• SYLLABUS:ANALYSIS-II

Definition of a topological space, open and closed Sets, base and subbase, Continuity and homeomorphism,Compactness, Connectedness, Connected sets in R, The product and quotient topology, Quotient topology, Seperation axioms.

Normed linear, Banach and Hilbert spaces, Banach Contraction mapping theorem, The Hahn Banach theorem, The open mapping theorem, and the closed graph theorem.

Books Recommended:

1. S. Kumaresan, Topology of Metric Spaces, Narosa Publishing House, 2005.

2. W. Rudin, Principles of Mathematical Analysis, International Student Edition, McGraw Hill, 1950.

3. J. Munkres, Topology, Pearson Education, 2003.

4. G. F. Simmons, Topology and Modern Analysis, McGRAW-Hill, 1963.

5. E.Kreyszig, Introductory Functional Analysis with Applications, Wiley, 2007.
