

# Stochastic Processes and Probability Theory III

MTH 669 (64748)

MWF 9:00–9:50, Rm: NH 346

## Course Information

**Instructor:** Prof. Gerardo Lafferriere

**Office:** M313 Neuberger Hall (Mezzanine)

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**Office Hours:** Monday, Wednesday, Friday 10:00–11:00 (or by arrangement)

**Syllabus:** This is a continuation of the second term covering most of chapters 5 and 6. We will start by discussing convergence in distribution, characteristic functions and the central limit theorem. We then move to conditional probability and expectation and a study of martingales. We will finish with an introduction to Brownian motion.

**Textbook:** We will use the text *Probability and Measure*, Third Edition, by Patrick Billingsley, Wiley-Interscience 1995.

**Grading:** will be based on regular homework assignments, a midterm exam, and a final exam. While you are encouraged to discuss general issues in the homework with your classmates the material turned in for grading should reflect individual work.

**Website** Most of the handouts will be posted on the website as well. The site will contain other useful links and last minute announcements.

**Other:** If you have a disability and are in need of academic accommodations, please notify the instructor immediately to arrange needed support.