Texts ISE 201

Required texts and optional text suggested for library reserve for ISE 201 *Foundations of Decision and Data Science,* Winter 2024.

A. Required Texts - available online. Please download them.

1. Probability

Michael J. Evans and Jeffrey S.Rosenthal, *Probability and Statistics: The Science of Uncertainty*

Available for download from University of Toronto:

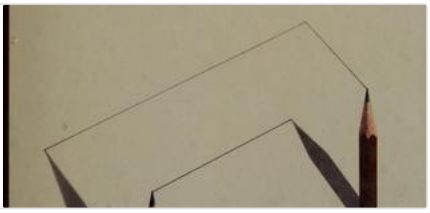
https://www.utstat.toronto.edu/mikevans/jeffrosenthal/book.pdf

2. Linear Algebra

Gilbert Strang, *Linear algebra and its applications.* 3rd edition vailable online from OpenLibrary.org:

Linear algebra and its applications by Gilbert Strang | Open Library
Linear algebra and its applications by Gilbert Strang, unknown edition,

https://openlibrary.org/works/OL3285496W/Linear_algebra_and_its_applications



Or use this link:

serge-lang-linear-algebra : Free Download, Borrow, and Streaming : Internet Archive
serge lang linear algebra

https://archive.org/details/serge-lang-linear-algebra/page/n3/mode/2up

3. Optimization, Linear Regression & Linear Algebra

S. Boyd, L. Vandenberghe, *Introduction to Applied Linear Algebra Vectors, Matrices, and Least Squares* (2018 Cambridge) Available for download online:

Introduction to Applied Linear Algebra – Vectors, Matrices, and Least Squares

Introduction to Applied Linear Algebra – Vectors, Matrices, and Least Squares
Stephen Boyd and
Lieven Vandenberghe

https://web.stanford.edu/~boyd/vmls/

4. Statistics

G. James, D. Witten, T. Hastie, R. Tibshirani, J. Taylor, *An Introduction to Statistical Learning with Applications in Python. (2023)* Available online from:

An Introduction to Statistical Learning

As the scale and scope of data collection continue to increase across virtually all fields, statistical learning has become a critical toolkit for anyone who wishes to understand data. An Introduction to Statistical Learning provides a broad and less technical treatment of key topics in statistical learning. This book is appropriate for anyone who wishes to use contemporary tools for data

https://www.statlearning.com/

B. Reference Texts

Primary sources, optional for the course. Part of a professional data science library. Available for purchase, and as Library reserves.

1. Probability

- J. Blitzstein & J. Hwang *Introduction to Probability (2015, CRC Press)*.

Introduction to Probability, Second Edition (Chapman & Hall/CRC Texts in Statistical Science)

Amazon.com: Introduction to Probability, Second Edition (Chapman & Hall/CRC Texts in Statistical Science): 9781138369917: Blitzstein, Joseph K., Hwang, Jessica: Books

https://amazon.com/Introduction-Probability-Chapman-Statistical-Science/dp/1138369918/ref=sr_1_1?crid=8PI8762GQ6O9&keywords=J.+Blitzstein+&+J.+Hwang+Introduction+to+Probability&qid=1704739998&s=books&sprefix=j.+blitzstein+&+j.+hwang+introduction+to+probability,stripbooks,194&sr=1-1&ufe=app_do:amzn1.fos.006c50ae-5d4c-4777-9bc0-4513d670b6bc

- S. Ross, *A First Course in Probability*

A First Course in Probability, Global Edition

Buy A First Course in Probability, Global Edition on Amazon.com ✓ FREE SHIPPING on qualified orders

https://www.amazon.com/First-Course-Probability-Global-dp-1292269200/dp/1292269200/ref=dp_ob_title_bk?asin=1292269200&revisionId=&format=4&depth=1

- Schaum's Outline of Probability and Statistics

Schaum's Outline of Probability and Statistics, 4th Edition: 897 Solved Problems + 20 Videos (Schaum's Outlines)

Amazon.com: Schaum's Outline of Probability and Statistics, 4th Edition: 897 Solved Problems + 20 Videos (Schaum's Outlines): 9780071795579: Schiller, John, Srinivasan, R., Spiegel, Murray: Books

https://www.amazon.com/gp/product/007179557X/ref=ppx_yo_dt_b_asin_title_o00_s00?ie=UTF8&psc=1

2. Optimization

- Stephen Boyd and Lieven Vandenberghe, *Convex Optimization* (2004 Cambridge University Press)

Convex Optimization – Boyd and Vandenberghe

Convex Optimization
Stephen Boyd and
Lieven Vandenberghe

https://web.stanford.edu/~boyd/cvxbook/

- Dimitris Bertsimas and John N. Tsitsiklis, *Introduction to Linear Optimization,* (1997, Athena Scientific).

Textbook: Introduction to Linear Optimization

by

Dimitris Bertsimas

http://athenasc.com/linoptbook.html

3. Linear Algebra

- G. Strang, *Introduction to Linear Algebra, Sixth Edition* (2023, MIT Press) This is the most current version of Strang's classic introductory text.

ILA, 6th Ed. (2023)

https://math.mit.edu/~gs/linearalgebra/ila6/indexila6.html

- Sheldon Axler, *Linear Algebra Done Right* (2024, Springer)

Downloadable from:

Linear Algebra Done Right

I am happy to announce publication of the fourth edition of Linear Algebra Done Right as an Open Access book. The electronic version of this new fourth edition with a Creative Commons BY-NC license is availble without cost at the link below.

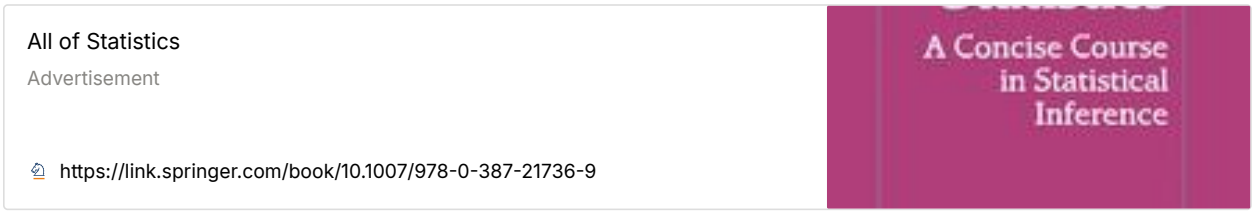
https://linear.axler.net/

- P. Halmos *Finite-Dimensional Vector Spaces* (1958, Springer)

This classic is a concise theorem & proof style exposition of Linear Algebra, in a way that generalizes to infinite-dimensional vector spaces. Although terse, it sets an example that gets picked up in later books,such as Axler's.
Download from
https://download.tuxfamily.org/openmathdep/

4. Statistics

- Larry Wasserman *All of Statistics (2004, Springer)*



- B. Efron & T. Hastie *Computer Age Statistical Inference,* (2016, Cambridge)
  Available to download from:

https://hastie.su.domains/CASI_files/PDF/casi.pdf

- G. Casella & R. Berger *Statistical Inference* (2002, Duxbury Press).
  Available to download from:
  https://mybiostats.files.wordpress.com/2015/03/casella-berger.pdf