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:

Organic Chemistry

Find it: eTextbook Website

Textbook Authors:
ChemWiki

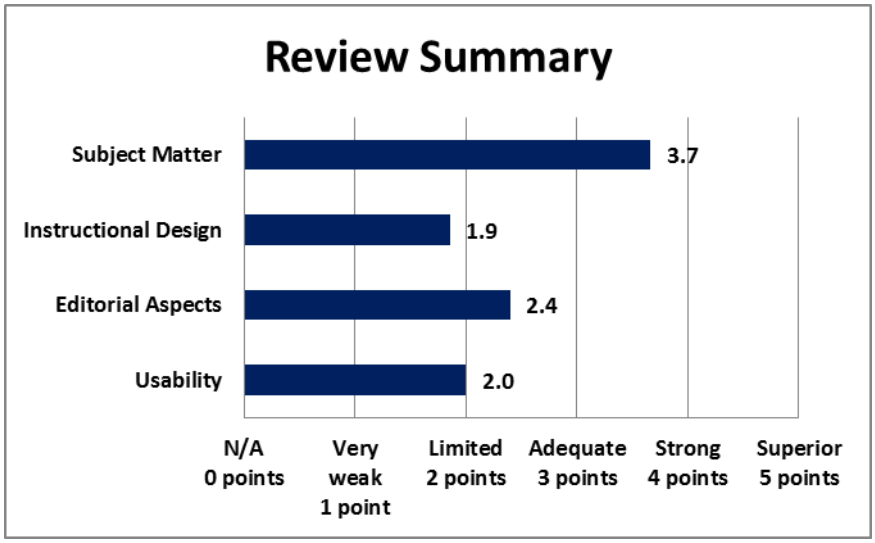
Reviewed by:
Renee Link

Institution:
University of California, Irvine

Title/Position:
Professor

Format Reviewed:
Online

A small fee may be associated with various formats.



Date Reviewed:
August 2015

California OER Council eTextbook Evaluation Rubric

CA Course ID: CHEM 160S

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: 22 out of 30

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

- The content appears to be accurate and up-to-date. The examples included are appropriate, but more examples would be a welcome addition. A benefit to the wiki format is that new information, corrections, and examples can be added easily.

- The scope and depth of content is appropriate of a year-long organic chemistry course once the appropriate sections can be located.

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: 13 out of 35

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

- The level of language and content is appropriate for a college course. Text and images are included. The images range from very simplistic to polished with little consistency in quality. The accuracy of the images is consistent regardless of image quality.

- There is a section labeled "Videos", but none of the links in this section work.

- A few worked examples are provided in some sections. In-chapter exercises are provided occasionally. In some cases, answer is directly under exercise so student will see answer directly with problem. This layout is not conducive to students solving problems without answer in front of them. In other cases, there is a link to a solution, but the page contains solutions for multiple exercises. The exercise is not numbered on the original page, so it is very difficult to locate the solution.

- No exercises are provided for students to try in resonance structures section. This is one of the most difficult areas for new organic chemistry students to grasp.

- Searching the ChemWiki is easy, but selecting an appropriate result is not. For example, a search for "spectroscopy" gives results almost exclusively from the physical chemistry area. While an expert might know to search for "molecular spectroscopy" to obtain a better result, a novice would not.

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: 12 out of 25

Please provide comments on any editorial aspect of this textbook.

- I navigated through the ChemWiki in a few different ways and found different issues depending on the method of navigation. For example, when following the Smith 4th ed textbook map, Section 1.13 led to a blank page.

- There are some typos but not to a level that would be confusing or difficult to read. There are some line spacing and word spacing errors. On at least one page there was a mistake in the page layout so that a box containing an example also contained the remaining text and images on the page.

- On one page the text just stops mid-word. It is clear from the partial sentence that the discussion was being extended to another structure, but the text and images are not present.

- The writing style is generally clear although not necessarily engaging.

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: 10 out of 25

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

- The site worked well in current versions of both Firefox and Chrome on a laptop. When accessed on a mobile device (iOS and Android), the site was navigable but the text on content pages was too small to read even when zoomed in. This could be a major detractor for students who are used to being able to access everything through a mobile device.

- Navigation was not obvious initially. I did locate the textbook maps that aid in navigation. Without a textbook map, however, the instructor would need to create a Wikitext for the class to help students navigate to appropriate sections. Even as a supplementary source, where to find specific content is not clear. For example, the "Alcohols" section contains minimal information on substitutions and elimination. The "Reactivity" section contains another small amount of information on these topics. The main content for the topics was located under the "Reactions" section.

- There is no clear way to print other than printing individual webpages.

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: 3 out of 10

Overall Comments

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

- The content is free and can be arranged in order of instructor preference.
- Online format allows students and instructors to access the text from anywhere.

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

- A replacement for end-of-chapter exercises and better in-section exercises would need to be developed.
- Typos need to be fixed, especially those where words or formulas are missing.
- Clear navigation pathways need to be created, although I think each instructor would need to create this based on their ordering preferences. A simple way for an instructor to create this would help.
- The site needs to be mobile-friendly and easily printed.
- Improved search results would also be needed.

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.