MATH 301

Announcements:

Course overview

Topics:

1. Complex integration - 1 week
2. Multivalued functions, branch points and branch cuts - 1.5 weeks
3. Integrals involving multivalued functions - 1.5 weeks
4. Conformal mappings and applications - 3 weeks
5. Poles and zeros of complex functions - 1 week
6. Fourier analysis - 2 weeks
7. Laplace transform - 2 weeks

Textbook:
Fundamentals of Complex Analysis by Saff and Snider (Third Edition).

We may cover some material not in the textbook.

Instructor Information

Instructor: Richard Froese
Email: rfroese-at-math-dot-ubc-dot-ca
Office Location: Math Annex 1106
Office Hours: by appointment
Office Phone: 604-822-3042

Location and Time

MWF 11:00-12:00
Leonard S. Klinck (also known as CSCI) 460

Grades

The following weightings will be used in computing your final grade:

Homework (lowest two scores dropped): 10%
Midterms: 40%
Exam: 50%

If you miss the test for a legitimate reason (e.g., illness with doctor's note), the weight of the final exam will be increased.

Homework and Tests

There will be weekly homework assignments. The assignments and due dates will be posted on this page. Late homework will not be accepted. Even if you miss the deadline, its a good idea to do the problems, since this is the best way to prepare for the tests and exam. You are welcome to discuss the homework problems with your friends, but are expected to hand in your own work.

There will be two midterm tests in class on **Wednesday, February 13** and **Friday March15** as well as a final exam during the April exam period. You will not be permitted to bring calculators or formula sheets to the tests and exam.

Homework 1 due Jan 9:
Section 5.6 (p. 285) 1 adeg, 5 abcd (give a reason), 12, 13, 14, 15
Section 6.1 (p. 313) 1 bdf, 3 ceg, 5, 7.

Files

Here are a collection of handwritten notes by Michael Ward that you might find useful.

m301.01.integ.pdf
m301.02.sum.pdf
m301.03.mval.pdf (an old version - please see the following two files for an updated version)
m305_multi.pdf
m305_branch.pdf
m301.04.imval.pdf
m301.05.res.pdf
m301.06.map1.pdf
m301.07.map2.pdf
m301.08.conf.pdf
m301.09.symm.pdf
m301.10.fluid.pdf
m301.11.four.pdf
m301.12.lapl1.pdf
m301.13.nyquist.pdf
m301.14.lapl2.pdf

These notes by Rodolfo R. Rosales of MIT discuss branch points and branch cuts:
rosales.branch.pdf

Fourier transform summary sheet: ftsummary.pdf

Terry Tao's java applets:
http://www.math.ucla.edu/~tao/java/index2.html

- Grade Book
- Forum

- **v1.16.0**

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- SLATE: Learning And Teaching Environment: created by the Department of Statistics
-
- User Guide

a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA

Department of Mathematics

E-mail: slate@math.ubc.ca