

Math 4364
Theory of Complex Variables

Fall 2024
Dr. Ryan C. Daileda

Course URL: ramanujan.math.trinity.edu/rdaileda/complex

Office Hours and Contact Information: Consult the course web page.

Textbook: *Basic Complex Analysis* (3e) by Marsden and Hoffman

Course Content: The theory of analytic functions of one complex variable. Topics include: arithmetic of the complex numbers, continuous functions, analytic functions, differentiation of elementary functions, contour integrals, Cauchy's theorem, Cauchy's integral formula, harmonic functions, the maximum modulus principle, sequences and series of analytic functions, power series, Taylor's theorem, singularities, Laurent series, residues and residue calculus, the residue theorem, evaluation of definite integrals and infinite series via residues.

Assignments: Exercises and reading will be assigned daily and posted on the course web page. Solutions to assigned exercises will only be due once a week. Due dates for all assignments will be clearly indicated. I reserve the right to penalize or refuse to accept late assignments.

All assignments must be typeset in L^AT_EX and submitted electronically, either through *Gradescope* or *Canvas*. Handwritten work will not be accepted.

Collaboration on assignments is permitted and encouraged, and you are free to consult any individual or resource that you find helpful. However, plagiarism is unacceptable. Attempting to pass off the work of others (regardless of the source) as your own will be considered a violation of the honor code.

Exams: There will be two midterm exams during the semester, as well as a cumulative final exam.

Exam 1	October 2
Exam 2	November 4
Final Exam	December 19, 8:30–11:30am

Use of Previous Exams: Students are permitted to obtain and study exams given in previous semesters. However, previous exams should not be used to judge the content or difficulty of the exams that will be given in this course.

Attendance: Attendance is highly encouraged but is not mandatory. Roll will not be taken, but excessive absences should be explained to me.

Grades: Your course grade will be based upon the scores on the homework, midterm exams, and the final exam as follows:

Homework	30 %
Midterm Exams	20 % (each)
Final Exam	30 %

Use of ChatGPT or Other Generative AI: All assignments submitted for this course should reflect your own thinking and work. Any use of generative AI, such as but not limited to Chat GPT, will be considered “unauthorized assistance” and a violation of academic integrity and of the Trinity University Academic Integrity (Honor Code) discussed below.

Electronic Recording of Classroom Instruction: Please be aware that all classroom instruction, including student participation in classroom activities, is subject to recording and dissemination on the University’s secure course management system (Canvas). The recordings will be made available only to students enrolled in the course to facilitate online learning and review. Students are expressly prohibited from capturing or copying classroom recordings by any means; violations will be subject to disciplinary action. Instructors who wish to use a recording outside of class must obtain the written consent of any students who are personally identifiable in the recording.

Additional Information

Academic Integrity: All students are covered by the Trinity University Honor Code which prohibits dishonesty in academic work. Under the Honor Code, a faculty member will (or a student may) report an alleged violation to the Academic Honor Council. It is the task of the Council to investigate, adjudicate, and assign a punishment within certain guidelines if a violation has been verified. Students are required to pledge all written work that is submitted for a grade: “On my honor, I have neither given nor received any unauthorized assistance on this work” and their signature. The pledge may be abbreviated “pledged” with a signature.

The specifics of the Honor Code, its underlying philosophy, and the norms for sanctioning can all be found on the Academic Honor Council website **here**.

Academic Support Resources: Trinity faculty hold students to the highest academic standards, but we also know that the very best students seek out help when necessary. To learn more about the resources that are in place to support your academic success, visit Trinity’s Academic Support Homepage **here**.

Special Needs: If you have a documented disability and will need accommodations in this class, please speak with me privately early in the semester so I may be prepared to meet your needs. If you have not already registered with Student Accessibility Services, contact the office at 999-7411 or SAS@trinity.edu. You must be registered with SAS before I can provide accommodations.

Title IX/Sexual Misconduct Reporting: As a Responsible Employee who is committed to creating an environment where every member of our community can thrive, I want to let you know that I am a Mandatory Reporter. What that means is that I am required to report any instances of sexual misconduct, including sexual harassment, non-consensual sexual intercourse, non-consensual sexual contact, sexual exploitation, intimate partner violence, stalking, and related retaliation that I am aware of to the Title IX Coordinator. So, if you share information with me about any incidents that implicate the Sexual Misconduct or Anti-Harassment Policies, I am required to report all information to the Title IX Coordinator to make sure you have information about support resources and complaint resolution options. My report does not initiate the complaint process, and you are in control over how you choose to engage with our Title IX Coordinator. If you or someone you know has experienced sexual misconduct, including sexual harassment, I encourage you to share this information directly with the Title IX Coordinator or one of the individuals who has been designated as a confidential resource on campus. The reporting form is available **here** and information about supportive resources is available **here**.