Mathematical Foundations
Reading List

Compiled by Edoardo Costantini

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Introductory Books

Blitzstein, J. K., & Hwang, J. (2014). *Introduction to probability*. Chapman and Hall/CRC.

> Important resource for studying probability and understanding statistics. Be sure to check out the website Statistics 110: Probability that has links to the youtube playlist with an entire course following the book and a lot of related resources.

Fox, J. (2009). *A mathematical primer for social statistics* (No. 159). Sage.

> Provides a basic working knowledge of mathematical concepts for statistical applications. In particular, the book introduces the reader to the three pillars: matrix algebra, calculus and probability theory.

Strang, G. (1993). *Introduction to linear algebra* (Vol. 3). Wellesley-Cambridge Press Wellesley, MA.

> Perfect companion for an in-depth course in linear algebra. Be sure to check out the associated online course

Online Courses

Auroux, D. (2010, Fall). *18.02sc multivariable calculus.* https://ocw.mit.edu. Massachusetts Institute of Technology: MIT OpenCourseWare.

> A great course on multivariable calculus. [Level: tough]

Strang, G. (2011, Fall). *18.06sc linear algebra.* https://ocw.mit.edu. Massachusetts Institute of Technology: MIT OpenCourseWare.

> A great primer on linear algebra. [Level: primer to medium]