

ST 778, Fall 2007
Measure Theory and Advanced Probability I
<http://www.stat.ncsu.edu/people/fuentes/st778>

Material for exam

- Sigma-fields and fields
- Probability measures
- Borel sets
- Infinite sequences (limit sup and lim inf)
- Indicator functions
- Measurable sets
- Independence and the Borel-Cantelli lemmas.
- Measurable functions.
- Simple random variables.
- Strong law of large numbers
- Convergence almost surely
- Convergence in probability
- Chebyshev's inequality (Markov's inequality)
- General measures
- Lebesgue measure
- Expected Value (variance)