

Math 510 Syllabus

Instructor: Mao Li

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Lectures: MWF 11:00-11:50 in 347 ALTGELD

Office Hours: MF 13:30pm-14:20pm via zoom.

Zoom Link for Office Hours:

<https://illinois.zoom.us/j/84076426314?pwd=ckNRa0xWZ3JIa1dmRmVraVptMlZ1UT09>

Course description: In this course we will study the theory of Riemann surfaces. Riemann surfaces provides basic examples for algebraic as well as complex geometry. We will aim to cover the theorems of Riemann-Hurwitz and Riemann-Roch, classification of differential equations, abelian integrals, the theorem of Abel-Jacobi and the construction of Jacobian varieties. Time permitting, we will also talk about vector bundles on Riemann surfaces.

Useful textbook: Lectures on Riemann Surfaces, Otto Forster; Algebraic Curves and Riemann Surface, Rick Miranda.