

## Linear Analysis Math 675 – Syllabus – Fall 2012 – Prof. Sachs

**TEXT:** Introductory Real Analysis, by Kolmogorov and Fomin (Dover).

**COURSE OVERVIEW:** The main goal of this course is to introduce the basic ideas and techniques of linear analysis and for students to develop a deeper understanding of the structure and applications. This topic is a synthesis of ideas from linear algebra and analysis. The key topics are: Metric Spaces; Linear Spaces; Linear Functionals; Linear Operators. Along the way some history of the subject matter will be discussed.

**GRADING:** Grading will be fair and impartial. Points used as the basis of the grade will be:

Hmwk. (250 pts.); Class (100 pts.); Two mid-term Exams (200 pts.); Final exam (150 pts.).

**POLICIES:** The GMU Honor code is in effect at all times and students are expected to be fully aware of their requirements. Graded group work may be part of the course, in which case group members will truthfully report on non-contributing members. Absence from exams must be for a valid reason and requires prior notification except in extreme circumstances.

### MATERIAL COVERED AND TENTATIVE PACE

Metric Spaces – 3 weeks

Linear Spaces – 2 weeks

Linear Functionals – 3 weeks

Linear Operators – 4 weeks

### CONTACT INFORMATION

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