

Complex Analysis: MA 648-1D, MWF 11:15 am-12:05 pm
Fall 2026

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Office hours: Email is the preferred method of contact if you have questions. Please expect a response within 24 hours on weekdays and a slower response on weekends (emails received after 5 pm on Friday will be returned Monday morning). Include the course number on the subject line of your email for a faster response. I am available to meet with you in person or virtually via Zoom by appointment. The link to a Zoom meeting will be sent to you by-mail after we have agreed on the time.

Textbook: Serge Lang "Complex Analysis" any edition, Springer. Recommended, but not required.

Lecture Notes: Lecture Notes will be put on Canvas weekly (Modulus section).

Course Content: The algebraic and topological structure of the complex plane; analytic functions; Cauchy's integral theorem and integral formula; power series; elementary functions; and their Riemann surfaces; isolated singularities and residues; the Laurent expansion; the Riemann mapping theorem.

Learning outcome. The course equips students to master rigorous proofs, analytic functions, Cauchy's theorems, series expansions, residue calculus, and conformal mappings. Students gain advanced problem-solving skills and theoretical grounding necessary for specialized research in mathematics, physics, and applied sciences

Grading policy: There will be the Midterm test and the Final Exam. Each of them will be evaluated between 0% and 100%. The final grade is calculated as follows:

$$Test : 40\%, \text{ Final Exam} : 60\%;$$

$$A \geq 90\%, \quad B \geq 80\%,$$

$$C \geq 70\%, \quad .$$

There will be an extra credit for homework added to the test and the final exam grades.

Tests and the Final Exam: Here is the **tentative** date for the test:

The Midterm Test: October 26 and Oct 28. The exact date will be announced two weeks before the test.

Final Exam Date: Monday, December 7, 10.45 am-1.15 pm.

Homework: Problems will be assigned weekly. All HW's are due the next Monday after assignments. The HWs are not mandatory. I will occasionally grade your HW for an extra credit. Only half of the credit will be given for the late HW.

Regular class attendance is important and strongly encouraged.

Time Commitment: You are expected to spend a substantial amount of time working through the course activities and assignments every week. Please know that time management and self-motivation are key components for success in this course and courses in general. There is a lot to be gained in this course, so approach it with an open mind. This class meets 3 times per week for 50 min each time. In addition to class time, you should spend about 6 hours per week reading, studying, preparing for class discussions, and completing assignments.

Class behavior: Success in this course requires you to be present and fully engaged. Therefore, you are expected to attend class, participate in discussions by sharing your ideas while also being respectful of others ideas. Additionally, you are expected to **refrain from distractions during class (texting, websites not pertinent to the discussion, etc.)**.

Add/Drop and Course Withdrawal: Drop/Add: Deadlines for adding, dropping, or withdrawing from a course and for paying tuition are published in the Academic Calendar available online. Review the Institutional Refund Policy for information on refunds for dropped courses. It is the students responsibility to initiate add/drop procedures. Students may drop and add courses online after they have registered and until the drop/add deadline online using BlazerNET. Withdrawal: To avoid academic penalty, a student must withdraw from a course by the withdrawal deadline shown in the academic calendar and receive a grade of W (withdrawn). Failure to attend class does not constitute a formal drop or withdrawal. The official course withdrawal must be completed online in BlazerNET.

DSS Accessibility Statement. Accessible Learning: UAB is committed to providing an accessible learning experience for all students. If you are a student with a disability that qualifies under the Americans with Disabilities Act (ADA) and/or Section 504 of the Rehabilitation Act, and you require accommodations, please contact Disability Support Services for information

on accommodations, registration, and procedures. Requests for reasonable accommodations involve an interactive process and consist of a collaborative effort among the student, DSS, faculty and staff. If you are registered with Disability Support Services, please contact me to discuss accommodations that may be necessary in this course. If you have a disability but have not contacted Disability Support Services, please call (205) 934-4205 or visit the DSS website.

