

Law 301 – Statistics for Lawyers (Spring 2026)

MW: 9:40-11:05AM.

Professor Kobayashi

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Office Hours: Mondays 11:05am-12:05pm

Required Texts:

- (FL) Finkelstein and Levin, Statistics for Lawyers, 4d. ed. (Springer-Verlag 2024).
- (FJC) Federal Judicial Center [Reference Manual for Scientific Evidence](#), 3d Edition

Learning Outcomes:

This course will expose students to the theory, methodology, and use of statistical and empirical evidence in legal settings. The aim of the course is to familiarize the student with the methodology and inferential tools of statistical analyses. Upon completing this course, students will be able critically analyze the methodology and inferential process used to produce statistical evidence, and be prepared to evaluate and challenge the admissibility, relevance, and strength of statistical evidence prepared by expert witnesses in litigation settings.

Course Requirements:

Writing Assignments:

- Two assignments, each worth 25% of the grade, and one assignment worth 50% of the grade
- Assignments will be posted one week in advance of the due date on CANVAS.
- All assignments must be submitted in PDF format using the drop box.
- E-mail submissions or submissions in other formats will not be accepted.

Class Participation & Attendance:

Students are expected to come to class prepared and ready to discuss the assigned readings. Your grade is subject to a discretionary class participation adjustment of 1/3rd of a grade in either direction. The course adheres to the attendance policy as outlined in AR 4-1.

Honor Code:

Students are expected to adhere to the Scalia Law [HONOR CODE](#).

Tentative Syllabus:

Last updated 12/8/25. We may deviate from the tentative syllabus for reasons including current events, new cases, scheduling, et cetera.

Intellectual Property:

I own all course content that is created (e.g., slides), regardless of format (electronic, print, audio, video). You are forbidden to use them with, or distribute them to, anyone other than your classmates in this course.

Reading Assignments:

I. Introduction (January 14).

- [Lempert, Richard. Modeling Relevance, 75 Mich. L. Rev. 1021 \(1977\).](#) (CHECK COURSE MATERIALS SECTION OR HEIN ON-LINE)
- [FRE Rule 401-403.](#)

II. Statistics in the Courtroom (January 21).

- FJC - Berger, M., ["The Admissibility of Expert Testimony"](#).
- [FRE 702-706.](#)
- [Daubert v. Merrell Dow Pharmaceuticals, 509 U.S. 579 \(1993\).](#)

III. Introduction to Litigation Statistics I (January 26).

- FJC - Kaye and Freedman - ["Reference Guide on Statistics"](#)
- FL - Section 1.1 - Introduction to Descriptive Statistics.
- FL - Section 1.2 - Measures of Central Location.
- FL - Section 1.2.1 - Parking Meter Heist.
- FL - Section 1.2.8 - Super Drowsy Drug.

IV. Introduction to Litigation Statistics II (January 28).

- FL - Section 1.3 - Measures of Dispersion.
- FL - Section 1.3.2 - Damages for Pain and Suffering.

- FL – Section 1.3.4 Bush v. Gore
- FL - Section 1.4 - A Measure of Correlation.
- FL - Section 1.4.1 - Dangerous Eggs.

V. Introduction to Probability Theory and Statistical Independence (February 2).

- FL - Section 3.1 - Some Fundamentals of Probability Calculation.
- FL - Section 3.1.1 - Interracial Couple in Yellow Car
- Tribe, Lawrence H., Trial by Mathematics: Precision and Ritual in the Legal Process. 84 Harv. L. Rev. 1329 (April 1971).
- FL - Section 3.1.2 - Independence Assumption in DNA Profiles

VI. Introduction to Probability Theory and Statistical Independence (February 4).

- FL - Section 3.1.3 - Telltale Fibers
- FL - Section 3.1.4 - Telltale Hairs
- FL - 3.2 Selection Effect
- FL - Section 3.3 - Bayes's Theorem
- Lombardero, Do Special Verdicts Improve the Structure of Jury Decision Making? 36 Jurimetrics J. 275 (1996).

VII. Probability Distributions (February 9).

- FL - Section 2.1 - Permutations and Combinations.
- FL - Section 2.1.3 - Was the Bidding Rigged?
- FL - Section 4.1 – Introduction to Probability Distributions
- FL - Section 4.2 - Binomial Distribution
- FL - Section 4.2.1 - Discrimination in Jury Selection
- FL - Section 4.2.3 - Small and Nonunanimous Juries in Criminal Cases

VIII. Probability Distributions (February 11).

- FL - Section 4.3 - Normal Distribution and a Central Limit Theorem.
- FL - Section 4.3.1 - Alexander: Culling the Jury List.
- FL - Section 4.3.2 - Castaneda: Measuring Disparities.

