

March 15, 2007

MATH 246A - Spring 2007

Complex Analysis

MWF 1:00 MS 5117 and Thurs 1:00 MS 5117

Office hours:

John Garnett: MWF 4:00 in MS 7941

William Meyerson: TBA in MS 2961

Texts:

- 1) L. Ahlfors, Complex Analysis, 3rd. Edition, (0-07-000657-1) (required)
- 2) D. Sarason, Complex Function Theory, 2nd. Edition, American Mathematical Society, 2007 (0-8218-4428-8) (recommended)
- 3) T. W. Gamelin, Complex Analysis, (0-387-95069-9) (recommended)

Grades: Homework 30%, final 50%, midterm 20%. There will be four homework assignments of 15 - 20 problems each. You must also present at least one homework problem at the blackboard in quiz section.

Prerequisites: Rigorous advanced calculus: 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. However, neither Math 245 nor undergraduate complex analysis are required prerequisites.

Material: Most of Chapters 1 - 4 of Ahlfors, except the Elementary Point Set Topology section which will be assumed. The rest of the Ahlfors book will be covered in 246B in Fall 2008.

Homework Assignment 1, due Monday April 14: All from Ahlfors, 3rd. Edition.

p. 6, #1. p. 9, #3, 4, 5. p. 11, #1, 4. p. 15, #2, 4. p. 16. #4, 5. p. 17. #2, 3, 5. p. 20. #1, 2, 4, 5.

Notes: The midterm exam will be May 5. There will a review session May 2. There will be a lectures in Thursday Section on April 3 and April 24.