MATH 501-502 Analysis I-II

About the course: This is a first year graduate-level course in real analysis. In the first semester, we will mainly concentrate on the core material from measure theory and integration. In the second semester, we will deal with the rudiments of point set topology and functional analysis and discuss some applications of the above given theories and ideas. The material we will cover is basically the material covered in the first seven chapters of Folland's book "Real Analysis". I intend to follow this book closely.

Prerequisites: Acquaintance with elementary topics in analysis such as limits, series, differentiable functions, Riemann integration, metric spaces together with some exposure to linear algebra and set theory.

Text-book: G. B. Folland. *Real Analysis: modern techniques and their applications.* Wiley, New York, second edition, 1999

Resourses:

W.Rudin. *Real and Complex Analysis,* Mc Graw-Hill, New York 1987

H. L. Royden. *Real Analysis,* Macmillan, New York 1988