Course Outline, Winter 2010 (Term 2)
Math 300: Introduction to Complex Variables
Section 202

Instructor: Robert Israel. *Office:* Math Annex 1206, 822-3629. e-mail `israel@math.ubc.ca`
Home page `http://www.math.ubc.ca/~israel`
If you email me, please put "Math 300" in the Subject line so I can tell that your email is not spam.

Office hours: Monday 3:00 – 4:00, Thursday 1:00 – 2:00, Friday 11:00 – 12:00.
If those times are not convenient, please make an appointment.

Prerequisites: One of Math 200, 217, 226, 253, 263 *Corequisite:* One of Math 217, 227, 263, 317.

Textbook: Saff and Snider, "Fundamentals of Complex Analysis with Applications to Engineering and Science", third edition.

Alternate references:
Levinson and Redheffer, *Complex Variables*
Marsden and Hoffman, *Basic Complex Analysis*
Copson, *Theory of Functions of a Complex Variable*
Knopp, *Theory of Functions*, vols. I and II
Knopp, *Problem Book in the Theory of Functions*, vols. I and II
Volkovyskii, Lunts and Aramanovich, *A Collection of Problems on Complex Analysis*

Outline of Topics
1. Complex numbers (sections 1.1 – 1.6)
2. Analytic functions (2.1 – 2.5)
3. Elementary functions (3.1-3.3, 3.5)
4. Complex Integration (4.1 – 4.6)
5. Series Representations for Analytic Functions (5.1 – 5.6)
6. Residue Theory (6.1 – 6.3)

Grading: The better of
1. Homework 10%, Midterm 25%, Final exam 65%
2. Homework 15%, Midterm 30%, Final exam 55%

There will be one midterm, in class on Wednesday, February 9.

Homework will be posted online, due each Wednesday in class. Late assignments will not be accepted. If you are unable to attend class on the day the assignment is due, you can e-mail it to me or fax it (604-822-6074, attention Robert Israel). Your homework grade for the class will be the average of all of your homework marks, without counting your lowest assignment mark.

Marks are subject to scaling.

Calculators and notes are not allowed on exams.