

Introduction to Complex Variables: Math 165B

Call number 14790

Spring 2003, MWF 3:10–4:00 in Olmsted Hall 1133

Professor: MICHAEL ANSHELEVICH, 250 Surge Building, manshel@math.ucr.edu.

Office hours: W 2–2:50, F 4–5. The office hours for my other class are M 4–5. You are welcome to come by then, but the students from the other class have priority.

Class homepage: <http://www.math.ucr.edu/~manshel/m165B/m165B.html>. I will use this page to post homework assignments and last-minute announcements.

TA: Chanwoo Pae, discussion section R 8:10–9:00.

Text: James Ward Brown, Rule V. Churchill, “Complex Variables and Applications,” 6th edition, McGraw-Hill, 1996.

Prerequisites: Math 165A or equivalent. That is, the students should be familiar with the notion of complex numbers, elementary functions of a complex variable, basics of analytic functions, and the Cauchy integral formula. In calculus, students should have seen some theory of infinite series.

Syllabus:

- Infinite series: Taylor and Laurent series, manipulations of power series.
- Residues and poles.
- Applications of residues to the calculation of (real) integrals.
- Geometric properties of mappings by elementary complex functions.
- Conformal mappings, and their applications.

Exams: We will have an in-class midterm on **May 5th**. The final exam is on Thursday, **June 12**, 11:30 am - 2:30 pm. No make-up exams will be given. If, under *completely exceptional* circumstances, you need to miss the midterm, the weight of the final will be adjusted accordingly. If you miss the final, you automatically fail the course. The exams are closed book, closed notes, and calculators are not permitted.

Homework: weekly, due Thursdays in section. No late homework will be accepted; the lowest score will be dropped. You are encouraged to work together, but you must each turn in your own work.

Quizzes: in section, about every other week.

Grading: Section (homework, quizzes, participation) 25%, midterm 30%, final 45%.

Other important dates: April 18 (last day to add or drop a course), May 9 (last day to withdraw from a course).

Students with disabilities: Please come talk to me no later than the first week of classes.

Keys to success: Solve *all* the homework problems, well before the exams. Spend more than seven hours per week doing so. Form study groups to discuss the course material and homework problems. Read ahead in the text.