MATH 502

ANALYSIS II

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Prerequisites: Undergraduate Analysis including metric spaces.
Some abstract measure theory

Topics to be covered:

· The space $\mathcal{L}^2(m)$; Fourier transform.
· Basic theory of Hilbert spaces.
· Baire category theorem and three principles of linear analysis.
· Banach space techniques.
· The Banach space of continuous functions on a compact set.
· Selected topics

Text-Book: No particular text-book will be used
Resources:
· **Real Analysis,** G.Folland, John Willey and Sons, 1999
· **Real Analysis series I-IV:** E.M. Stein, R. Shakarchi, PRINCETON
UNIVERSITY PRESS 2005
· **Functional Analysis,** W.Rudin, McGraw-Hill Science/Engineering/Math;
2 edition 1991

First Meeting: 12 February, 9.30 , my office= 2057 MDBF