

STATISTICS 7302 – SPRING 2015

Instructor: Professor Doug Critchlow

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Office Hours: Wednesdays and Fridays, 1:15 – 2:15 p.m.

Textbook: Testing Statistical Hypotheses (Third Ed.) by E. L. Lehmann & J. P. Romano

Material Covered in the Course: Most of chapters 3 and 4 of the “Testing Statistical Hypotheses” textbook, plus additional topics, including introductions to: (1) asymptotics for maximum likelihood estimators, (2) the asymptotic theory of the likelihood ratio test, Wald test, and Rao score test, (3) the bootstrap (including bootstrap confidence regions), (4) permutation tests, (5) multiple hypothesis testing, (6) conditional inference, and (7) sequential tests.

Additional References:

Berger, J. O., Statistical Decision Theory and Bayesian Analysis, Second Edition
(especially Sections 7.1 – 7.5 on sequential tests)

Efron, B. and Tibshirani, R., An Introduction to the Bootstrap.

Lehmann, E. L., Elements of Large-Sample Theory.

Lehmann, E. L. and Casella, G., Theory of Point Estimation, Second Edition
(especially Sections 6.1 – 6.3 for asymptotics for MLE's)

Prerequisites: Statistics 7201 and 7301.

Classroom Policies: Use of personal computers, cell phones, etc. is prohibited during lecture. Please do not read the newspaper or other extraneous materials during lecture. Homework will be due at the start of class; please do not work on the homework during lecture.

Attendance Policy: In accordance with University Rules, a student who is absent from three or more (not necessarily consecutive) classes, without contacting the instructor with a valid excuse, may be reported for possible disenrollment. To prevent disenrollment, the instructor should be contacted (e-mail: dec@stat.osu.edu) within 24 hours of the third (and any subsequent) absence.