWBY8&usg=AFQjCNE8nILjZRpme9EZyaMBxZeQpsQHKA&sig2=YU1KUO7cxl_-2P8uw0yF5w

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