1. Fourier Integrals, Plancheral, Parceval identities.
2 Positive definite functions, Bochner's theorem
3. Spectral Theory of Bounded operators.
4. Fredholm operators and Index
5. Singular Integrals, Calderon Zygmund.
6. Sobolev Spaces, distributions, Interpolation inequalities
7. Fractional Derivatives and pseudo differential operators
8. Weyl's Lemma.