

**Syllabus: IEMS 460-2**  
**Stochastic Models II**  
**Spring 2012**

**Time:** Mondays, Wednesdays, and Fridays, 10:00-10:50.

**Final Exam:** Take home

**Place:** Tech LG72

**Website:** Blackboard

**Professor:** Benjamin Armbruster (armbruster@northwestern.edu)

**Office:** Tech M237

**Office Hours:** Wednesdays 4-5pm

**Objective:** learn tools for modeling and rigorously analyzing stochastic systems in applications, as required for research in IEMS.

**Main textbook:**

*Modeling and Analysis of Stochastic Systems*, 2<sup>nd</sup> ed., by Vidyadhar G. Kulkarni.

**On reserve at the Mudd science and engineering library:**

*Stochastic Processes* by Sheldon Ross.

*Adventures in Stochastic Processes* by Sid Resnick.

*Applied Probability and Queues* (2<sup>nd</sup> ed.) by Søren Asmussen.

<http://www.springerlink.com/content/978-0-387-21525-9>

**Available online:**

*Basics of Applied Stochastic Processes* by Richard Serfozo

<http://springerlink.com/content/978-3-540-89331-8>

The final grade will be computed on the basis of:

Homework	40%
1 Midterm Exam	20%
Final	20%
Project	20%

) Exams are cumulative and take-home.

) Homeworks will generally be due Fridays.

) The “standard” IEMS policy on academic integrity applies.

) Please double space (or 1.5 space) your work. This is mainly relevant for people who typeset their solutions. This allows me space to make corrections and write comments.