

Stat 556: Advanced Statistical Inference

Instructor: Dr. Yan Lu, luyan@math.unm.edu

Class Time/Place: 11:00am-11:50am MWF

Office Hours: MWF 12:40Pm-1:40pm in HUM 468

Prerequisites: Stat 553, 561 and Math 510

Text: Elements of Large-Sample Theory (corrected third printing, 2004) by E. L. Lehmann

Topics: We will cover most of the sections in the book. The following is a tentative schedule.

Chapter 1 Review of Math (about 1 week)

Chapter 2 Convergence in Probability and in Law (about 3 weeks)

Chapter 3 Critical value and power, Efficiency and robustness (about 2 weeks)

Chapter 4 Confidence intervals (about 2 weeks)

Chapter 5 Convergence of multivariate distribution, contingency tables (about 2 weeks)

Chapter 6 U-Statistic, statistical functionals (about 2 weeks)

Chapter 7 Efficient Estimators and Tests (about 3 weeks)

Review (The remaining weeks)

Computing: R will be used in this class. R is available to download at <http://cran.r-project.org/>

Grading: Homework, 50% (bi-weekly homework, **no late homework will be accepted**); Midterm Exam 25%; Final Exam 25% (final is comprehensive and is scheduled on 10:00am-12:00pm December 17th).