IX. Screening Devices (February 16). (Assignment 1 Due)

- FL - Section 3.4 Screening Devices and Diagnostic Tests
- FL - Section 3.4.1 - Airport Screening Devices.
- FL - Section 3.4.2 - Polygraph Evidence.
- Imwinkelreid and McCall, Issues Once Moot: the Other Evidentiary Objections to the Admission of Exculpatory Polygraph Examinations, 32 Wake Forest L. Rev. 1045 (Winter 1997).
- U.S. v. Scheffer, 523 U.S. 303 (1998).

X. Screening Devices – DNA Evidence (February 18).

- FL - Section 2.1.1 - DNA Profiling
- FJC - Kaye and Sensabaugh, Reference Guide on DNA Evidence.
- Berry, D. A. DNA Fingerprinting: What Does it Prove? 3 Chance: New Directions for Statistics and Computing 15-32. CHECK COURSE MATERIALS SECTION.

XI. Error Cost Analysis (February 23).

- Burtis, et al., *Error Costs, Legal Standards of Proof, and Statistical Significance*, 25 Supreme Court Economic Review (2018), Section 3.
- Section 3.3.1 - Rogue Bus Nesson, The Evidence or the Event: On Judicial Proof and the Acceptability of Verdicts, 98 Harv. L. Rev. 1357 (1985), Section IIIB.

XII. Optimal Standards of Proof (February 25)

- Cheng, EK, Reconceptualizing the Burden of Proof, 122 Yale Law Journal 1254 (2013).
- Burtis, et al., *Error Costs, Legal Standards of Proof, and Statistical Significance*, 25 Supreme Court Economic Review (2018), Section 3.

XIII. Statistical Inference and Hypothesis Testing I (March 2).

- Burtis, et al., *Error Costs, Legal Standards of Proof, and Statistical Significance*, 25 Supreme Court Economic Review (2018), Section 4.
- FJC -Kaye and Freedman -Reference Guide on Statistics.
- Rubinfeld, Daniel L. Econometrics in the Courtroom, 85 Col. L. Rev. 10481065 (1985) CHECK COURSE MATERIALS SECTION OR HEIN ONLINE.
- Palmer v. Schultz, 815 F.2d 84 (1987).
- FL - Section 4.4 Testing Statistical Hypotheses
- FL - Section 4.5 - Hypergeometric Distribution
- FL - Section 4.53 - Election 2000: Who Won Florida?

XIV. Statistical Inference and Hypothesis Testing II (March 4)

- McCloskey, D. N. and S. T. Zillak, The Standard Error of Regressions, 34 J. Econ. Literature. 97-114 (March 1996). CHECK COURSE MATERIALS SECTION OR J-STOR.
- Burtis, et al., Sections 1, 2, 4, & 5
- FL - Section 5.4 - Statistical Power in Hypothesis Testing
- FL - Section 5.5 - Legal and Statistical Significance.
- FL - Section 5.51 - Port Authority Promotions
- FL - Section 7.1 - Students t-test: Hypothesis Testing and Confidence Intervals
- FL - Section 7.1.2 - Voir Dire of Prospective Trial Jurors.

Spring Break (March 9-11)

XV. RCTs and Epidemiology (March 16).

- FL - Section 1.5 - Measuring the Disparity Between Two Proportions.
- FL - Section 1.5.1 - Proficiency Test with a Disparate Impact.
- FL - Section 5.42 - Is Bendectin a Teratogen?
- FJC - Reference Guide on Epidemiology
- FL - Section 8.1 - Mantel-Haenszel and Fisher Methods for combining the Evidence
- Kellerman, et al. Gun Ownership as a Risk Factor for Homicide in the Home. 329 New England Journal of Medicine 1084-1091 (October 7, 1993). Article is available online at <http://content.nejm.org/>. You can register free and view back issues (older than 6 months).
- Kates and Schaffer, "Guns and Public Health: Epidemic of Violence or Pandemic of Propaganda, 62 Tenn. L. Rev. 513 (1995).

XVI. Combining Evidence Meta Analysis (March 18).

- FL - Section 8.2 - Meta Analysis
- FL - Section 8.2.1 - Bendectin Revisited.
- FL Section 10.1 - Introduction
- FL Section 10.2.1 - Atomic Weapons Tests
- FL Section 10.3 - Epidemiologic Principles of Causation
- FL Section 10.3.1 - Dalkon Shield

XVII. Regression Analyses (March 23). (Assignment 2 Due)

- FJC - Rubinfeld -[Reference Guide on Multiple Regression](#).
- Rubinfeld, Daniel L. Econometrics in the Courtroom, 85 Col. L. Rev. 10651094 (1985).
CHECK COURSE MATERIALS SECTION OR HEIN ONLINE.
- FL - Section 13.1 - Introduction to Multiple Regression Models.
- FL - Section 13.2 - Estimating and Interpreting Coefficients of the Regression Equation.
- FL - Section 13.3 - Measures of Indeterminacy for the Regression Equation.
- FL - Section 13.4 - Statistical Significance of the Regression Coefficients.
- FL - Section 13.5 - Explanatory Factors for a Regression Equation.

