Math/Stat 523, Spr 2020

Jon A. Wellner

Lecture 0

Monday, March 30

Course Admin and Structure

STATISTICS 523:
Advanced Theory of Probability
Spring 2020

Course Admin and Structure

Time:	11:30 - 12:20 MWF (lecture)
Place:	MEB 251 $\rightarrow$ via Zoom
Professor:	Jon A. Wellner
Office:	B320 Padelford $\rightarrow$ home office
Phone:	543-6207
e-mail:	jaw@stat.washington.edu
Office Hours:	1:30 - 3:30 MWF (via Zoom; by appointment)

Texts:

- *Probability for Statisticians*
  by G. R. Shorack, 1998 & 2017.
- *Probability: Theory and Examples*, 5th Edition.
  by R. Durrett, 2019.
- *Normal Approximation by Stein's Method*
  by L.H.Y. Chen, L. Goldstein, and Qi-Man Shao, (2011).

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Homework:	Posted and sent by e-mail Wednesday; due following Wednesday by e-mail
Topics:	See accompanying outline.
Grading:	Homework: 35% Midterm: 30%, Friday, May 12 Course Project: 35%, due Monday, June 8 (See Course Project Handout)
Course Web site:	www.stat.washington.edu COURSES/520s/521/fws.19-20.html

Course Outline (tentative)

- The Strong Markov Property: PfS Sections 8.7 & 12.5
- Embeddings in Brownian motion: PfS Sections 12.6 and 12.8.
- Brownian motion, continued: PfS Section 12.9.
- CLT's via Characteristic Functions: PfS Sections 10.0 - 10.5
- CLT's via Stein's method: Chen, Goldstein, and Shao
- Infinitely Divisible and Stable Distributions: PfS, Chapter 11
- Stochastic Calculus (a brief introduction); ??