

MATH 345

Syllabus Fall 2021

Instructor: Dr. Colin Starr **Office Hours*:** MWF 10:20-11:10, 1-2
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* Only MWF 10:20-11:10 office hours are held in person; all others will be via Zoom.

Required Text: *Complex Variables with Applications, Ninth Edition*, by Brown and Churchill.

Goals: Complex Analysis generalizes the calculus you are familiar with. In Calculus I, we study change in functions of a single real variable. In Complex Analysis, we study change in functions of a single complex variable. This class has a computational side and a theoretical side; there are calculus-like calculations as well as proofs. Our goals are:

1. to understand the difference the change in the domain from \mathbb{R} to \mathbb{C} makes;
2. to become proficient with relevant computations; and
3. to understand and be able to apply proof techniques that arise in the context of complex analysis.

Assessment: Your grade will be computed as follows:

Homework:	300 points
Presentation:	100 points
Midterm Exams:	2@ 100 points each
Final Exam:	200 points

Homework: Note that over a third of your grade is tied to the homework. Essentially, you **cannot pass the course** without doing the homework. On the other hand, good performance on the homework will take a lot of pressure off of the exams. I recommend that you attempt all of the problems alone first, then get together with classmates for those you struggled with, and finally come to me if that doesn't resolve it. I am very happy to help you when needed, but the goal is for you not to need me. Go ahead and struggle!

The procedure recommended above requires that you begin the homework immediately in order to leave time at the end for further assistance. I will collect the homework the second class period after it is assigned.

Homework is to be turned in using \LaTeX , mathematical typesetting software with which you should all be somewhat familiar. Further assistance and my own style file are posted on our course website.

Presentation: You will also be responsible for a group presentation toward the end of the semester on an application of Complex Analysis. I will provide more details when the time gets closer.

I will not take attendance for a grade, but I will expect you to be here every day. If you must miss, you should let me know in advance.

Exams: There are two midterm exams; please note that the dates below **are subject to change** if necessary.

Exam I	Friday, October 1
Exam II	Friday, November 5

The final will be on Monday, December 13 from 8 to 11 AM. You may not make up any missed exam. If an emergency arises, **contact me prior to the exam**.

Please note: Written responses to all questions must be in complete sentences. I expect correct usage of grammar, spelling, and punctuation at all times. Your homework should be \LaTeX ed; I recommend Overleaf.

If you have special needs (e.g., for a documented disability), it is your responsibility to approach me at least a day in advance of the need for accommodation. To receive accommodation, you must be registered with Disability Services; this office is located in Bishop Health Center in Baxter Hall. (Phone: (503) 370-6471.)

Cheating absolutely will not be tolerated. The minimum penalty for cheating is a 0 on the assignment and a formal notification to the dean. I encourage you to work together on your homework, but your final write-up **must** be your own.

General Policies

Academic Integrity

Students of Willamette University are members of a community that values excellence and integrity in every aspect of life. As such, we expect all community members to live up to the highest standards of personal, ethical, and moral conduct. Students are expected not to engage in any type of academic or intellectually dishonest practice and encouraged to display honesty, trust, fairness, respect, and responsibility in all they do. Plagiarism and cheating are especially offensive to the integrity of courses in which they occur and against the College community as a whole. These acts involve intellectual dishonesty, deception, and fraud, which inhibit the honest exchange of ideas. Plagiarism and cheating may be grounds for failure in the course and/or dismissal from the College. <http://willamette.edu/cla/catalog/policies/plagiarism-cheating.php>

Commitment to Positive Sexual Ethics

Willamette is a community committed to fostering safe, productive learning environments, and we value ethical sexual behaviors and standards. Title IX and our school policy prohibit discrimination on the basis of sex, which regards sexual misconduct — including discrimination, harassment, domestic and dating violence, sexual assault, and stalking. We understand that sexual violence can undermine students' academic success, and we encourage affected students to talk to someone about their experiences and get the support they need. Please be aware that as a mandatory reporter I am required to report any instances you disclose to Willamette's Title IX Coordinator. If you would rather share information with a confidential employee who does not have this responsibility, please contact our confidential advocate at confidential-advocate@willamette.edu. Confidential support also can be found with SARAs and at the GRAC (503-851-4245); and at WUTalk - a 24-hour telephone crisis counseling support line (503-375-5353). If you are in immediate danger, please call campus safety at 503-370-6911.

