Biostatistics II

Course Director: Frank Harrell, PhD and Thomas Stewart, PhD
Spring [4 hours credit] Harrell, Stewart

The primary focus of Biostatistics II is the multivariable regression model which is the fundamental tool that researchers use for prediction, effect estimation, and hypothesis testing. This course covers the most commonly used regression models (linear, logistic, ordinal, time-to-event, and serial) plus general methods applicable to all regression models such as restricted cubic splines, bootstrapping, multiple imputation for missing data, model diagnostics, and validation. There is an emphasis on aspects related to clinical and translational study design.

Texts & Readings:

- The Analysis of Biological Data, 2nd Edition by MC Whitlock and Dolph Schluter  
  Required text

- Harrell FE: Regression Modeling Strategies, 2nd edition, 2015 (available at the VU bookstore at 2525 West End Ave. and at Amazon)  
  Required text

- Dupont WD: Statistical Modeling for Biomedical Researchers, 2nd edition, 2009  
  Recommended text (excellent STATA resources)

Prerequisite, MSCI Biostatistics I 524-5009 and Epidemiology I.