

MATH 201—Analysis I, Winter/97

Instructor: Dr. David Casperson
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Hours: *Lecture* M W F 14:30–15:20 Room 5–173
Office T 13:00–14:00
Office W 15:30–16:20

Text: *Advanced Calculus* (4th edition), by Wilfred Kaplan.

Grading:

Homework	:	10%	
Quizzes	:	10%	
Exam 1	:	20%	Wednesday, 3 Feb (tentative)
Exam 2	:	20%	Monday, 24 Mar (tentative)
(Final) Exam 3	:	40%	

Syllabus: Primarily from Chapters 7 and 8 of Kaplan. Complex arithmetic. Functions of a Complex variable. Complex valued functions of a real variable. Complex functions of a complex variable. Continuity. Derivatives, Analytic functions, and the Cauchy-Riemann equations. Entire functions. The log function. Goursat's theorem. Integration, analytic functions, and power series. Meromorphic functions, Laurent series, poles and singularities. Residues.

Fourier Series and Orthogonal Functions. Trigonometric series. Fourier series. Convergence of Fourier series. Bessel's inequality. Orthogonal Functions. Completeness of systems of Orthogonal Functions.