Complex Analysis, MA 545, Section OP

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| Instructor Nikita Selinger Email selinger@uab.edu Office location University Hall 4016 | Course overview We will talk about complex numbers and functions thereof. The class will include a review of complex numbers and infinite series, analytic functions, complex integration and Cauchy’s theorem, Taylor and Laurent series, calculus of residues and applications. Required text*Complex variables and Applications*, by James Ward Brown, Ruel V. Churchill. Any edition. (you do not need the hard copy) |

# Exam schedule

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| --- | --- |
| Date | Subject |
| 7/5/25 | Exam 1 |
|  |  |
|  |  |
| 8/13/25 | Final Exam (Lectures 1-32) – 2 hours 30 minutes, Location TBD |

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# Grading Scheme

# This is an approximation of the points breakdown for the course. There will be 100 available points altogether in the course (not including any extra credit), though this number may change if circumstance requires the deletion of any assignments.

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| --- | --- |
| Assignment Type | Total Percentage |
| Midterm Exam | 30% |
| Final Exam | 40% |
| Weekly Homework | 30% |

# Grading Scale

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| --- | --- | --- | --- | --- |
| A: 88% and higher | B: 75% - 87% | C: 62% - 74% | D: 50% - 61% | F: 49% and lower |

# Accomodations for Students with Disabilities

If you are a student with learning needs that require special accommodation: Register with UAB's Disability Support Services (https://www.uab.edu/students/disability/) by providing appropriate documentation. Then: Email your instructor ([lwickman@uab.edu](mailto:lwickman@uab.edu)) your accommodation letter, along with any additional information. Finally, register for the exams and quizzes through the DSS (if you get extended time) to ensure testing accommodations are met.

This should be done as early as possible in the semester. However, you can submit your accommodation letter to the instructor at any point in the semester.

When completing a midterm or quiz with DSS, you should complete it on the same day as the midterm is completed in class. If your accommodations allow for extra time, and you believe this applies to homework assignments, please make sure to speak out this with your instructor.

# Acadmeic Integrity

# UAB students are bound by the Academic Integrity Code, which can be found here: https://www.uab.edu/one-stop/images/documents/academic-integrity.pdf. Instances of cheating will be dealt with according to the code. If you are suspected of cheating on an in-class test or quiz, you may be asked to move seats. If a take-home assignment appears to have been solved by someone/something other than the students submitting the assignment, the student will receive a zero on either a portion of the assignment, or even the whole assignment. The student is encouraged to meet with the instructor during office hours to discuss a potential academic integrity violation.

# Campus Resources

# There are many counseling and wellness programs available to you as a UAB student. If you or a friend is in distress, please visit <https://www.uab.edu/students/counseling/resources/campus-resources> for a list of available resources and reach out for help.

# Extra Help

# There are many opportunities available for extra help. One of the most useful is the Math Learning Lab. You can attend without an appointment and get help with any math class (up to Calculus 2). Learning Lab information can be found at this link: <https://www.uab.edu/cas/mathematics/student-resources/math-learning-lab>

# Learning Outcomes

By the end of the course, students will be able to:

1. Integrate and differentiate functions of complex variable.
2. Know how to apply Cauchy’s theorem.
3. Know how to represent an analytic function by its Taylor and Laurent series.
4. Apply complex functions to a variety of mathematical problems.