Title IX Statement In accordance with Title IX, the University of Alabama at Birmingham does not discriminate on the basis of gender in any of its programs or services. The University is committed to providing an environment free from discrimination based on gender and expects individuals who live, work, teach, and study within this community to contribute positively to the environment and to refrain from behaviors that threaten the freedom or respect that every member of our community deserves. For more information about Title IX, policy, reporting, protections, resources, and supports, please visit the UAB Title IX webpage.

Academic Integrity Code: Your success while at UAB and after graduation is valued by the University. To gain and grow in the knowledge and skills needed for your future career, it is vital that you complete your own work in your courses and in your research. The purpose of the Academic Integrity Code is to support our academic mission and to maintain and promote academic integrity. All students in attendance at UAB are expected to pursue all academic endeavors with integrity, honor, and professionalism and to observe standards of conduct appropriate to a community of scholars. Please be sure you understand the different forms of "academic misconduct" covered by the code. See what UAB students say about academic integrity and review the FAQs about the code for details on the Student Academic Integrity webpage.

Artificial Intelligence Use: Academic misconduct is present in an academic work wherever AI assistance has been used when unauthorized, or when authorized, has not been disclosed as required. Such behavior is considered deceit and a violation of UAB's shared commitment to truth and academic integrity. Deceit constitutes academic misconduct and is subject to review according to UAB's Academic Integrity Code.

Student Conduct Code: The purpose of the University of Alabama at Birmingham (University) student conduct process is to support the vision, mission, and shared values of the University and the tenets of the Universi-

tys creed, The Blazer Way. Through a student-focused and learning-centered lens, the process strives to uphold individual and community standards; foster an environment of personal accountability for decisions; promote personal growth and development of life skills; and care for the well-being, health, safety, and property of all members of the University community. The Student Conduct Code (Code) describes the standards of behavior for all students and student organizations and outlines students rights and the process for adjudicating alleged violations. It is set forth in writing in order to give general notice of non-academic prohibited conduct. The Code should be read broadly and is not designed to define non-academic conduct in exhaustive terms. All students and student organizations are expected to conduct themselves in accordance with the Code. The current version of the Code, which may be revised periodically, is available from the Office of Community Standards & Student Accountability.

Intellectual Property: My lectures and course materials, including PowerPoint presentations, quizzes, exams, outlines, and similar materials, are protected by copyright. You may take notes and make copies of course materials for your own use. You may not and may not allow others to reproduce or distribute lecture notes and course materials publicly, whether or not a fee is charged, without my expressed written consent.

Divisive Concepts: All University faculty, instructors and teaching staff have the academic freedom to explore, discuss, and provide instruction on a wide range of topics in an academic setting. This class may present difficult, objectionable, or controversial topics for consideration, but will do so through an objective, scholarly lens designed to encourage critical thinking. Though students may be asked to share their personal views in the academic setting, no student will ever be required to assent or agree with any concept considered divisive under Alabama law, nor penalized for refusing to support or endorse such a concept. All students are strongly encouraged to think independently and analytically about all material presented in class and may express their views in a time, place, and manner, consistent with class organization and structure, and in accordance with the University's commitment to free and open thought, inquiry, and expressions.

Shared Values Statement: Collaboration, integrity, respect, and excellence are core values of our institution and affirm what it means to be a UAB community member. A key foundation of UAB is diversity. At UAB, everybody counts every day. UAB is committed to fostering a respectful,

accessible and open campus environment. We value every member of our campus and the richly different perspectives, characteristics and life experiences that contribute to UAB's unique environment. UAB values and cultivates access, engagement and opportunity in our research, learning, clinical, and work environments. Our [School] aims to create an open and welcoming environment and to support the success of all UAB community members.

Violence Prevention and Response Policy: The University of Alabama at Birmingham (UAB) is committed to maintaining a safe and secure educational environment and workplace, one which seeks to ensure the well-being and safety of faculty and staff, employees, students and visitors. Violence and threatened violence are prohibited by UAB. Each member of the UAB community has the responsibility to understand, prevent and respond appropriately to campus/workplace violence. View the Violence Prevention and Response Policy.

