Complex Function Theory

Course: MATH 4310

Semester: Winter 2022

Instructor: Yorck Sommerhäuser

Office: HH-3007

Telephone: 864-8097

E-Mail: sommerh@mun.ca

Class meetings: Monday, Wednesday, Friday 3:00 pm–3:50 pm, SN 2041

Office hours: Monday, Friday 4:00 pm–6:00 pm and by appointment.

Textbook: J. W. Brown/R. V. Churchill: Complex Variables and Applications, 7th ed., McGraw-Hill, New York, 2004 (required resource)

Course description: The topics treated in the course include applications of the theory of residues, Rouché's theorem, the argument principle, mappings by elementary functions, conformal mappings, the Schwarz-Christoffel transformation, and the Poisson integral formula.

Coverage: We cover approximately the last six chapters of the textbook.

Exams: Under standard conditions, there will be a midterm examination and a comprehensive final examination. The midterm examination takes place on Friday, February 25, during class time in our usual classroom. The final examination takes place during the examination period from April 13 to April 23 at a time and place determined by the registrar's office. In the case that the university decides to extend the remote course delivery to the entire semester, there will be no examinations.

Homework: Beginning Monday of the second week, a weekly exercise sheet will be handed out. This has to be submitted in class on the following Monday. If it takes place, there will be no exercise sheet during the week of the midterm examination, and there will be no exercise sheets during the last two weeks of the semester. In addition, a reading assignment from the textbook will be given in every lecture.

Policies: Eating, drinking, and smoking is not permitted in the classroom. You are expected to be present at every class meeting, from the beginning to the end. Attendance will be taken and used to make decisions in borderline cases. The use of electronic devices, especially cellphones, calculators, and laptop computers, is not permitted without explicit permission of the instructor. Electronic devices have to be turned off completely.

Memorial University accommodates students with disabilities and demands academic integrity. The corresponding university policies can be found at http://www.mun.ca/policy/site/policy.php?id=239 and in the Academic Calendar in Paragraph 6.12, respectively.

Prerequisite: MATH 3210 (Introduction to Complex Analysis)

Marking weights: Under standard conditions, the final mark will be computed using the following weights.

Homework:	25 %
Midterm exam:	25 %
Final exam:	50 %

In the case that the university decides to extend the remote course delivery to the entire semester, the final mark will be computed from the homework alone.