

MATH 201—Analysis I, Winter/98

Instructor: Dr. David Casperson
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Hours: *Lecture* MW F 14:30–15:20 Room 6–305
Office M 15:30–17:10

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

Grading:

Homework	:	15%	
Exam 1	:	25%	Wednesday, 4 Feb (tentative)
Exam 2	:	25%	Monday, 11 Mar (tentative)
(Final) Exam 3	:	35%	

Syllabus: Primarily from Chapters 6, 7 and 8 of Kaplan.

Review. Definition of a derivative. Definition of a limit. Limit of a function. Limit of a sequence. Continuity.

Sequences. Series. Convergence and Divergence tests. Sequences and Series of functions. Uniform convergence. Weierstrass M -test. Properties of uniform convergence. Power series.

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

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