

Math 4300 book list

There is no required textbook for the course. Below are some books that I used to make my notes. If you want to buy one, then read below.

- These three books cover the axiomatic system that we will cover in the class. The first book is the one to get if you want to get one.
 - **Geometry: A metric approach with models, 2nd edition, by Millman and Parker**
If you want to buy a book then this is the best one to get. It covers everything and is the main book that I used for the notes for the course.
 - **The Foundations of Geometry and the Non-Euclidean Plane, by Martin**
I used this one a little bit. It covers the same material as Millman/Parker but not as in depth in the computations. It gives a different way to do the main proofs.
 - **Foundations of Geometry, 2nd edition, by Venema**
Same comments as the Martin book.

- We are using an axiomatic system that is different from Euclid's system. If at some point you want to learn the Euclidean method then these books below are good ones. We will not cover this material in our class.
 - **Foundations of Geometry by David Hilbert**
Hilbert gave an axiomatic system that is like Euclid's but he filled in the gaps. This is an advanced book.
 - **Geometry: Euclid and Beyond, by Robin Hartshorne**
Another book that fills in the gaps from Euclid. A modern version of Euclid's system.
 - **Euclidean and Non-Euclidean Geometries – Development and History, by Mavin Greenberg**
Gives a historical perspective.
 - **Ruler and compass, practical geometric constructions, by Andrew Sutton**
This gives very short versions of how to construct objects using ruler and compass.