Math 383: Complex Analysis
First Lecture

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Williams College

Introduction and Objectives

Introduction / Objectives

Objectives

- Obviously learn complex analysis.
- Emphasize techniques / asking the right questions.
- Prepare for grad school.
- Gain expertise in proofs.
- Seeing applications of earlier courses.

Types of Problems

- Number Theory: $\zeta(s)$ and primes.
- Physics: Heisenberg Uncertainty Principle.
- Method of Stationary Phase.
- Understanding Special Functions.
- Probability: Central Limit Theorem.

My experiences

- Zeros of L-functions.
- Eigenvalues of random matrix ensembles.

Course Mechanics

Grading / Administrative

- Move at fast pace, responsible for reading before class: 5%. HW: 15%. Midterm: 40%. Final exam: 40%. You may also do a project for 10% of your grade (which reduces all other categories proportionally).

- Pre-reqs: real analysis; Green's Theorem a plus (http://www.youtube.com/watch?v=XnWnXcHDESY).

Office hours

- TBD and when I'm in my office (schedule online).

Other

- Webpage: numerous handouts, additional comments each day (mix of review and optional advanced material).
- PREPARE FOR CLASS! Must do readings before each class.
- Option to influence topics, present to class.

Other: Advice from Jeff Miller

- Party less than the person next to you.

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Happy to do practice interviews, adjust deadlines....