

# Math 595

## Mapping class groups

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**Instructor:** Chris Leininger

**Meeting time:** 9:00–9:50am, MWF.

**Room:** 243 AH.

**Prerequisites:** The basics of group theory, covering spaces, and surface topology will be assumed (for example, geometric arguments involving transversality will be freely used). An understanding of hyperbolic geometry would also be helpful, but is not a prerequisite.

**Text:** No text (see below).

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**Topics to be covered:** We will quickly discuss the basics of the mapping class group and surface topology, and then define one of the central objects used in its study, the complex of curves. We will spend the majority of the course discussing the two papers of Masur and Minsky listed below which have played a prominent role in the geometric study of the mapping class group.

H.A. Masur and Y.N. Minsky, *Geometry of the complex of curves. I. Hyperbolicity*. Invent. Math. 138 (1999), no. 1, 103–149.

—, *Geometry of the complex of curves. II. Hierarchical structure*. Geom. Funct. Anal. 10 (2000), no. 4, 902–974.