Course Business

Instructor:	Robert Weiss
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Mail box:	51-254
Office Hours:	Tuesday 2:00 – 2:50
	Wednesday 1:00 – 1:50 and by appointment.
	Exceptions: 4-1,4-28, 4-29, 5-13: no office hours
Class:	M 10:00-11:50 Room 61-269
	W 10:00-10:50 Room 61-269
Lab 1:	W 11:00-11:50 Room A1-241

Labs will not meet the last week.

Texts No text is assigned. There are a number of good to excellent to incredible books on graphics available that you may find useful.

Tufte: 4 inspiring books on statistical graphics. The Visual Display of Quantitative Information; Envisioning Information; Visual Explanations: Images and Quantities; Evidence and Narrative; Beautiful Evidence. Well worth your read, and quite inexpensive from `http://www.edwardtufte.com/tufte/`

Cleveland, W. S. (1994). The Elements of Graphing Data (Second Edition). Hobart Press, Summit, New Jersey. Well worth reading.

Wickham, Hadley (2009). ggplot2. New York: Springer. Improvement on R Graphics.

Sarkar, Deepayan (2008). Lattice: Multivariate Data Visualization with R. New York: Springer.

Murrell, Paul (2011). R Graphics, 2nd edition. New York: Chapman & Hall. Excellent book, we mostly are interested in the first half.

Venables, W.N., Smith, D. M. and the R Development Core Team (2015). An Introduction to R. Available from R, and for free downloadable from the web. Comes with R: start R, go to the Help menu, go down to "Manuals (in PDF)". The first manual is An Introduction to R.

Wilkinson, Leland (2005). The Grammar of Graphics, 2nd edition. New York: Springer. A massive tome.

Mosteller, Frederick and Tukey, John W. (1977). Data Analysis and Regression. Learn about exploratory data analysis.

Cook on Graphical Regression.

Cook, R. Dennis and Weisberg, Sandy (1999). Applied Regression Including Computing and Graphics. Wiley.

Cook, R. Dennis and Weisberg, Sandy (1994). An Introduction to Regression Graphics. Wiley.

J. M. Chambers, W. S. Cleveland, B. Kleiner, and P. A. Tukey (1983). Graphical Methods for Data Analysis. Chapman and Hall, New York.

Grading

The grade will be based upon homework and projects. There is no final. The final project will be a graphical analysis of a data set of your own choosing to be analyzed graphically in R.

Homework	30%
Project	30%
Final project	40%

Final project as a single *pdf* file is due June 5 noon California time sent via email to `robweiss@ucla.edu`. Late final projects will likely result in an incomplete until July at the earliest.

Homework Policy

All work you turn in must be your own. You are allowed to discuss homework problems and their solutions with your colleagues. You are not allowed to share files/writing/computer code/plots of any sort. You may not turn in work for credit in this class that was used in another class without explicit advance permission. If permission is granted to collaborate, collaborators must identify each other.

It is mandatory (in class, in academia, in life) to reference any and all external sources.

Course Handouts

There will be NO physical handouts. All computer labs, course notes and homework will be placed on the course web site `https://faculty.biostat.ucla.edu/robweiss/biostat230`. Computer labs and course notes are in a restricted directory that is accessible via password. You are welcome to exchange labs, lecture notes and handouts with other class members, but not with people outside the class.

You are responsible for downloading and printing all handouts yourself.

Please bring your notes to class.

Statistics Package

R. We will use R. R is free. Available from `http://www.r-project.org/`.
To download R, go to the site.
Pick a "CRAN Mirror."
I usually use Berkeley when I download a new version of R.
Under "Precompiled Binary Distributions", click on "Windows" (say).
Click on "base".
Click on "Download R 3.1.3 for Windows".
Save to disk and run the executable.
This gives you R and the main packages that run in R. There are tons of
additional packages that are helpful to have that you can download.
I recommend also downloading Rstudio. `http://www.rstudio.com/products/`
`RStudio/#Desk` This gives you access to a very handy interface for run-
ning R, and also provides easy access to R Markdown and Sweave.

Computers

Regular labs meet in the computer lab in A1-241. You need to install R
on a computer outside the lab to work on assignments outside of labs.