STATISTICAL METHODS FOR LAWYERS

L749

University of Pennsylvania Law School
Fall Term 2006

SYLLABUS

Texts:


This is our basic textbook for the course. It is available from The Book Store, 3601 Walnut Street. The sections listed below are from this text.


This is a simplified and less mathematical rendition of parts of SFL. It is available from the copy center.


This is an excellent introductory text that one can use for background. It does not cover all of the subjects we will explore. It is also available at The Book Store.

September 7–Probability, Classical and Bayesian

Basic concepts of probability in science and in law; sufficiency of statistics as proof; conditional probability; odds; likelihood; Bayes’s theorem. Reading: BC, Ch. 1.

September 14–Descriptive Statistics

Section 1.1 *Introduction to descriptive statistics*
Section 1.2: *Measures of central location*
Section 1.2.1 Parking meter heist
Section 1.2.4: Hydroelectric fish kill
Section 1.3: *Measures of dispersion*
Section 1.3.1 Texas reapportionment
Section 1.3.2: Damages for pain and suffering
September 21--Descriptive Statistics (con’t)
Section 1.4: A measure of correlation
Section 1.4.1: Dangerous eggs
Section 1.4.2: Public school finance in Texas
Section 1.5: Measuring the disparity between two proportions
Section 1.5.1: Proficiency test with a disparate impact
Section 2.1: Permutations and combinations

October 5—Elements of Probability
Section 3.1: Some fundamentals of probability calculation
Section 3.1.1: Interracial couple in yellow car
Section 3.1.3: Telltale fibers
Section 3.2: Selection effect

October 12--Some Probability Distributions
Section 4.2: The binomial distribution
Section 4.2.3: Small and nonunanimous juries in criminal cases
Section 4.3: The normal distribution and a central limit theorem
Section 4.3.1: Alexander: Culling the jury list
Section 4.3.2: Castaneda: Measuring disparities

October 19–Some Probability Distributions (con’t)
Section 4.4: Testing statistical hypotheses
Section 4.4.1: Hiring teachers
Section 4.5: Hypergeometric distribution
Section 4.5.2: Challenged election
Section 4.5.3: Election 2000: Who won Florida?

October 26–Statistical Inference for Two Proportions
Section 5.1: Fisher’s exact test of equality for two proportions
Section 5.1.1: Nursing examination
Section 5.2: The chi-squared and z-score tests for the equality of two proportions
Section 5.2.1: Suspected specialists
Section 5.2.2: Promotions at a bank

November 2–Confidence and Power
Section 5.3: Confidence intervals for two proportions
Section 5.3.1 Confounders and confidence intervals
Section 5.3.3: Purloined notices
Section 5.4: Statistical Power in hypothesis testing
Section 5.4.3: Automobile emissions and the Clean Air Act
November 9–Epidemiology

Section 10.1 Introduction
Section 10.2 Attributable Risk
Section 10.2.1 Atomic weapons test
Section 10.3 Epidemiologic principles of causation
Section 10.3.1 Dalkon Shield
Section 10.3.2 Radioactive cocktails for pregnant women

In re Ephedra Products Liability Litigation, 2005 U.S. Dist. Lexis 20259 (SDNY 2005)

November 16–Regression Models & Moot Court Preparation

Section 13.1: Introduction to multiple regression models
Section 13.2: Estimating and interpreting coefficients of the regression equation
Section 13.5: Explanatory Factors for a regression equation
Section 13.6: Reading multiple-regression computer printout
Section 13.6.1 Pay discrimination in an agricultural extension service

November 30–Regression Models & Moot Court Preparation

Section 13.7: Confidence and prediction intervals
Section 13.7.2: Challenged absentee ballots
Section 14.7: Logit and probit regression
Section 14.7.1: Death penalty in Georgia

December 7–Moot Court

END OF SYLLABUS