

Open Textbooks

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Copyright 101

- A government-granted monopoly (like a patent)
- ... for a long, long time
- Gives (you) total control over your creative work
- Everything you create has an automatic copyright, with or without © notice

Open Licenses

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- Copy, modify, distribute (perhaps with obligations)

Open Licenses

- With an open license you give others greater freedoms
- Copy, modify, distribute (perhaps with obligations)
- **Creative Commons**, popular for media, very flexible
- **GNU Free Documentation License (GFDL)**, viral
- **GNU Public License**, primarily for software, e.g. Linux
- Others at the **Open Knowledge Foundation**

Open Content in Research

- Open Access Journals
 - ▶ [Public Library of Science](#)
 - ▶ [Electronic Journal of Combinatorics](#)
- Think long and hard before you transfer your copyright to a publisher!
- It could be a Faustian Bargain

Open Textbooks

- High-quality, free textbooks do exist
- Michael Corral's [Vector Calculus](#)
- C.M. Snell, J. Laurie Snell, [Introduction to Probability](#)
 - ▶ Previously published by American Mathematical Society
 - ▶ Now GFDL license, with source available
- Judson's [Abstract Algebra: Theory and Applications](#)
 - ▶ Written in \LaTeX
 - ▶ Published by PWS-Kent in 1994
 - ▶ Copyright returned to author after corporate merger
 - ▶ Released as open-source in late 2008
- RAB's [First Course in Linear Algebra](#)
- An [Open Math Curriculum](#) — 10 texts, 2 software packages

Advantages

- Free — your students will love it (especially at community colleges)
- No spurious editions designed to frustrate the used book market
- Never goes out of print (for you and your students)
- Flexible — chop, hack, extend, combine
- Electronic editions allow hyperlinks back to theorems
- Electronic editions can embed live CAS code
(e.g. [Sage](#), an open-source alternative to Mathematica, Maple, ...)

When
is Free
not Free?

With Good Intentions

After his death, Dartmouth College announced releasing Ken Bogart's *Combinatorics through Guided Discovery* under the GNU Free Documentation License (GFDL).

This was an NSF funded project, so it seems right to make it freely available.

However the license is not included in the book and the $\text{T}_{\text{E}}\text{X}$ source is not readily available. Only a PDF is available — making modifications (improvements) problematic.

Bait and Switch

Thomas S. Shores, *Linear Algebra and Applications Textbook Website*, July 29, 2009:

In order to enable prospective users to preview my text easily and conveniently, in the past I have put a copy of it on the web for your perusal. In the last few years I've received many helpful comments and appreciative notes for having done so. I would like to thank those of you who sent me these notes and comments. You have helped me substantially improve the text. I am now under contract with Springer-Verlag and the book has been published in their Undergraduate Texts in Mathematics series in hardbound and, more recently, soft cover editions. Therefore, I have removed the on-line copy.

Choosing an Open Textbook

- This requires much more work! Must take care.
- Review sites, directories:
 - ▶ Ben Crowell's [The Assayer](#)
 - ▶ [OpenTextbook.org](#)
 - ▶ Student Public Interest Research Group's [Affordable Textbook Campaign](#)
 - ▶ More coming...
- Authors are typically “scratching their own itch”, so find authors at similar institutions for a good fit
- Test-drive in parallel with your current text
- A hard sell on a textbook committee, it is an easier option for single-section course (summer, upper-division)

Using an Open Textbook

- Like a “regular” textbook, plus
- Enough exercises? Might want to supplement
- Electronic formats offer in-class opportunities
- Printing options:
 - ▶ Print-on-demand: Lulu.com, CreateSpace.com
 - ▶ Locally: copy shop, campus bookstore (need to explain license)
- Experiment with new possibilities

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