

CS120 Fall 2021: Introduction to Algorithms and their Limitations

Recommended Textbooks

As mentioned in the Syllabus, we will be assembling content from a number of different sources and often presenting it somewhat differentially from the original sources. Thus there is no required text for CS 120, but the following are recommended texts for supplementary reading. We will order copies with the Coop and request for the library to put all of them on reserve.

1. Background (to review or fill in material from CS 20 and CS 50)
 - a. Harry Lewis and Rachel Zax. [Essential Discrete Mathematics for Computer Science](#).
 - b. [CS50 OpenCourseWare](#) and the [Python documentation](#).
2. Algorithms (the first two-thirds of the course).
 - a. Tim Roughgarden. [Algorithms Illuminated](#), especially Volumes I & II.
 - b. Thomas H. Cormen, Charles E. Leiserson, Ronald L. Rivest and Clifford Stein. [Introduction to Algorithms, Third Edition](#).
3. Limits of Algorithms (last third of the course)
 - a. Michael Sipser. [Introduction to the Theory of Computation](#).
 - b. John MacCormick. [What can be Computed?](#)