Substitution Courses Summary

August 22, 2015

1 RNR 614- Advanced applied biometrics for environmental research

- Brief history / theory of science
- Cursory overview of probability theory
- Regression/ OLS
- General / Generalized Linear Models
- Bootstrapping and randomization
- Likelihood ratio tests
- Likelihood-based Information Criteria (AIC/BIC)
- Bayesian inference
- Experimental design (randomization, sampling designs, crossed vs nested, blocking etc.)
- Generalized Estimating equations
- Variance Components Analysis
- Mixed effects models
- Alternative regression (robust regression, quantile regression, splines, kernel smoothing, etc.)
- Multivariate statistics (PCA, MDS, Factor Analysis, clustering, etc.)
- Time-series and spatial models
- Meta-analyses