

**Math and Statistics Courses Taken****Stat 134 - Concepts of Probability**

- Instructor: Adam Lucas
- Grade received: A
- School: University of California, Berkeley
- Textbook:
  - *Probability* by Jim Pitman
- Subject matter: Conditional expectation, independence, laws of large numbers. Discrete and continuous random variables. Central limit theorem. Selected topics such as the Poisson process, Markov chains, characteristic functions.

**Stat 135 - Concepts of Statistics**

- Instructor: Noureddine El Karoui
- Grade received: A
- School: University of California, Berkeley
- Textbook:
  - *Mathematical Statistics and Data Analysis* by John Rice
- Subject matter: Descriptive statistics, maximum likelihood estimation, non-parametric methods, introduction to optimality, goodness-of-fit tests, analysis of variance, bootstrap and computer-intensive methods and least squares estimation.

**Data C100 - Principles and Techniques of Data Science**

Note: DataC100 is listed here as it is cross-listed with the Statistics Department, was used for a statistics core course requirement, and covered significant statistics material.

- Instructors: Fernando Pérez, Alvin Wan
- Grade received: A+
- School: University of California, Berkeley
- Textbook: [none]
- Subject matter: Languages for transforming, querying and analyzing data; algorithms for machine learning methods including regression, classification and clustering; principles behind creating informative data visualizations; statistical concepts of measurement error and prediction; and techniques for scalable data processing.

**Math 110 - Linear Algebra**

- Instructor: Svezdelina Stankova
- Grade received: A-
- School: University of California, Berkeley
- Textbook: *Linear Algebra* by Friedberg, Insel, and Spence

- Subject matter: Matrices, vector spaces, linear transformations, inner products, determinants. Eigenvectors. QR factorization. Quadratic forms. Jordan canonical form, applications. Linear functionals.

### **Stat 150 - Stochastic Processes**

- Instructor: Benson Au
- Grade received: B
- School: University of California, Berkeley
- Textbooks:
  - *Essentials of Stochastic Processes* by Durrett.
  - *An Introduction to Stochastic Modeling* by Pinsky and Carlin.
- Subject matter: Random walks, discrete time Markov chains, Poisson processes. Further topics such as: continuous time Markov chains, queueing theory, point processes, branching processes, renewal theory, stationary processes, Gaussian processes.

### **Stat 153 - Introduction to Time Series**

- Instructor: Adityanand Guntuboyina
- Grade received: A+
- School: University of California, Berkeley
- Textbooks:
  - *Time series analysis and its applications* by Shumway and Stoffer
  - *Time series analysis by state space methods* by Durbin and Koopman
  - *Introduction to Time Series Modeling with Applications to R* by Kitagawa
- Subject matter: Estimation of trends and seasonal effects, autoregressive moving average models, forecasting, indicators, harmonic analysis, spectra.

### **Stat 157 - Seminar on Topics in Probability and Statistics: Forecasting**

- Planned/in-progress for Spring 2023
- Instructor: Jacob Noah Steinhardt
- School: University of California, Berkeley
- Subject matter: Historical instances of successful and unsuccessful forecasts, Fermi estimates, calibration training, base rates, scope sensitivity, and power laws