## Mathematics 326H – Geometry II: Projective and non-Euclidean geometries TRENT UNIVERSITY, Winter 2007

## **Additional Sources**

The list of additional sources below is *not* comprehensive, so feel free to look for more.

- The Thirteen Books of the Elements, Euclid. Translated with introduction and commentary by Sir Thomas L. Heath. Reprinted by Dover Publications, Inc., New York. Vol 1, ISBN 0-486-60088-2; Vol. 2, ISBN 0-486-60089-0; Vol. 3, ISBN 0-486-60090-4.
- Euclid's Elements, David E. Joyce http://aleph0.clarku.edu/~djoyce/java/elements/toc.htm A very nice online edition of Euclid.
- 3. Euclid's Elements in Greek, Richard Fitzpatrick http://farside.ph.utexas.edu/euclid.html The first nine (of thirteen) "books" of the *Elements* in the original Greek with an English translation on the facing pages, downloadable in pdf format.
- Foundations of Geometry, David Hilbert. (Translated by E.J. Townsend.) Reprint Edition, The Open Court Publishing Company, La Salle, Illinois. Freely available for download in pdf format from Project Gutenberg at: http://www.gutenberg.org/etext/17384.
- 5. Non-Euclidean Geometry, Roberto Bonola. (Translated by H.S. Carslaw.) Reprinted by Dover Publications, Inc., New York. ISBN 0-486-60027-0 This book gives a historical development of non-Euclidean geometry and includes translations of Bolyai's *The Science of Absolute Space* and Lobachevski's *The Theory* of Parallels.
- Noneuclidean Geometry, Herbert Meschkowski. (Translated by A. Shenitzer.) Academic Press, New York and London, 1964. Your instructor likes to crib from this one ...
- Projective Planes, D.R. Hughes and F.C. Piper. Graduate Texts in Mathematics 6, Springer-Verlag, New York, 1973, ISBN 0-387-90044-6. Note: This is a very good book, but is intended for readers that are pretty mathematically sophistinote in the provided by an effective of challenge of the bit of challenge of the provided by a set of the provided by a set of the provided by the pro

cated. In particular, you will really need to know a fair bit of abstract algebra to get the most out of it.

8. Wikipedia, http://wikipedia.org/

This is a pretty good place to start if you're looking online for information about mathematics. A few articles of general interest for this course are:

Eucidean geometry, http://en.wikipedia.org/wiki/Euclidean\_geometry Non-Euclidean geometry, http://en.wikipedia.org/wiki/Non-Euclidean\_geometry Projective geometry, http://en.wikipedia.org/wiki/Projective\_geometry

There are many specialized articles in *Wikipedia* that may be of interest: search and browse!