

MATH 501

ANALYSIS I

Aydın Aytuna aytuna@sabanciuniv.edu

Prerequisites: Undergraduate Analysis including Metric Spaces

Topics to be covered:

- Brief review of metric spaces
- Outer measures, Lebesgue measure and integration on the line.
- Convergence theorems.
- General measure and integration.
- Decomposition of measures. Radon Nikodym theorem.
- Product measures and Fubini's theorem
- Convolution products and the Fourier transform

Resources:

- **Real Analysis** G.Folland, John Willey and Sons, 1999
- **Real Analysis** E.M. Stein, R. Shakarchi, PRINCETON UNIVERSITY PRESS 2005

First Meeting: 21 September 1430, My office (MDBF 2057) at SabancıUniversity