

# PM 352 Complex Analysis Outline

**Instructor:** Kenneth Davidson

**Class times:** MWF 10:30–11:20 in MC 2035

**Office Hours:** Wednesdays 4:00–5:00 or by appointment.

**Textbook:** R.E. Greene and S.G. Krantz, *Function Theory of One Complex Variable*, Graduate Studies in Mathematics, Vol. 40, American Mathematical Society, 3rd edition.

**Alternate reference:** J.B. Conway, *Functions of One Complex Variable*, Graduate Texts in Mathematics, Vol. 11, Springer-Verlag, 2nd edition.

## Grading:

Assignments	20%	
Midterm	30%	(tentatively Wednesday February 24, 4:00–6:00)
Final Exam	50%	

## Outline

1. Complex numbers.
2. Analytic Functions
3. Power series
4. Line Integrals and Cauchy's Theorem
5. Some major results
6. Some conformal maps
7. General form of Cauchy's Theorem
8. Integration by residues
9. Other topics