

Instructor: Michael J. Ward, ward@math.ubc.ca.

Credits: 3

Office hours: to be arranged

Course webpage: Course materials will be found on Canvas

Piazza: There is a link to Piazza on Canvas. Please use Piazza for questions that arise in your learning and for questions about all issues related to the course. For personal matters please use email to Michael Ward.

Text: The text for the course in the bookstore is E.B. Saff and A.D. Snider, "Fundamentals of Complex Analysis," 3rd edition, Pearson Education Inc., 2003 (reissued in 2018).

Supplemental course notes written by me will be on canvas. There are certainly many used versions of this text available online. HW will be assigned from the text.

Topics: The main topics are referring to (SS = Saff and Snider):

1. Complex numbers and fundamentals (SS §1.1–1.6).
2. Complex derivatives and analytic functions (SS §2.1–2.5)
3. Elementary functions and mappings (SS §3.1–3.3, 3.5).
4. Contour integration and Cauchy's Theorem (SS §4.1–4.6).
5. Taylor Series and Laurent series (SS §5.1–5.3, 5.5–5.6).
6. Poles, residues and complex integration (SS §6.1–6.3, 6.5)

Evaluation: There will be homework assignments, two tests, and a final exam.

Homework: Roughly weekly assignments will be given and marked for credit. Assignments are due at the time indicated on Canvas and are to be uploaded as file uploads to Canvas. *No late assignments will be accepted.*

Tests: There will be two 50-minute tests held during the regularly scheduled class hours on the following dates:

Thursday, February 13, Tuesday, March 25.

Final exam: There will be a final examination during the April examination period.

Final mark: The final mark will be calculated (subject to possible scaling) as follows:

Homework: 10% (lowest HW score is dropped)

Tests: 20% each

Final exam: 50%

Prerequisite: One of MATH 200, MATH 217, MATH 226, MATH 253, MATH 254.

Corequisite: One of MATH 217, MATH 227, MATH 254, MATH 317.

Course policies: You are encouraged to discuss assignment problems with each other; it is a good way to learn. However, the solutions that you write up should be in your own words. Never copy your solutions from each other. If you find a solution on the internet, a book, or elsewhere, cite your source.

The midterms and final exam are closed book: no calculators, formula sheets, or other aids are permitted.

Missing an assessment without a valid reason results in a mark of zero. Missing an assessment for a valid reason normally results in the weight of that assessment being transferred to the final exam. Examples of valid reasons include illness and travel to play a scheduled game for a varsity team. Examples of reasons that are not valid include conflicts with personal travel schedules or conflicts with work schedules. Any student who misses an assessment is to present to their instructor the Department of Mathematics self-declaration form for reporting a missed assessment within 72 hours of the assessment date. The form is here: <https://www.math.ubc.ca/undergraduate-academic-concession-form>. This policy conforms with the UBC Vancouver Senate's Academic Concession Policy V-135 and students are advised to read this policy carefully: <http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,329,0,0>.

University policies: UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available on the UBC Senate website <https://senate.ubc.ca/policies-resources-support-student-success>.