

Instructor. Prof. Matt Miller, Coliseum 1020A hours: MWF 1:00-2:00, TuTh 11:30-12:30, and by appointment, phone: 777-7455, e-mail: millermath.sc.edu

Text. *Complex Variables and Applications* by Brown and Churchill, ISBN 978-0-073-383170. The Russell House Bookstore, Amazon, etc. carry print and electronic versions, new and used, to rent or buy. The e-book is also available directly from the publisher at McGraw Hill with ISBN 978-0-073-530857.

Course content. Chapters 1-6 of the text, and parts of 7-9.

Learning outcomes. Upon successful completion of the course, students will be able to state the main definitions and theorems from the basic theory of complex variables. They will exhibit a working knowledge of the computations that can be done by hand, principally with power series, line integrals, and residues.

Grades. Three major tests will be given, each worth 100 points. Tentative dates are Thursday, February 3 (day 8); Thursday, March 3 (day 16); and Thursday, April 7 or 14 (day 24 or 26). Some of these dates fall just before breaks or vacations; make your travel plans accordingly. At least six ten-point quizzes will be given; the five highest scores will be counted. Some of these quizzes will be designated *competency quizzes*. Your first attempt will have a recorded score, but to be assigned a final grade for the course you will have to score at least 9/10 on each one; you will be allowed to make as many attempts as you need to do this, but these attempts will not contribute to your computed grade. There will be a comprehensive final exam, worth 150 points. **No make-ups will be given on quizzes or exams**, but the percent score on your final will replace your lowest exam score. The final exam is scheduled for Tuesday, May 3 at 9:00 am. **No exemptions will be granted.** Selected homework problems will be collected and graded. Up to three homework assignments prepared using LaTeX will each earn 5 bonus points. The homework total (which is generally in the range 150-300 points) will be scaled to total 125 points. A total of 625 points may be earned:

Exams	300	
Final	150	
Quizzes	50	(best five)
Homework	125	(scaled score)

Letter grades will be announced separately for each exam, for the final, for the quiz total, and for the scaled homework total. They will generally fall close to the scale (on a percentage basis) 85–100 A, 80–84 B+, 75–79 B, 70–74 C+, 65–69 C, 55–64 D, below 55 F, but will vary up or down. Note that the deadline to drop this course without a

grade of WF is Monday, March 28; you should have a pretty good idea before then how you are doing.

Collaboration. One of the goals of this course is to learn how to communicate mathematical ideas. By all means form study groups to discuss the homework problems (but give them a fair shot first before you ask others for their ideas, and write up your final draft on your own). I hope many of you will be willing to present problems in class; there is no better way to learn something than to explain it to others. **All collected homework will be required to have a statement of sources (name of website or URL, name of person) used; no source is forbidden**, but if you simply copy problem solutions and learn nothing from this it will be apparent on the exams.

Attendance. Regular attendance is crucial for success in this course. I will follow the University Attendance Policy closely, except that I will have a more generous allowance for unexcused absences. Please read it over carefully. Note that any excused absences that can be anticipated in advance (for example, participation in away games or other official university events, religious holidays, military obligations, etc.) must be arranged with me during the first two weeks of the semester. Documentation for other absences that you may request to have excused must be provided before the absence if at all possible, and otherwise as soon after the absence as is feasible. University policy states that if more than 5% of the total class time is missed (105 minutes or two classes), and these absences are not excused, then the instructor may impose a penalty. If you miss 7 or more class sessions, I will lower your grade by half a grade point (from an A to a B+, or a C+ to a C, for example), and if you miss 10 or more classes, your grade will drop by a full grade point. Five bonus points will be awarded for perfect attendance, four for only one unexcused absence, and two for only two unexcused absences.

Assignments. Homework assignments are posted week by week on Blackboard. I collect around 6-10 problems per week; each problem is worth 4 points, so the problem sets vary in their total points. Problems marked with a * (star) will be handled by a grader; those marked with a ^ (hat) or + (plus, indicating optional bonus problem) will be graded by me. You will have the option of turning in assignments on paper or through Blackboard. For paper submission, please write on only one side of the paper, staple the pages at the top left corner, fold in half lengthwise, and write your name only on the outside of the packages. For online submissions do not submit photos of individual pages; combine these into separate star and hat pdf documents. I prefer that you learn LaTeX and produce pdf files that way. A good place to begin to learn about LaTeX is [here](#) or with Overleaf . To encourage you I will give 5 bonus points for each of your first three homework assignments prepared using LaTeX; I bet that if you do this early on in the semester, you will be hooked. If you need to miss a class in which an assignment is to be collected, then submit it electronically. Late homework may be accepted depending on the reason and the lateness; a penalty will be assessed.

Electronic gear. Cell phones must be turned off and stowed out of sight. Please obtain my permission before using a laptop or pad for note taking. It is important

that you learn how to perform certain computations by hand, but the fact is they can be tedious. After you pass a competency quiz on a given computational technique you will be allowed to use a graphing calculator (not your phone!) such as a TI to do the computations (if you like).

Students with disabilities. Any student with a documented disability must request accommodation with the Student Disability Resource Center, 777-6142, housed in the Close-Hipp Building.

Academic integrity. Violations of the University Honor Code are taken very seriously. Familiarize yourself with the Carolina Creed and the full Honor Code. Homework or exam problem solutions that are obtained from Google, Wikipedia, Chegg, or other sources without citation are instances of plagiarism, and will be reported. You do not need to cite solutions from the back of the textbook. **You may use such external sources on the homework** (although I do not think that this is a good idea – the few points that may be gained on the homework might be lost many times over on an exam if the knowledge is superficial), **but each individual problem for which you use such a source must have a precise citation. It is not sufficient to write “I used the internet” at the top of your homework.** An answer obtained from other students that used such sources must retain the citations; if it does not, then you personally will be held accountable. Ask before you copy! Please note also that class materials (video recordings, lecture notes, handouts, etc.) are for your personal use for this class only. It is a violation of academic integrity to share, post, sell, or distribute such materials outside of this class (sorry to sound like a lawyer).

University Covid-19 policies. Masks are required on campus when indoors. All absences due to documented illness or quarantine will be excused, and no grade penalty will be assessed for missing classes for this reason. If you experience COVID-19 symptoms or are directed to quarantine, please stay home, contact Student Health Services (803-576-8511), and complete the COVID-19 Student Report Form. The form also gives each student the option to have their information sent to their course instructors, which will provide a documented excuse for the student to miss classes, up until the date when the student is medically allowed to return. For attendance issues that are not necessarily covid related contact the Undergraduate Student Ombuds (803-777-4172).