

Week 4

MATH 456, Spring 2016
02/15/16

[\[Schedule\]](#) [\[Week 3\]](#) [\[Week 5\]](#)

Announcements

- Ch 6 Hw due on Sunday.
- Consulting reflection assignment posted on BBLearn
- Revise and update your recruitment report.

Prepare

- Read Afifi Ch 7.
- Replicate code in lecture notes for Multiple Linear Regression.

Notes and Materials

- Lec 03: Multiple Linear Regression [\[PDF\]](#)[\[HTML\]](#)

Experience

Monday 2/15/16

- Multiple linear regression - Model fitting, predictions, interpretations

Wednesday 2/17/16

- Multiple linear regression - Interactions & stratification

Friday 2/19/16

- Consulting
 - Reflection on discussion boards due today
 - Comparative analysis of chosen variables needs to be worked on.
 - Draft of report due next Friday 2/26
 - Dr Downing has OH 10-11:30 on Wednesday. Go ask him questions.
- Handouts: Harrell Ch 1 & 2
- Writing models, reference coding and contrasts

Looking Ahead

- BBLearn Quiz on Ch 7 - Due Monday @ 12. Topics include:
 - Writing and fitting linear models
 - Interpretation of coefficients
 - Model Diagnostics (also reference Harrel Ch 1)
 - Testing hypothesis using indicator variables and contrasts.
- Splines, Missing Data

Additional references

Regression Modeling Strategies (Harrell), e-book plus tons of supplemental materials including R code:
<http://biostat.mc.vanderbilt.edu/wiki/Main/RmS>

Not fully random links to other websites demonstrating regression modeling in R

- <http://ww2.coastal.edu/kingw/statistics/R-tutorials/multregr.html>
- <http://www.gardenersown.co.uk/education/lectures/r/regression.htm>
- <https://www.youtube.com/watch?v=q1RD5ECsSB0>