XVIII. Regression Analyses II (March 25).

- Gelbach and Klick, [Empirical Law and Economics](#)
- Angrist, J. & Pischke, J., The Credibility Revolution in Empirical Economics: How Better Research Design is Taking the Con Out of Econometrics, *Journal of Economic Perspectives* 3 (2010).

XIX. Time Series Regression Analyses – Event Studies (March 30).

- FL – Section 14.1 – Time Series
- FL 14.1.5 – Fraud-on-the-market damages
- MacKinlay, Event Studies in Economics and Finance, 35 J. Econ. Literature 13-39 (1997).
CHECK COURSE MATERIALS SECTION OR J-STOR.
- Heron, Randall A. and Lie, Erik, [Does Backdating Explain the Stock Price Pattern](#) Around Executive Stock Option Grants? *Journal of Financial Economics*, Available at SSRN.

XX. Time Series Regression Analyses – Event Studies II (April 1)

- Hazlett & Bittlingmayer, [DOS Kapital](#): Has Antitrust Action Against Microsoft Created Value in the Computer Industry? 55 J. Fin. Econ. 329 (2000).
- Jon Klick & Robert H. Sitkoff, [Agency Costs, Charitable Trusts, and Corporate Control](#): Evidence from Hershey's Kiss-Off, 108 Col. L. Rev. 750 (2008).
- Gelbach, Helland & Klick, [Valid Inference in Single-Firm, Single-Event Studies](#), 15 Am. L. & Econ. Rev. (2013), SSRN version.

XXI. Cross Section Regression Analyses (April 6).

- FL - Section 14.7 - Logit and Probit Regression
- FL - Section 14.7.1 - Mortgage Lending Discrimination
- Munnell, et al., "Mortgage Lending in Boston: Interpreting HMDA Data," 86 Am. Econ. Rev.

25 (1996). CHECK COURSE MATERIALS or JSTOR).

- Day and Liebowitz, "Mortgage Lending to Minorities: Where's the Bias?" 36 Econ. Inq. 3 (1998). CHECK COURSE MATERIALS or JSTOR).
- Harrison, "Mortgage Lending in Boston: A Reconsideration of the Evidence," 36 Econ. Inq. 29 (1998). CHECK COURSE MATERIALS or JSTOR).

XXII. Cross Section Regression Analyses II (April 8).

- Klick & Helland, Legal Origins and Empirical Credibility (CHECK COURSE MATERIALS)
- FL – Section 14.6.1 – Death penalty: Does it deter murder?
- Leamer, Let's Take the Con Out of Econometrics, 73 Am. Econ. Rev 31 (1983). (CHECK COURSE MATERIALS or JSTOR).

XXIII. Panel Regression Techniques, Natural Experiments (April 13).

- FL Section 14.2 – Interactive Models
- Ashenfelter, et al., [Econometric Methods in Staples](#), 13 *Int. J. of the Economics of Business*, 265 (2006), SSRN version.

XXIV. Panel Regression Techniques, Natural Experiments II (April 15).

- Carpenter & Stehr, [Intended and Unintended Consequences of Youth Bicycle Helmet Laws](#), 54 J. L. & Econ 305 (2011), SSRN version.
- Klick & Wright, [Grocery Bag Bans and Foodborne Illness](#).
- Heald, [How Copyright Keeps Works Disappeared](#), 11 J. Emp. Legal. Stud 829 (2014), SSRN version.

XXV. Instrumental Variables (April 20).

- Megan T. Stevenson, [Distortion of Justice](#): How the Inability to Pay Bail Affects Case Outcomes

XXVI. Regression Discontinuity and Instrumental Variables (April 22).

- Cohen, et al, Using Big Data to Estimate Consumer Surplus: The Case of Uber, available at https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0ahUKEwiXktXQI7XYAhUO_mMKHdCCCpgQFggxMAE&url=http%3A%2F%2Fwww.datascienceassn.org%2Fsites%2Fdefault%2Ffiles%2FUsing%2520Big%2520Data%2520to%2520Estimate%2520Consumer%2520Surplus%2520at%2520Uber.pdf&usq=AOvVaw2ZOq7LMRtGwUgk56karPH

Assignment 3 Due on April 29.