Theory of Functions of a Complex Variable II

The course

This is a second course in the theory of functions of one complex variable. It covers the construction and approximation of holomorphic, entire, and meromorphic functions, including Mittag-Leffler's theorem, the factorization theorems of Weierstrass and Hadamard, and the theorems of Runge and Mergelyan; the concept of simple connectivity; the theory of analytic continuation and the idea of a Riemann surface; Picard's theorems; and applications to some problems in functional analysis and number theory.

Textbook The required textbook is *Function Theory of One Complex Variable*, second edition, by Robert E. Greene and Steven G. Krantz, American Mathematical Society, 2002, ISBN 0-8218-2905-X. The course covers chapters 8–16.

Prerequisite The prerequisite for this course is Math 617.

Venue The course meets Monday, Wednesday, and Friday, 12:40–1:30 P.M., in BLOC 164.

Home page The home page for the course is `http://www.math.tamu.edu/~harold.boas/courses/618-2004a/`.

The instructor

The instructor is Dr. Harold P. Boas. The email address is `boas@tamu.edu` and the telephone number is (979) 845-7269. The instructor's office hours are held in 202 Milner Hall from 10:30 to 11:30 on Monday, Wednesday, and Friday; also by appointment.

Course requirements

In this course, there will be a variety of learning experiences, including in-class work, homework, projects, and a final examination (scheduled by the registrar for 10:30–12:30 on Monday, May 10). The grading scheme will be as follows: A = did most of the work well; B = did most of the work adequately; C = did minimal work; F = failed to complete a substantial amount of the required work.