

ANALYSIS 1
MTH G101, key # 39357
Fall 2008
Professor Mikhail Shubin

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Textbook: Introduction to Analysis, by Maxwell Rosenlicht,
Dover Publications, New York, 1986

Class meetings: Tuesday and Thursday, 5:50 – 7:20 p.m.,
(beginning September 10).

Office hours: Tuesday, Thursday 4:30-5:30, or by appointment

Course outline:

The course will cover elementary aspects of Analysis for functions of one or several real variables. It is the first part of the two-semester course, which intends to prepare students for ordinary and partial differential equations, probability and many other fields of mathematics. The ideas and methods introduced here are fundamental, and are used in all areas of mathematics.

The following topics (except possibly the last one) will be covered:

1. Metric spaces
2. Convergence and continuity
3. Differentiation
4. Riemann integration
5. Successive approximations and applications
6. Partial derivatives
7. Multiple integrals

Grading:

The grade will be based on weekly homework assignments, one in-class test and possibly a final. The homework assignments are an essential part of the course. They will be graded and returned. They must be handed in time.