Syllabus for Real Analysis I and II (Math 5453-63)

Masters and Ph.D. Qualifying Examination

L. W. White, 2004


2. Lebesgue Measure on R: Outer measure, Caratheodory’s characterization of Lebesgue measurable sets, approximations by open and closed sets, $F_\sigma$ and $G_\delta$. Existence of nonmeasurable sets.

3. Abstract Measure spaces: $\sigma$-algebras of sets, measures defined on $\sigma$-algebras. Elementary properties of measures.


References: H. L. Royden, Real Analysis (3rd edition)
R. Bartle, The Elements of Integration
W. Rudin, Real and Complex Analysis (2nd edition)
Boas, Primer on Real Functions