Information Sheet
MATH463, Spring 2013
Complex Variables for Scientists and Engineers

Instructor: Radu Balan
Lectures: Tuesday, Thursday, 12:30pm-1:45pm, MATH 0304.
Office Hours: Tuesday, 3:15-4:30pm; in MATH 2308 or CSIC 4131 (CSCAMM)
Contact Information: Email rvbalan@math.umd.edu, Math Building, Room 2308, x55492 / CSCAMM, Room 4131, x51217
Website: http://www-users.math.umd.edu/~rvbalan/TEACHING/MATH463Spring2013/index.html

MATH 463 is an introduction to complex analysis. Topics include: The algebra of complex numbers, analytic functions, mapping properties of the elementary functions, Cauchy integral formula. Theory of residues and application to evaluation of integrals. Conformal mapping.

Prerequisite: MATH 241

Additional Reading Materials:

Grading. There will be two in-class tests (100 points each), quizzes (for a total of 100 points), and a final exam (200 points). Students are allowed one single-sided “cheat sheet” during the in-class tests, and one double-sided “cheat sheet” during the final exam. Exam dates will be announced in class and posted online. Letter grade cut-offs shall not be higher than 90% (for A-), 80% (for B-), 70% (for C-), 60% (for D-) of total.

Quizzes and Homeworks. There will be up to 11 short in-class quizzes based on homeworks. They will be given at the beginning of the class period. They will be short. Please be sure to arrive on time! No calculators, books, or notes may be used during quizzes. All items except student ID, pens, pencils, and erasers must be off the desktops. Homeworks will not be collected and hence not graded.

Academic Integrity. You are expected to adhere to the University’s Code of Academic Integrity, available on the University’s web site, at: https://www.she.umd.edu

Students with Disabilities: If you have a documented disability and wish to discuss academic accommodations with me, please contact me as soon as possible.

Religious Observances. If you will be absent from class because of religious observances, please submit a list of the dates of your absences within a couple of days.
Syllabus
MATH 463 / Spring 2013
Complex Variables for Scientists and Engineers


1. Complex Numbers
2. Analytic Functions
3. Elementary Functions
4. Integrals
5. Series
6. Residues and Poles
7. Applications of Residues
8. Mapping by Elementary Functions
9. Conformal Mapping
10. Applications of Conformal Mapping