

June 15, 2015.

MATH 246A - Fall 2015 - Complex Analysis

MWRF 10:00 MS 5138 (room may be changed later)

FIRST LECTURE Thursday Sept. 24

Office hours: John Garnett: MWF 1:30 in MS 7941

Teaching Assistant: TBA

Texts:

- 1) D. E. Marshall, Complex Analysis, notes available online from Donald E. Marshall's Home Page: <https://www.math.washington.edu/marshall/.../Notes>
- 2) L. Ahlfors, Complex Analysis, 3rd. Edition, (0-07-000657-1) (recommended)
- 3) D. Sarason, Complex Function Theory, 2nd. Edition, American Mathematical Society, 2007 (0-8218-4428-8) (recommended)
- 4) W. Rudin, Real and Complex Analysis, Third Editon, (0070542341) (recommended)

Grades: Homework 40%, final 40%, midterm 20%. There will be six homework assignments of 10 - 15 problems each, and each student must present at least one solution correctly and clearly during Thursday recitation section.

Prerequisites: Rigorous advanced calculus: Mathematics 131AB. Properties of \mathbb{R} , least upper bounds, uniform convergence of sequences of continuous functions (\Rightarrow limit is continuous and Riemann integral of limit is limit of integrals), compact and connected sets in \mathbb{R}^n . Also, the ability to write a correct mathematical proof. Undergraduate complex analysis is not a required prerequisites, although it would make the course easier.

Material: Chapters I - VII of Marshall's Notes. Marshall's Notes begin at the beginning and assume only 131AB. They contain very clear proofs, which are often optimally elegant. Consequently this 246A should be a good beginning graduate course for undergraduate mathematics students. Math 132H in Winter 2016 will cover the same theorems as 246A, but with a different book, different proofs and fewer hard exercises. Therefore students are not advised to follow 246A with 132BH, but to follow 246A with 246B. It is, however, permissible to take 246A after taking 132H.

J. Garnett