Basic Complex Analysis I - Math 60370

Instructor: Gábor Székelyhidi
MWF 3:00 – 3:50, Fall 2016
Pasquerilla Center 107

This course will be an introduction to complex analysis in one variable. The main topics covered will be the following:

- Complex derivatives, holomorphic functions

- Complex integration, Cauchy integral formula

- The residue theorem, applications

- Picard's theorem, Runge's theorem

- The Riemann mapping theorem

Textbook:

- Narasimhan, Nievergelt, *Complex analysis in one variable*, 2nd edition. Birkhauser Boston, 2001.

References: Some other useful references are the following books:

- Ahlfors, *Complex Analysis*

- Stein, Shakarchi, *Complex Analysis*, Princeton Lectures in Analysis II

- Greene, Krantz, *Function Theory of One Complex Variable*

Grading policy: There will be weekly homework sets, a midterm, and a final exam. The final grade will be broken down as follows: Homework 40%, Midterm 30%, Final 30%.

Office hours: I will have regular office hours on Wednesdays, 9-10:30am, in 277 Hurley Hall, or by appointment.