Complex Variables
Math 4036-1, Spring 2010
Louisiana State University
Tuesday and Thursday from 12:10 to 1:30
Room 132 of Lockett Hall

Instructor:  Prof. Stephen Shipman
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Office hours: Tuesday and Friday 9:30–11:30 or by appointment
Course web site: http://www.math.lsu.edu/~shipman/courses_10A-4036.html

Textbook:  Complex Variables and Applications, by J. W. Brown and R. V. Churchill,
eighth edition.

Course Description:
Complex functions of one complex variable; analytic functions, integration, power series,
residues, and conformal mapping.
The prerequisite for this course is Math 2057, multivariable calculus.

Course Content:
The content of the course will span most of the text book, with some subsections being
omitted. Some of the key ideas are the following:

- Algebraic, geometric, and analytic structure of the set of complex numbers.
- Complex-analytic functions and the differential and integral calculus thereof.
- Power series.
- Computing integrals using poles of complex functions and their “residues”.
- Mapping by elementary functions; conformal mapping (preservation of angle).
- Applications to boundary-value problems for harmonic functions.

Assignments:
Check the web site for weekly assignments.
Exam schedule:
   Exam 1: Tuesday, February 23
   Exam 2: Tuesday, April 13
   Final Exam: Friday, May 14, from 5:30 to 7:30 PM.

Evaluation:
Evaluation of performance in the course is based on scores on the exams, assignments and the final exam as follows:
   Assignments: 25%
   Exam 1: 25%
   Exam 2: 25%
   Final exam: 25%
Grading scale: A—at least 90%; B—at least 80%; C—at least 70%; D—at least 60%.

Ethical Conduct:
Students may discuss problems with each other and other people and consult other literature; however, all work that is turned in must ultimately be that of the submitter alone. If a student receives aid on an assigned problem from discussions with people or other sources, he or she must begin from scratch in writing the solution so that the result is the product of his or her own understanding alone. No joint work in any capacity may be submitted for evaluation. Students must abide by the LSU Code of Student Conduct: