

SYLLABUS

ANALYTICAL METHODS

(LAW 1107-08)

Georgetown University Law Center

Professor Joshua C. Teitelbaum

Spring 2017

Tuesday & Thursday, 3:30 PM – 4:55 PM

Course Description: Lawyers in every type of practice (corporate, litigation, government, public interest, etc.) routinely deal with problems that require a basic understanding of concepts and methods from economics and statistics. This course provides an introduction to these subjects and their application and relevance to law and legal practice. Topics covered include decision analysis, game theory, probability theory, and statistics. Grades will be based on class participation, a graded problem set, and a final examination. No prior background in economics or statistics is required; however, we will regularly use elementary algebra and geometry. Students with strong backgrounds in economics, mathematics, or statistics should consult with the professor before enrolling in the course.

Professor Information:

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Office Hours: Tuesday, 1:30 PM – 3:30 PM

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Canvas Site: There will be a Canvas site for the course. Course materials will be posted on the Canvas site. I will also post announcements on the site from time to time, so please check the site routinely.

Course Materials: The required text for the course is HOWELL E. JACKSON ET AL., ANALYTICAL METHODS FOR LAWYERS (2nd ed. 2011). Additional materials for the course—including articles, cases, and problems—will be posted on the Canvas site.

Class Format: The class will combine lecture and discussion. Students are expected to attend all class meetings, to prepare for and participate in class discussion on a regular basis, and to complete assigned problems that are designed to provide you with practice working with the main concepts of the course.

Grading: Grades will be based on class participation (10%), a graded problem set (25%), and an eight-hour take-home final examination (65%). Administrative details regarding the final examination will be provided at the appropriate time.

Topics and Assignments: The following is a schedule of topics and reading assignments for the course.

DECISION ANALYSIS			
1	Jan 17	Introduction; Decision Trees	Text: Chapter 1, Sections 1 & 2, pp. 1-24. Problem 1.
2	Jan 19	Information; Sensitivity Analysis	Text: Chapter 1, Sections 3 & 4, pp. 24-30. Problems 2 & 3.
3	Jan 24	Risk Aversion	David A. Cather, <i>A Gentle Introduction to Risk Aversion and Utility Theory</i> , 13 Risk Management and Insurance Review 127 (2010): Read pp. 127-141. Complete practice problem 1 on pp. 141-142. Redo practice problem 1 with $U = \ln(W)$. Problem 4.
4	Jan 26	Time Value of Money	Text: Chapter 5, Section 3, pp. 229-237. Problems 5-8.
GAMES AND INFORMATION			
5	Jan 31	Introduction to Game Theory	Text: Chapter 2, Section 1-3, pp. 33-47. Problem 1.
6	Feb 2	Sequential Games	Problems 2-4.
7	Feb 7	Moral Hazard	Text: Chapter 2, Section 4, pp. 47-52. Problems 5 & 6.
8	Feb 9	Adverse Selection	Text: Chapter 2, Section 5, pp. 52-55. George A. Akerlof, <i>The Market for "Lemons": Quality Uncertainty and the Market Mechanism</i> , 84 Quarterly Journal of Economics 488 (1970): Read pp. 488-496. Problems 7-9.
9	Feb 14	Settlement versus Trial; Bargaining	Text: Chapter 7, Section 5.B, p. 420-427. Problem 10.
10	Feb 16	Repeated Games	Problem 11.

	Feb 21	No Class – Faculty Retreat	The graded problem set will be posted at 9am.
	Feb 23	No Class – Statutory Monday	The graded problem set will be due at 5pm.
PROBABILITY			
11	Feb 28	Fundamentals of Probability	James Brook, <i>A Lawyer's Guide to Probability and Statistics</i> (1990): Read pp. 33-46.
12	Mar 2	Fundamentals of Probability	Problem 1.
13	Mar 7	Conditional Probability	James Brook, <i>A Lawyer's Guide to Probability and Statistics</i> (1990): Re-read pp. 40-46. Problem 2.
14	Mar 9	Bayes' Rule	James Brook, <i>A Lawyer's Guide to Probability and Statistics</i> (1990): Read pp. 69-85. Problem 3.
	Mar 14	No Class – Spring Break	
	Mar 16	No Class – Spring Break	
15	Mar 21	Probabilistic Evidence: Identity	<i>People v. Collins</i> , 438 P.2d 33 (Cal. 1968). Problem 4.
16	Mar 23	Probabilistic Evidence: Coincidence	<i>State v. Pankow</i> , 422 N.W.2d 913 (Wis. App. 1988). Ray Hill, <i>Reflections on the Cot Death Cases</i> , 2 Significance 13 (2005). <i>Rex v. Smith</i> , 85 L.J.K.B. 2153 (1915).
17	Mar 28	Probabilistic Evidence: Matching	<i>Plemel v. Walter</i> , 735 P.2d 1209 (Or. 1987). Problem 5.
18	Mar 30	Probabilistic Evidence: Inference	<i>Navarette v. California</i> , 134 S. Ct. 1683 (2014). Problem 6.

STATISTICS

19	Apr 4	Descriptive Statistics	Text: Chapter 8, Section 1, pp. 445-469. Problem 1.
20	Apr 6	Hypothesis Testing	Text: Chapter 8, Sections 2.A & 2.C-2.E, pp. 469-472 & 476-486. Problem 2. <i>Castaneda v. Partida</i> , 430 U.S. 482 (1977). <i>Hazelwood School District v. United States</i> , 433 U.S. 299 (1977).
	Apr 11	No Class	
	Apr 13	No Class	
21	Apr 18	<i>United States v. Shonubi</i>	<i>United States v. Shonubi</i> (Shonubi III), 895 F. Supp. 460 (E.D.N.Y. 1995). <i>United States v. Shonubi</i> (Shonubi IV), 103 F.3d 1085 (2d Cir. 1997).
22	Apr 20	Bivariate Regression	Text: Chapter 9, Section 1, pp. 489-513. Problem 3. <i>Marks v. Stinson</i> , 19 F.3d 873 (3d Cir. 1994). <i>Marks v. Stinson</i> , 1994 WL 146113 (E.D.P.A. 1994) (on remand).
23	Apr 25	Multiple Regression	Text: Chapter 9, Section 2, pp. 513-524. Problem 4.
24	Apr 27	Multiple Regression	<i>Bazemore v. Friday</i> , 478 U.S. 385 (1986). <i>McClesky v. Kemp</i> , 481 U.S. 279 (1987).