Complex Analysis

UBC MATH 440 & 508

Winter 2015, Term 1

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Text: Complex Analysis by E. Stein and R. Shakarchi. The textbook is available at
the UBC Bookstore, at Amazon, or online at the UBC library.

Prerequisite: MATH 300 or equivalent and a score of 68% or higher in MATH 320.

Course outline: The UBC course description states the topics covered will include:

- The residue theorem
- The argument principle
- Conformal mapping
- The maximum modulus principle
- Harmonic functions
- Representation of functions by integrals, series, and products
- Other topics at the discretion of the instructor.

From the text, we will review Chapter 2, then cover in depth Chapters 3, 5 and
8. Time permitting, additional topics may be covered. Chapter 1 contains material
that the student would have mastered in the prerequisite courses.

Lectures: MWF 11:00-12:00 in the Mathematics Building, Room 105.

Grading Policy: Homework problems will be assigned regularly, distributed in
class and posted on the course website. There will be an in-class midterm and a
take-home final examination. The final grade will be based on a weighted average of
the homework, midterm, and final exam marks, as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>40%</td>
</tr>
<tr>
<td>Midterm</td>
<td>20%</td>
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<tr>
<td>Final exam</td>
<td>40%</td>
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