

Math 488P/588 Homework 12

Due: Thursday, 4/2/2015

NAME: _____

Reading Assignments - current Status:

Bluman:

- skimmed chapter 1
- Ch.2: sections 2.1, 2.2, 2.4
- Ch.3: sections 3.1, 3.2, 3.3 (the part about standard scores)
- all of Ch.4
- all of Ch.5
- all of Ch.6
- all of Ch.7
- Ch.8.1, 8.4

Hossain/Makhnin:

- Chapters 1 - 3.5
- Chapters 4.1 - 4.3 and 4.6
- Chapter 5
- Chapter 6.2, 6.4 (CLT)
- Chapter 8

Some chapters in H/M I have skipped and they will be assigned at a later date:

- H/M 3.7: Poisson Distribution
- H/M 4.4: Exponential distribution
- H/M 4.5.1: Poisson process, disregarding the link with the Gamma function

Reading Assignments: Reading due: Thursday, 4/1/2015

Different readings are assigned to you depending on what project you are in.

A. Hypothesis testing group:

1. Finish Bluman ch.8
2. Read as much as possible in ch. 9 about testing for the difference of parameters belonging to two different populations. Read ch.9.1 thoroughly and try to get an overview of the remainder.

B. Linear regression group:

1. Go straight to Bluman ch.10 on correlation and regression. I have taught you the basics

about correlation already, so you should rush through ch.10.1 and rather focus on ch.10.2 which is at the core.

C. Common to both groups A and B:

Be sure to understand “influential points”: when you do your project with real world data you are expected to identify outliers and do regression with and without them and compare the results.

The following link will give you access to a multitude of data:

<http://data.worldbank.org/news/opening-up-data-on-world-bank-trust-funds>

There look at the Topics section...

Whatever data you decide to use, be sure you can get them into Excel. The way I remember it, you may have to do some cleanup, e.g., remove rows or columns which have gaps because not all data sources (e.g. governments) chose to provide sufficient data.

D. Wiener process group:

The first thing you want to do is to download all of the following: disc space is plenty these days and you never know whether the links will still be up tomorrow.

http://www.sharifdata.com/pdf/rpdf_720.pdf (Ross: Intro to prob models 10 ed)

<http://efinance.org.cn/cn/Feshuo/stochastic.pdf> (Steven Shreve: Stochastic Calculus and Finance)

<https://me.ucsb.edu/moehlis/APC591/tutorials/tutorial7/node2.html>

<http://www.cims.nyu.edu/eve2/chap4.pdf>

<http://mplab.ucsd.edu/tutorials/sde.pdf>

http://sfb649.wiwi.hu-berlin.de/fedc_homepage/xplore/tutorials/sfehtmlnode24.html

<http://www.math.unl.edu/sdunbar1/MathematicalFinance/Lessons/BrownianMotion/Definition>

At this time I only have the following fixed reading assignment for you:

Ross: Intro to probability models 10 ed: Read ch.10.1-10.3. It's barely more than 7 pages but you may have to “backfill”.

And take a glance at the first couple of pages of ch.13 here: Steven Shreve: Stochastic Calculus and Finance

Written assignments:

No written assignments yet

Assignment 1: