Topics in Several Complex Variables

The course

This course addresses topics in the theory of functions of several complex variables, such as the following.

- Integral representations and applications

  - Bochner-Martinelli integral

  - Cauchy-Fantappiè forms

  - Bergman and Szegő integrals

  - Cauchy integral for convex domains

  - Hartogs phenomenon via integrals

  - Integral solutions of the $\overline{\partial}$-equation

  - Tangential Cauchy-Riemann equations

- Holomorphic mappings

  - Classification problem of domains

  - Boundary behavior of biholomorphic maps

  - Automorphism groups of domains

  - Invariant metrics; Wong-Rosay theorem

  - Approximate Riemann mapping theorems

  - Proper holomorphic maps

  - Automorphisms of $\mathbb{C}^n$; Jacobian conjecture

Prerequisite The prerequisite for this course is Math 618.

Venue The course meets 11:30-12:20 on Monday, Wednesday, and Friday in Milner 216.

Web site The course web site is `http://www.math.tamu.edu/~boas/courses/685-2005c/`

Textbook There is no required textbook. I will indicate some reference books as the course progresses.

Grading

Grades will be based on class participation.

The instructor

The instructor is Dr. Harold P. Boas. Office hours are in 202 Milner Hall, 10:15–11:15 on Monday, Wednesday, and Friday; also by appointment. The office telephone number is (979) 845-7269, and the email address is boas@tamu.edu.

Other information

Americans with Disabilities Act Statement from the Department of Student Life

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the office of Disability Services in Cain Hall (telephone 845-1637, web site http://disability.tamu.edu/).

Academic Integrity Statement from the Aggie Honor System Office

The Aggie Honor Code states: "An Aggie does not lie, cheat or steal, or tolerate those who do." Information about the Honor Council Rules and Procedures may be found at the web site http://www.tamu.edu/aggiehonor/.