MATH 60380: Basic Complex Analysis II
Spring 2026

Meeting Time:	TTh 11AM–12:15 PM
Location:	Nieuwland 184
Instructor:	Nick Salter Office: Hurley 277 Email: nsalter@nd.edu
Office hours:	Location: Hurley 277 Monday 3:45-4:45 pm
Course Website:	https://nsalter.science.nd.edu/teaching/complexII/

Textbook: We will primarily follow the course notes of McMullen (see the course website). For additional reading, see Griffiths–Harris, or Miranda.

Plan for the course: Our objective is to cover as much of McMullen's notes as time permits. Highlights will include the natural emergence of Riemann surfaces from the theory of complex integration, (holomorphic) differentials, sheaves and their cohomology, Riemann–Roch, the Mittag-Leffler problem, Serre duality, the geometry of linear systems (canonical embeddings, Weierstrass points, etc.), and the theory of the Jacobian.

Homework: Weekly homework will form an integral part of the course. It will be posted each Tuesday on the course website and due the following Wednesday. You are encouraged to collaborate and to consult outside resources as necessary, but all work that you submit should reflect only your own understanding.

Exams: For the weeks preceding spring break and finals week, the homework will instead count as a take-home exam. For these, you are asked not to collaborate with other students and to not consult outside resources.

Grading: Regular homework will account for 60% of the course, with the midterm and final assignments worth 20% each. Letter grade cutoffs will be determined in the course of the semester.