MATH 441/541
Applied Mathematics II
Spring 2009
M,W, F 2:10-3, TROY 201

Instructor: Sergey Lapin **Office:** Neil 327

Office Hours: M, W 3pm-4pm, and by appointment

Email: slapin@math.wsu.edu

Web-page: http://www.math.wsu.edu/math/faculty/slapin/

Required book: Erwin Kreyszig *Advanced Engineering Mathematics, 9th edition*

Course outline:

1. Complex numbers and functions
   (a) Complex numbers
   (b) Analytic functions
   (c) Elementary functions in the complex plane
   (d) Cauchy-Riemann equations
2. Complex integration
   (a) Line integral in the complex plane
   (b) Cauchy's integral theorem
   (c) Derivatives of complex functions
3. Series
   (a) Convergence of sequences and series
   (b) Taylor series and Laurent expansions
   (c) Residue theorem
4. Conformal mapping
5. Potential theory

Grading:

- Homework assignments - 40%
- Final project - 60%