

# Statistics 581 MATHEMATICAL PROBABILITY I

Fall 2006

## Instructor

Marek Kimmel, DH 2102, x 5255, kimmel@rice.edu.

## Website (temporary)

www.stat.rice.edu/~xwwu

## Grading

Weekly homeworks/projects (30% of the grade)

Two tests (70% of the grade)

## Voluntary weekly practice sessions

Day and time to be coordinated with the TA, Xiaowei Wu,  
xwwu@stat.rice.edu

## Text

Sidney Resnick "*A Probability Path*" Birkhauser Boston 1998

Auxiliary text

David Williams "*Probability with Martingales*" Cambridge 1991

## Office hours

Wednesday, 11am-12noon, DH2102

## Course description

Basic concepts in mathematical foundations of probability, based on set and measure theory. Illustrated by diverse examples of applications. More advanced concepts including martingale theory to follow in the Spring semester.

## Outline

1. Sets and events
2. Probability spaces
3. Random variables, elements and measurable mappings
4. Independence
5. Integration and expectation
6. Convergence concepts