

# MATH 4100/AMCS 5100 - COMPLEX ANALYSIS

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The TA will be responsible for grading your assignments. Please direct any questions regarding how you were graded on the homework to him in his office hour. Exams will be jointly graded.

**Schedule:** This class meets MW 10:15 - 11:45 in Leidy Labs 109.

**Recommended text:** *Complex Analysis* by Bak and Newman. This should be available through SpringerLink on campus wifi.

## **Office Hours:**

Aaron: two hours weekly to be determined, and by appointment.

Alex: to be determined.

**Tests and Exams:** There will be two in-class midterms and a final, which will occur at a time to be determined, during finals week. The exams will be worth 50% of your grade - 15% for each midterm and 20% for the exam.

Absence from an exam will result in a score of 0 unless a valid reason (such as illness or family emergency) is given before the start of the exam. If such a reason is given and an exam must be missed, either the average of the other two exam grades will be applied to the missed exam, or a make-up exam will be scheduled.

**Homework:** By default, homework will be due weekly, on Wednesdays or Thursdays at 11:59PM, through Gradescope. Please start your homework early! This will give you time to try the problems, collaborate with other students, ask questions at office hours, and write clear and formal solutions.

Solutions should consist of rigorous proofs. Although you can handwrite your homeworks, I recommend typesetting them in LaTeX (you might want to learn here). If you do type your homeworks, it will still be useful to include pictures - don't be afraid to take a picture of a drawing and use `\includegraphics[]{}{}`.

Assignments will be posted on Canvas and will be due through Gradescope. Late homework will only be accepted under exceptional circumstances - please notify me before the due date if you will not be able to submit in time. However, your lowest two homework grades will be dropped. You are allowed and encouraged to work on your homework together, but *you must write up your solutions independently*. Cheating and/or copying is forbidden by University policy—please read the code of academic conduct.

**Topics:** We will study the basic properties of holomorphic functions - differentiable functions  $\mathbb{C} \rightarrow \mathbb{C}$ . This will let us prove the standard properties of contour integration, from the Cauchy Integral Formula to the Residue Theorem. With this toolbox, we will hopefully have time to study several additional topics, such as conformal mappings.

**Academic accommodations:** If you have a documented disability requiring academic accommodation, please have the Office for Student Disability Services (SDS) provide a letter during the first two weeks of class.

Grade Breakdown

<b>Midterm 1:</b> October 1, during class	15% of your grade.
<b>Midterm 2:</b> October 29, during class	15% of your grade.
<b>Final:</b> TBA, during finals week	20% of your grade.
<b>Homework:</b> due weekly, except midterm weeks	50% of your grade.