

MAT 342: Applied Complex Analysis

Spring 2024

Course description: This is a mathematically rigorous course, and most statements will come with complete proofs. Topics covered will include properties of complex numbers, analytic functions with examples, contour integrals, the Cauchy integral formula, the fundamental theorem of algebra, power series and Laurent series, residues and poles with applications, conformal mappings with applications. See [Weekly Plan](#) for details.

Textbook: Complex Variables and Applications (9th edition) by Brown and Churchill.

Lecturer: Dzmitry Dudko, Math Tower 2-117.

Homework: Most weeks there will be a homework assignment that should be submitted during the lecture on Thursday of the week following the posting of the assignment. Homework assignments will be posted on [Brightspace](#).

Exams: There will be two Midterms (**February 29 and April 11**) and the Final Exam on **May 14** (Tuesday), 2:15 – 5:00 pm.

Grading: Your final grade will be determined as follows:

Homework: 20%

Midterm 1: 20%

Midterm 2: 20%

Final Exam: 40%

Expected Grade will be announced after Midterm 1 and Midterm 2.

Required syllabus statements

Student Accessibility Support Center Statement:

If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Student Accessibility Support Center, Stony Brook Union Suite 107, (631) 632-6748, or at sasc@stonybrook.edu. They will determine with you what accommodations, if any, are necessary and appropriate. All information and documentation is confidential.

Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and the Student Accessibility Support Center. For procedures and information go to the following website:

<https://ehs.stonybrook.edu//programs/fire-safety/emergency-evacuation/evacuation-guide-disabilities>

and search Fire Safety and Evacuation and Disabilities.

Academic Integrity Statement:

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty is required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Professions, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty please refer to the academic judiciary website at

http://www.stonybrook.edu/commcms/academic_integrity/index.html

Critical Incident Management:

Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Student Conduct and Community Standards any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures. Further information about most academic matters can be found in the Undergraduate Bulletin, the Undergraduate Class Schedule, and the Faculty-Employee Handbook.