Faculty Review of Open eTextbooks

The California Open Educational Resources Council has designed and implemented a faculty review process of the free and open etextbooks showcased within the California Open Online Library for Education (www.cool4ed.org). Faculty from the California Community Colleges, the California State University, and the University of California were invited to review the selected free and open etextboks using a rubric. Faculty received a stipend for their efforts and funding was provided by the State of California, the William and Flora Hewlett Foundation, and the Bill and Melinda Gates Foundation.

Textbook Name:

College Physics

Find it: eTextbook Website

Textbook Authors:
Dr. Paul Peter Urone, Dr. Roger Hinrichs, Dr. Kim Dirks, and Dr. Manjula Sharma

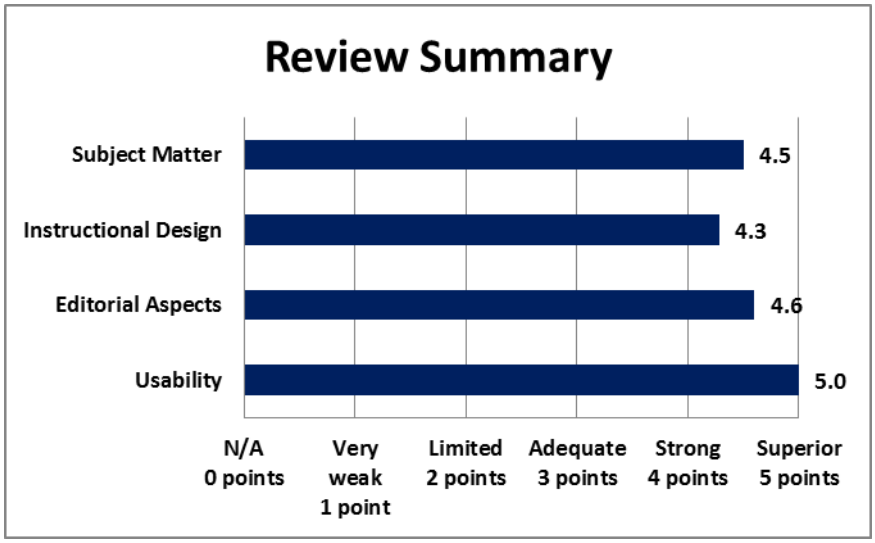
Reviewed by:
Alex Small

Institution:
California State University, Pomona

Title/Position:
Professor

Format Reviewed:
Online

A small fee may be associated with various formats.



Date Reviewed:
December 2015

California OER Council eTextbook Evaluation Rubric

CA Course ID: PHYS 105

Subject Matter (30 possible points)	N/A (0 pts)	Very Weak (1pt)	Limited (2 pts)	Adequate (3pts)	Strong (4 pts)	Superior (5 pts)
Is the content accurate, error-free, and unbiased?					X	
Does the text adequately cover the designated course with a sufficient degree of depth and scope?						X
Does the textbook use sufficient and relevant examples to present its subject matter?						X
Does the textbook use a clear, consistent terminology to present its subject matter?					X	
Does the textbook reflect current knowledge of the subject matter?						X

Does the textbook present its subject matter in a culturally sensitive manner? (e.g. Is the textbook free of offensive and insensitive examples? Does it include examples that are inclusive of a variety of races, ethnicities, and backgrounds?)					X	

Total Points: 27 out of 30

Please provide comments on any aspect of the subject matter of this textbook:

- I like that this book makes a non-trivial effort at using biological examples, including whole chapters of biology.
- One thing I like is the choice of two different online homework systems. I reject much of progressive pedagogy, but I like online homework for giving students immediate feedback.

Instructional Design (35 possible points)	N/A (0 pts)	Very Weak (1pt)	Limited (2 pts)	Adequate (3pts)	Strong (4 pts)	Superior (5 pts)
Does the textbook present its subject materials at appropriate reading levels for undergrad use?					X	
Does the textbook reflect a consideration of different learning styles? (e.g. visual, textual?)					X	
Does the textbook present explicit learning outcomes aligned with the course and curriculum?					X	
Is a coherent organization of the textbook evident to the reader/student?					X	
Does the textbook reflect best practices in the instruction of the designated course?					X	
Does the textbook contain sufficient effective ancillary materials? (e.g. test banks, individual and/or group activities or exercises, pedagogical apparatus, etc.)						X
Is the textbook searchable?						X

Total Points: 30 out of 35

Please provide comments on any aspect of the instructional design of this textbook:

- It verges on sensory overload, much like other intro books. That's utterly standard.

Editorial Aspects (25 possible points)	N/A (0 pts)	Very Weak (1pt)	Limited (2 pts)	Adequate (3pts)	Strong (4 pts)	Superior (5 pts)
Is the language of the textbook free of grammatical, spelling, usage, and typographical errors?						X
Is the textbook written in a clear, engaging style?					X	
Does the textbook adhere to effective principles of design? (e.g. are pages latid0out and organized to be clear and visually engaging and effective? Are colors, font, and typography consistent and unified?)						X
Does the textbook include conventional editorial features? (e.g. a table of contents, glossary, citations and further references)						X
How effective are multimedia elements of the textbook? (e.g. graphics, animations, audio)					X	

Total Points: 23 out of 25

Please provide comments on any editorial aspect of this textbook:

- I admire these authors for making a good-faith effort to do more than just a thin veneer of biology on top of a dumbed-down version of the already dumbed-down books that we use for engineers. Because they seem to be making an honest effort, let me nitpick something from my expertise. I work on biomedical applications of optics, particularly superresolution fluorescence microscopy. I'm not going to demand that the authors include superresolution in the book, but I am beyond tired of textbooks that talk about microscopes without ever using the word "pixel." Yes, modern microscopes still have eyepieces, used for inspecting samples, but the most important component of the microscope is the camera. In a modern microscope, lenses form images that are picked up by cameras. It wouldn't be hard to do an example where the objective lens forms an image at infinity, a second lens focuses the image onto a CCD or CMOS chip, and the student has to work out how many pixels across the image is.

Usability (25 possible points)	N/A (0 pts)	Very Weak (1pt)	Limited (2 pts)	Adequate (3pts)	Strong (4 pts)	Superior (5 pts)
Is the textbook compatible with standard and commonly available hardware/software in college/university campus student computer labs?						X
Is the textbook accessible in a variety of different electronic formats? (e.g. .txt, .pdf, .epub, etc.)						X
Can the textbook be printed easily?						X
Does the user interface implicitly inform the reader how to interact with and navigate the textbook?						X
How easily can the textbook be annotated by students and instructors?						X

Total Points: 25 out of 25

Please provide comments on any aspect of access concerning this textbook:

Overall Ratings						
	Not at all (0 pts)	Very Weak (1 pt)	Limited (2 pts)	Adequate (3 pts)	Strong (4 pts)	Superior (5 pts)
What is your overall impression of the textbook?					X	
	Not at all (0 pts)	Strong reservations (1 pt)	Limited willingness (2 pts)	Willing (3 pts)	Strongly willing (4 pts)	Enthusiastically willing (5 pts)
How willing would you be to adopt this book?				X		

Total Points: 7 out of 10

Overall Comments

If you were to recommend this textbook to colleagues, what merits of the textbook would you highlight?

- This book straddles the line between traditional "algebra-based books" and books that actually try to go far with the biological context. It doesn't hit the notes that I, as a biophysicist, would want to hit (e.g. I would like a more integrated discussion of diffusion and electrostatics, and the analogies between the two), but it has entire chapters on biological context.
- Also, this is one of the few free books to have meaningful integration with online homework systems.

What areas of this textbook require improvement in order for it to be used in your courses?

- I would absolutely love to see more treatment of diffusion, particularly the analogy between steady-state concentration profiles and electrostatic fields, or the analogies between Ohm's Law of electrical conduction, Fick's Law of diffusion, Poiseuille's law of fluid flow, and Fourier's Law of heat conduction.
- I would love to see more than one section on muscles, torque, and static equilibrium. It would be worth trimming some more "traditional" content for this.

We invite you to add your feedback on the textbook or the review to the textbook site in MERLOT
(Please register in MERLOT to post your feedback.)

CALIFORNIA OER COUNCIL
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For questions or more information, contact the CA Open Educational Resources Council.