Math 618 Dr. Boas Spring 1995

Complex Variables II

About the course

This is a second course in the theory of functions of a complex variable. It covers the theory of convergence of analytic and meromorphic functions; the theory of approximation and construction of analytic, entire, and meromorphic functions, including Mittag-Leffler's theorem, the factorization theorems of Weierstrass and Hadamard, and Runge's theorem; the concept of simple connectivity and the Riemann mapping theorem; the theory of analytic continuation and the concept of a Riemann surface; properties of harmonic, subharmonic, and superharmonic functions and the solution of the Dirichlet problem; Bloch's theorem, Schottky's theorem, and the Picard theorems; and other topics if time permits. This material is contained in chapters VII–XII of the required textbook, *Functions of One Complex Variable*, second edition, by John B. Conway.

The prerequisite for this course is Math 617 or its equivalent.

This course and its predecessor Math 617 form the basis for the Mathematics Department Qualifying Examination in Complex Analysis.

The course meets in FRAN 305 from 11:10 A.M.–12:25 P.M. on Tuesday and Thursday.

Important information

Contacting the instructor

My office is 322 Milner, and I will hold office hours 10:00–11:00 A.M., Tuesday, Wednesday, and Thursday, and by appointment. You can contact me by e-mail at boas@math.tamu.edu and by telephone at 845–7269.

Course requirements

This course will operate in a non-traditional style. You and your classmates will be largely responsible for what you learn and for what grade you earn. You will keep a notebook containing all your homework, quizzes, projects, etc., as evidence of what you accomplish during the semester. The grading scale will be: A = exceeded expectations; B = met expectations; C = did not meet expectations.