Technology: Access technical support and view privacy policies and accessibility statements for Canvas and other technologies on the Student Academic Technologies website. Additionally, view information about the Minimum System Requirements and Technical Skills.

Canvas Alerts: I may send alerts to students based on Canvas course information, such as current grades in the course, assignment due dates, and assignment scores. The alert is sent as an email to the student's UAB email address.

Academic Policy Appeal. Students should request an Academic Policy Appeal when the student cannot continue in a course for reasons that are outside of the strict qualifications under this policy. Students need to submit supporting documentation showing why they cannot continue in a course. Learn more about the Academic Policy Appeal and how to submit an appeal form by visiting the Academic Policy Appeal webpage.

Health and Safety: UAB is very concerned for your continued health and safety. Please consult the Students section of UAB United for up-to-date guidance because the following information is subject to change as circumstances require. We strongly urge you to be fully vaccinated. Here is information on the safety of vaccines and on how to get vaccinated at UAB. Mask-wearing has proven to be one of the most successful mitigation strategies used to combat spread of the various variants of the COVID-19 virus. Please check UAB United for mask-wearing requirements and other safety protocols for this semester.

Student Academic and Support Services:

- One Stop Student Services provides a single point of professional integrated service to students. The One Stop serves students who need assistance with academic records, financial aid, registration, student accounting, ONE card, and other related topics.
- Student Assistance and Support provides individualized assistance to promote student safety and well-being, collaboration and resilience, personal accountability, and self-advocacy. The Care Team consults and collaborates with campus partners to balance the needs of individual students with those of the overall campus community. The UAB Care Team helps find solutions for students experiencing academic, social, and crisis situations including mental health concerns.
- Disability Support Services assists students with in reaching accommodations for their educational experiences at UAB that ensure that they have equal access to programs, services, and activities at UAB.
- The Vulcan Materials Academic Success Center provides tutoring, supplemental instruction, and other services that encourage goal achievement and degree completion.
- The University Writing Center offers free writing assistance for all UAB students. Get help at any stage of the writing process and with any type of writing. Students may meet with a tutor in person or via Zoom. Students may also upload a paper for feedback (called eTutoring in the online system). During in-person and Zoom sessions, tutors can help you understand your assignment, develop and organize your ideas, use and cite sources, revise and edit your draft, and more. When you upload a draft for eTutoring, tutors can provide feedback on both big-picture issues and detail-oriented concerns; please note that you must upload a draft and assignment sheet to use eTutoring. To make an appointment or get more information, please see the UWC website, email writingcenter@uab.edu, or call 205-996-7178. Follow the UWC on Facebook, Instagram, and LinkedIn for daily news and quick writing tips.

- UAB Student Health Services delivers comprehensive, high quality, confidential, primary healthcare to students. Student Health provides testing services and vaccination clinics.
- Student Counseling Services offers students a safe place to discuss and resolve issues that interfere with personal and academic goals. UAB has created a new app (available in the App Store and Google Play) called B Well, that is designed to easily access resources on mobile devices and build a self-care plan. Kognito is a free, interactive simulation-based platform designed to help you talk with someone when you are worried about your mental health.
- UAB Blazer Kitchen at the Hill Student Center provides food and basic supplies for any UAB student in need through in-person or online shopping. Students who can are also able to donate food and supplies to assist their peers. To get more information, call 205-975-9509, email studentoutreach@uab.edu, or visit Student Assistance & Support website.
- eLearning and Professional Studies provides numerous academic technologies and learning resources for students whose learning may be affected by COVID.
- UAB Emergency Management will be the official source of UAB information during any actual emergency or severe weather situation. The following are the various websites describing additional student academic and technology resources:
 - UAB Policies for Students
 - Student Academic and Support Services
 - Technology Resources
 - See also the Student Assistance & Support website of Student Affairs for a description of Covid-19-related resources, including the laptop loaner program. Peers Contact Information
- I encourage students to reach out and obtain contact information of up to three classmates. This will be helpful in the event of an absence, forming study groups, or communicating schedule changes, etc.

Welcome to MA 648 and best of luck to you all.