

MATH 308, FIRST WINTER TERM, 2015-2016

1. CONTACT INFORMATION

The instructor for this course is me, Ben Williams. I may be reached at tbjw@math.ubc.ca.

The course website is <http://www.math.ubc.ca/~tbjw/308/index.html>.

OFFICE HOURS:

Monday 1:15-2:45,
Tuesday 10:30-12:00,

in MATX 1203.

2. MEETING TIMES

The course meets Mondays, Wednesdays and Fridays at 12pm in Buchanan A102.

3. TEXTBOOK

The recommended textbook for this course is a translation of Euclid's *Elements*—the preferred version is the 1908 translation by Thomas Heath. We will discuss mainly books I, III and XIII. This will be supplemented by class notes.

4. HOMEWORK

Homework will be assigned throughout the course, at a rate of approximately one assignment every two weeks. The first assignment will be due on Monday 21 September, in class. Some credit will be assigned for the presentation of homework (as well as for the content).

5. EXAMS

There will be an in-class midterm, provisionally on Wednesday 28 October. This date is subject to change. There will be a final exam.

6. OVERALL COURSE GRADE

The overall course grade will be assigned based on homework (25%) and exams (25% for the midterm, 50% for the final).

7. LIST OF TOPICS

The following is a provisional list of topics that will be covered.

- Elements: Book I—culminating in Pythagoras' Theorem.
- Elements: Book III—the geometry of circles.
- Constructing a regular pentagon.
- Axiomatic geometry, Hilbert's axioms, non-euclidean geometries.
- Coordinate geometry.
- Solid geometry.
- The geometry of linear and affine transformations.
- Spherical Geometry.
- Elements: Book XIII—Platonic Solids.