First Four Weeks:

Week 1

Arthur Miller
Salem Witch Trials
The Crucible
Edward R. Murrow
Joseph McCarthy
spectral evidence
familiar spirit
Moses Maimonides
R. A. Fisher
John Tukey
"a good fit doesn't necessarily imply a good model"
"the two statistical modeling cultures"
deus ex machina

Week 2

Sally Clark
Roy Meadow
Prosecutor's Fallacy
statistical independence
Bayes' theorem
sensitivity
specificity
prior probability
positive predictive value
negative predictive value
conditional probability
baserate
forensic evidence
cancer-cluster
Alfred Dreyfus
Executive Order 9066
Alphonse Bertillon
mutually exclusive

facilitative event
inhibitive event
complementary event
Bonferroni inequality
rule of total probability
random match probability
cold-hit search
data-base match "probability"
Magic Lasso
denying the antecedent fallacy
affirming the consequent fallacy
contrapositive
abductive reasoning
false positive
false negative
natural frequencies
Fagan nomogram
medical screening
Lucia de Berk
Defendant's Fallacy
racial profiling
Citizenship Clause
Due Process Clause
Equal Protection Clause
Fred Korematsu
stop-and-frisk
Terry stop
Custodian Detention Index
"driving while black"
"flying while Muslim"
Smith Act (1940) -- Alien Registration Act
Reid Technique
Miranda rights
"lawyer-up"
"trier of fact"
Bertillonage"
gaze aversion
Othello error
random field theory
reverse inference (in fMRI)

"voodoo correlations"
Texas sharpshooter fallacy
No Lie MRI

Week 3

legal burden of proof
preponderance ot the evidence
clear and convincing evidence
clear, unequivocal, and convincing evidence
proof beyond a reasonable doubt
general causation
specific causation
attributable proportion of risk
spread betting
point shaving
parimutuel betting
Vincent Gigante
Agent Orange
discrimination (statistical)
classification (statistical)
Receiver Operating Characteristic (ROC)
Total Probability of MIsclassification (TPM)
Expected Cost of Misclassification (ECM)
290th (negative) commandment
reasonable suspicion
Chevalier de Mere
Blaise Pascal
Pierre Fermat
"problem of points"
simple experiment
sample space
sample point
event
elementary event
impossible event
sure event
"fair game"

framing effects
prospect theory
loss aversion
"dry lab"
tort

Week 4

double dipping
cross-validation
illusory correlation
ecological correlation
(correlation) restriction of range
intraclass correlation
Florence Nightingale
John Snow
"voodoo correlations"
Francis Galton
Pearson product moment correlation coefficient
"correlation does not imply causation"
post hoc, ergo propter hoc
cum hoc, ergo propter hoc
Guttman monotonicity coefficient
confirmation bias
apophenia
pareidolia
clinician's fallacy
clinician's illusion
detection bias
tachyphylaxis
ecological fallacy
ecological inference
aggregation bias
modifiable area unit problem
Taylor-Russell Charts
nonlinear association
Goodman-Kruskal Gamma Coefficient
Goodman-Kruskal Lambda Coefficient

(Index of Predictive Association)
Spearman Rank Correlation Coefficient
Model II (random effects) analysis-of-variance model
intraclass correlation coefficient
phenotype
genotype
heritability coefficient
pyromancy

Second Four Weeks:

Week 5

Henry A. Wallace
actuarial versus clinical prediction
Barefoot v. Estelle (1983)
Robyn Dawes
"robust beauty of improper linear models"
"errors-in-variables" models
regression toward the mean
dependent variable
independent variable
regressive fallacy
sophomore jinx
shrinkage
winner's curse
Paul Meehl
Kelley true score estimation
Kelley's Paradox
James-Stein estimation

Week 6

Census complete enumeration versus sampling
multiple testing
repeated measures analysis

matching and blocking
sample size selection
Theory World
Data World
population
sample
parameter
statistic
population distribution
sampling distribution
point estimation
interval estimation
"square root of n law"
Diederik Stapel
stepwise regression
"chart junk"
Bonferroni correction
Scheffe's method
Tukey's method
planned comparisons
post-hoc comparisons
compound symmetry
Huynh-Feldt correction
Geisser-Greenhouse correction
profile analysis
randomization test
reverse scoring
local optimum
sampling frame

Week 7

Golden Rule settlement
construct validation
eugenics
compulsory (forced) sterilization
immigration restriction
racial purity laws

Buck v. Bell (1927)
Loving v. Virginia 1967)
Racial Integrity Act of Virginia (1924)
(anti)miscegenation
True Score Theory (TST)
reliability
validity
test fairness
Immigration Act of 1924
Carl Brigham
A Study of American Intelligence (1923)
Diagnostic and Statistical Manual (DSM)
Robert Spitzer
orgone accumulator
"no validity without reliability"
Myers-Briggs Type Indicator (MBTI)
"high-stakes testing"
Item Response Theory (IRT)
test-retest reliability
equivalent-forms reliability
internal consistency
split-half reliability
Cronbach's alpha
true score variance
observed score variance
"reliability as true score variance divided by observed score variance"
predictive validity
content validity
test (item) bias
race-norming
(change) gain-score unreliability
Perron-Frobenius Theorem
Spearman's "g"
Harry Goddard
Charles Davenport
Kallikak family
Harry Laughlin
Madison Grant
The Passing of the Great Race (1916)
Pocahontas exception

