

**Syllabus: IEMS 460-2
Stochastic Models II
Spring 2014**

Time: Tuesdays and Thursdays, 9:30-10:50

Place: Tech M228

Website: Blackboard

Professor: Benjamin Armbruster (armbruster@northwestern.edu)

Office: Tech M237

Office Hours: Tuesdays 11-12

Objective: To learn tools for using stochastic systems in applications, as required for research in industrial engineering. The focus is on modeling, computations, rigorous analysis, and clear exposition.

No exams and no required textbook.

On reserve at the Mudd science and engineering library:

Stochastic Processes by Sheldon Ross.

Stochastic processes by J. Medhi.

Stochastic models edited by D.P. Heyman, M.J. Sobel

Adventures in Stochastic Processes by Sid Resnick.

Modeling and Analysis of Stochastic Systems, 2nd ed., by Vidyadhar G. Kulkarni.

Available online:

Basics of Applied Stochastic Processes by Richard Serfozo

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

Applied Probability and Queues (2nd ed.) by Søren Asmussen.

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

Introduction to Modeling and Analysis of Stochastic Systems by V. G. Kulkarni

<http://link.springer.com/book/10.1007/978-1-4419-1772-0>

The course grade will be computed as an average of the grade on each assignment.

The policy on collaboration, sharing of course materials, academic integrity, etc. is the “standard” IEMS policy, p9-10 of

<http://www.iems.northwestern.edu/docs/graduate/Handbook.pdf>

Written work should be typeset with double (or 1.5) spacing and turned-in as hard copy. This allows me space to make corrections and write comments.

Make sure that graphs are labeled and all the text is legible.