

# MTH G102 – Analysis 2, Spring 2006

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## **Book:**

Text: *Mathematical Analysis* by Andrew Browder

## **Course Web Page:**

<http://www.math.neu.edu/~braverman/teaching.html#G102>

Various supplemental course materials and course announcements are located here.

## **Grading**

Weekly homework problems may be done collaboratively. The take-home final exam must be entirely your own work.

## **Course Objectives:**

We will cover chapters 9-14 of the book. The main topics to be covered are

- Measure Theory, Lebesgue and Riemann Integrals.
- Introduction to Manifolds.
- Tensor Algebra, Exterior Algebra.
- Tensor and Vector Fields on Manifolds.
- Differential Forms. Integration of Differential Forms.
- Stokes' Theorem for Differential Forms and its consequences (classical Green's, Gauss-Ostrogradski's, and Stokes' Theorems)
- Calculus of Vector Fields on Manifolds.