DACA/Undocumented Student Advocate Willamette is committed to supporting our DACA/Undocumented students in a variety of ways. This year, Tori Ruiz is the contact person for all DACA/undocumented students; she can provide those students with a number of external and internal resources that are available. Her contact information is email:truiz@willamette.edu, Office: 3rd Floor UC, Phone: 503-370-6447.

Diversity and Disability Statement

Willamette University values diversity and inclusion; we are committed to a climate of mutual respect and full participation. My goal is to create a learning environment that is usable, equitable, inclusive and welcoming. If there are aspects of the instruction or design of this course that result in barriers to your inclusion or accurate assessment or achievement, please notify me as soon as possible. Students with disabilities are also encouraged to contact the Accessible Education Services office in Smullin 155 at 503-370-6737 or Accessible-info@willamette.edu to discuss a range of options to removing barriers in the course, including accommodations.

Religious Practice

Willamette University recognizes the value of religious practice and strives to accommodate students' commitment to their religious traditions whenever possible. Please let me know within the first two weeks of the semester if a conflict between holy days or other religious practice and full participation in the course is anticipated. I will do my best to work with you to determine a reasonable accommodation.

SOAR Center Offerings: Food, Clothing, and School Materials

The Students Organizing for Access to Resources (SOAR) Center strives to create equitable access to food, professional clothing, commencement regalia, and scholarly resources for WU and Willamette Academy students. The SOAR Center is located on the Putnam University Center's third floor (in the former Women's Resource Center and across from the Harrison Conference Room). The space houses the Bearcat Pantry, Clothing Share, and First-Generation Book Drive and is maintained by committed students and staff and faculty advisers.

Trans-Inclusive Classroom Space

I will gladly honor your request to address you by your affirmed name or gender pronoun. Please advise me of this at any point in the semester so that I may make appropriate changes to my records. If I accidentally use an incorrect gender pronoun when addressing you, please feel free to let me know, in whatever manner makes you comfortable, what pronouns you use so that I can make every effort to correct that error.

Land Acknowledgement

We are gathered on the land of the Kalapuya, who today are represented by the Confederated Tribes of the Grand Ronde and the Confederated Tribes of the Siletz Indians, whose relationship with this land continues to this day. We offer gratitude for the land itself, for those who have stewarded it for generations, and for the opportunity to study, learn, work, and be in community on this land. We acknowledge that

our University's history, like many others, is fundamentally tied to the first colonial developments in the Willamette Valley. Finally, we respectfully acknowledge and honor past, present, and future Indigenous students of Willamette.

LinkedIn Learning

Willamette University tracks all log-in information for LinkedIn Learning. This information will be kept in-house and will be used for the purposes of developing LinkedIn Learning on campus. Faculty may keep track of your log-in for the purposes of evaluating your progress for class. Faculty using LinkedIn Learning in for class assignments will not share your log-in information with others as it is protected under FERPA.

Time Commitment

Willamette's Credit Hour Policy holds that for every hour of class time there is an expectation of 2-3 hours' work outside of class. Thus, for this class you should anticipate spending 6-9 hours outside of class engaged in course-related activities. Examples include reading course materials, preparing for discussion, and preparing and writing papers and exams.

Intellectual Property and Privacy

Class materials and discussions including recorded lectures are for the sole purpose of educating the students enrolled in the course. The release of such information (including but not limited to directly sharing, screen capturing, or recording content) is strictly prohibited, unless the instructor states otherwise. Doing so without the permission of the instructor will be considered an Honor Code violation and may also be a violation of other state and federal laws, such as the Copyright Act.