Math 375 Syllabus

Course: Complex Variables

Semester: Summer 2016

Instructor: John Brown

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Course Objectives

Complex Analysis is primarily the study of holomorphic functions; as such, much of discussion will be focused on developing a deep understanding of such functions both abstractly and concretely. Any remaining time may be spent discussing interesting applications of Complex Analysis to other fields of study. Some of the topics to be covered include:

1. The Complex Numbers: Their algebraic, geometric, and topological properties.
2. Holomorphic Functions: Definition, some properties, The Cauchy-Riemann Equations.
3. Power Series, The Exponential and Trigonometric Functions
4. Integration, Cauchy's Theorem
5. Cauchy's Integral Formulas, Further Applications of Cauchy's Theorem
6. Meromorphic Functions and the Logarithm

Grades

There may be some quizzes and homeworks but grades will be mostly based on performance on a mix of in-class and take-home exams. The breakdown will most likely be:

Take home exams: 15%

In class exams: 85%

where the in class exams are most likely a final (25%) and four other exams (15% each). The in class exams will most likely be on Fridays.

Academic Honesty

Academic dishonesty may result in failure of the course; see the Binghamton University Student Academic Honesty Code for details.