Mathematics 300 , Section 201
Introduction to Complex Variables
January - April 2020. TTh 2:00 - 3:20 in LSK 200

- Instructor: Z. Reichstein
- Office: 1105 Math Annex
- Office hours: Monday 11:30-12:30, Wednesday 10:30-11:30.
- Office: 1105 Math Annex
- Phone: 2-3929

Course description: We will begin by discussing the complex numbers and functions of a complex variable, then proceed to develop differential and integral calculus in this setting. The resulting theory is beautiful and in many ways quite different from the "usual" calculus for functions of either one or several real variables. Complex analysis has many applications to science, engineering and other areas of mathematics.

We will go over (most of) chapters 1-6 in the text, covering the following topics:

- complex numbers,
- complex derivatives and analytic functions,
- elementary functions,
- contour integration,
- Cauchy's theorem,
- Cauchy's Integral Formula,
- Taylor series,
- Laurent series, singularities and residues.

The specific sections I plan to cover, subject to minor changes along the way, are 1.1-1.6, 2.1-2.6, 3.1-3.3, 3.5, 4.1-4.6, 5.1-5.6, 6.1-6.3.

Registration: Questions regarding registering for this class, switching sections, etc., should be addressed to the Mathematics Department office staff, Rm. 121 Mathematics Building.

Homework: Homework will be assigned bi-weekly basis. Late homework will NOT be accepted. The lowest homework grade will be dropped. Students are allowed to consult one another concerning homework problems, but solutions submitted for credit must be written by the student in his or her own words. Copying solutions from

another student, from the web or from any other source, and turning them in as your own is a violation of the Academic Code.

Evaluation: Course mark will be based on the homework, the midterm and the final exam. The total course mark will be the higher of the following:

Total1 := HW /20 + Midterm/30 + Final /50 or

Total2 := HW /20 + Final /80

The midterm exam is scheduled for Thursday, February 27.

Missed exam policy: Please make sure you do not make travel plans, work plans, etc., without regard to the examination schedule in this class. There will be no make-up or alternate exams. If you miss a midterm, your score will be recorded as 0, unless you have a serious documented reason (an illness, a death in the family, etc.), in which case you should discuss your circumstances with me as soon as possible, in advance of the test. Note that you may still get a 100% in the course, even if you get a score of 0 on one midterm (see the marking scheme above).

Missed finals are not handled by me or the Mathematics Department. Students with legitimate reasons for missing the final exam should request a "Standing Deferred" status through their faculty.

Students with disabilities: Please see the instructor early in the term if you need any special accommodations. Academic Integrity. The Mathematics Department strictly enforces UBC's Academic Integrity code.