Campbell's Law
Sacco and Vanzetti

Week 8

weight-of-the-evidence argument
Brown v. Board of Education (1954)
Fourteenth Amendment
Equal Protection Clause
Matrixx Initiatives v. Siracusano (2011)
Hormone Replacement Therapy (HRT)
healthy-user bias
compliance bias
adherer effect
prescriber effect
eager patient effect
hormone disruptor
John Rock
Law of Unintended Consequences
resistant measures of central tendency and dispersion
resampling methods
"salami science"
"least-publishable unit" (LPU)
phrenology
somatotype
graphology
pseudoscience
scienter
reasonable person standard
dispositive
materiality
bright-line rule
psycograph
Cesare Lombroso
Robert Oppenheimer
Leslie Groves

Third Four Weeks

Week 9

five-year survival rate
annual mortality rate
lead-time bias
relative risk reduction
absolute risk reduction
number needed to treat
mismatched framing
astroturfing
push poll
dark figure
mutant statistic
"the plural of 'anecdote' is not 'data' "
probability neglect
"proofiness"
"truthiness"
Potemkin number
"disestimation"
"electile dysfunction"
"average age of death" fallacy
age adjustment

Week 10

causuistry
Jonah Lehrer
the decline effect
funnel plot
John Ioannidis
evidence-based-medicine
quasi-experiment
internal validity
Lord's Paradox
idiopathic

"randumbness"
Austin Bradford Hill
Richard Doll
differential etiology
differential diagnosis
miasma theory
Ignaz Semmelweis
iatrogenesis
Oliver Wendell Holmes (Senior)
Koch's Postulates

internal validity threats:
history
maturation
testing
instrumentation
statistical regression artifacts
selection
experimental mortality
selection-maturation interaction

Bradford-Hill criteria:
strength
consistency
specificity
temporality
biological gradient
plausibility
coherence
experiment
analogy

Week 11

Simpson's Paradox
meta-analysis
Gene V Glass
reversal paradox

"unimportant interaction"
standardization
primary analysis
secondary analysis
inclusionary/exclusionary criteria
file-drawer problem
small study effects
gray literature
funnel plot
"apples and oranges" criticism
Flat Earth Society
vote-counting meta-analysis
Cochrane Collaboration
Campbell Collaboration

Week 12

Poisson clumping
Benford's law
Kaplan-Meier curves
survival analysis
McCleskey v. Kemp (1987)
rational drug design versus mass screening
Bernoulli trials
binomial distribution
Poisson distribution
runs distribution
"birthday problem"
stare decisis
inspection paradox

Last Three Weeks

Week 13

observational study

controlled study (experiment)
1954 Salk polio vaccine trials
randomized response method
trial registry
CONSORT; MOOSE; QUOROM; STARD
Contract Research Organization (CRO)
Robert McNamara
retrospective study
counterbalance
placebo
placebo effect
voluntary response
nonresponse bias
double-blind
wait list
framing questions
cohort study
case-control study
cross-sectional study
ecological study
"it is difficult, often impossible, to separate the chooser from the choice"
confounding
encouragement design
selection bias
information bias
recall bias
misclassification bias
controlled clinical trial
randomized control trial
intention-to-treat analysis
performance bias
attrition bias
detection bias
reporting bias
sequence generation
allocation concealment
blinding
incomplete outcome data
selective reporting
Francesco Redi

agent
differential misclassification
etiology
misclassification bias
pathognomonic
secular trend study
signature disease
teratogen
epigenetic
mutagen
differential diagnosis
differential etiology
Phase I, II, III, IV trials
James Lind

external (ecological) validity threats:
interaction effects of testing
interaction of selection and experimental treatment
reactive effects of experimental arrangements
multiple treatment interference
irrelevant responsiveness of measures
irrelevant replicability of treatments

Week 14

Nazi Doctors' Trial
Nuremberg Code
Tuskegee Syphilis study
Belmont Report
National Research Act of 1974
Declaration of Helsinki
foreign clinical trials
Marcia Angell
disease-mongering
Karl Brandt
Green Report
Office of Human Research Protection (OHRP)
Guideline for Good Clinical Practice (GCP)

Week 15

Federal Rules of Evidence
Daubert trilogy
expert witnesses
Daubert v. Merrell Dow (1993)
Data Quality Act (2001)
junk science
Frye Standard
general acceptance
Daubert factors
abuse of discretion
illusion of validity
Monty Hall Problem
representativeness heuristic
gambler's fallacy
doctrine of the maturity of chances
availability heuristic
anchoring and adjustment heuristic
fundamental attribution error
surrogate endpoint
test impact versus test bias
argument from ignorance
argumentum ad ignorantiam
arguing from a vacuum
argument from personal incredulity
false dilemma
falsum in uno, falsum in omnibus
margin of error folly
confusing "no evidence of an effect" with one of "evidence of no effect"
secretary problem
precautionary principle
ex cathedra
ad hominem
ipse dixit
obiter dictum
via regia

chimerical
equivocate
equivocal
taxicab standard
"doubt is their product"