SYLLABUS

Course: Math 7350

Instructor: Jimmie Lawson
        Department of Mathematics
        Lockett 216

Office Hours: 9:30-11 T, 10:40-11:30 W, 8:30-9:30 F (or by appointment);
        an assistant will also be available for help, office hours to be announced.

Text: *Theory of One Complex Variable* (3rd Edition): Robert E. Greene, Steven G. Krantz,
        AMS Publication, 2006

Text Coverage: Chapters 1-8, 10 as time permits

Room and Time: Lockett 135, 9:40-10:30 MWF

Course Description: This is a first rigorous course in the theory of functions of one complex variable. Topics include holomorphic (or complex analytic) functions; power series; complex line integrals; Cauchy's integral formula, and some of its applications; singularities of holomorphic functions; Laurent series, and computation of definite integrals by residues; the maximum principle and Schwarz's lemma; conformal mapping; and harmonic functions (if time permits). The text and the course emphasize connections with multidimensional calculus.
Note: Math 7350 is being offered this year as a Core-2 Course. Students taking this course will have the option of taking a Complex Analysis Core-2 PhD Qualifying Examination.

Homework: Problems will be assigned at the end of each chapter, either to be written up and turned in or typed up and e-mailed in or presented at extra problem sessions, currently scheduled for 10:40-11:30 M or 3:00-4:00 M.

Grades: Forty per cent of your grade will be based on how many homework problems you work and the quality, depth, correctness, and clarity of your solutions. An abundance of homework will be assigned, and it is not expected that you will have time (or even the ability) to do all of it..
There will also be an in-class midterm (20%) and an in-class final (40%).