Course content. In this class, we examine some of the fundamental ideas, tools, and questions of geometry. Here are some possible topics.

- Ruler and compass constructions
- Axiomatic Euclidean geometry
- Projective geometry
- Desargues/Pappus theorems and fields
- Transformation groups
- Hyperbolic and spherical geometry

Course material.

- The course textbook is *The Four Pillars of Geometry* by John Stillwell, which is available electronically at no cost to Harvard students at https://link-springer-com.ezp-prod1.hul.harvard.edu. Physical copies are available at the Coop.
- The lectures may also draw upon Robin Hartshorne’s books *Foundations of Projective Geometry* and *Geometry: Euclid and Beyond*, among others.
- Other materials will be posted to the course website scholar.harvard.edu/knudsen/classes/math-130-classical-geometry.

Course work and grading.

- There will be weekly homework assignments (35%), to be submitted at the beginning of Thursday’s class, as well as midterm (25%) and final (40%) exams/projects.
- No late homework except with permission from me (*not* from the CA).
- Collaboration is highly encouraged. Please credit collaborators.
- Typesetting solutions with Latex is optional but encouraged.

Other course information.

- Class: TTh 10:30–11:45, Science Center 310
- Office hours: T 2-4, Science Center 520 (for now)
- CA: Fan Zhou (fanzhou@college.harvard.edu)
- CA office hours/problem session: TBA

Contact information.

- Email: knudsen@math.harvard.edu
- Office: Science Center 520