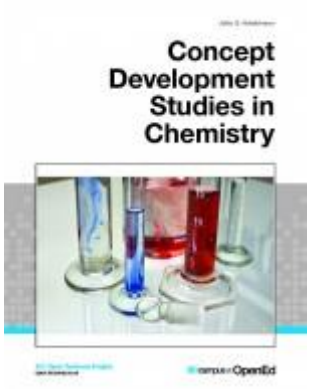
Faculty Review of Open eTextbooks

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:

Concept Development Studies in Chemistry



License:

Find it: eTextbook Website

Textbook Authors:
John S. Hutchinson

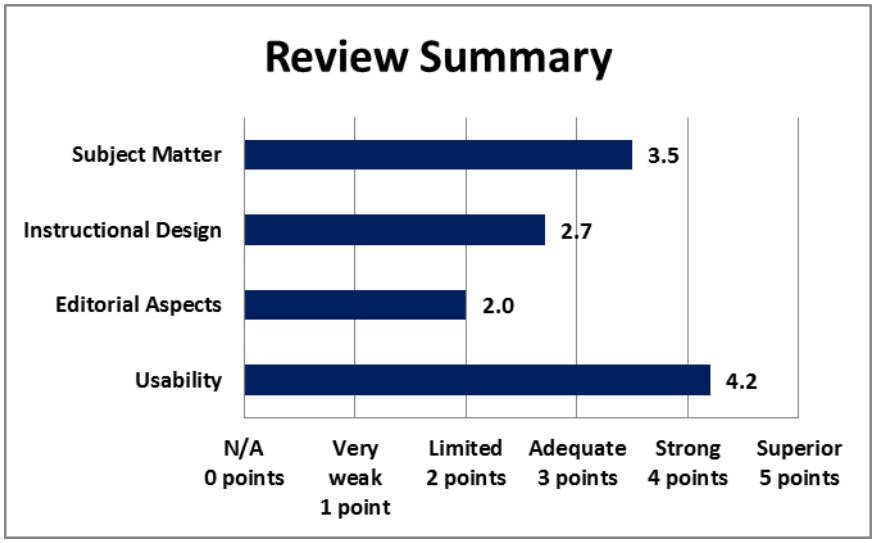
Reviewed by:
Larry Mink

Institution:
California State University, San Bernardino

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: CHEM 120S

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: 21 out of 30

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

- This text book would not be appropriate for a general chemistry class geared for science majors. At best, it may be appropriate for a General Education (G.E.) chemistry course. However, most G.E. chemistry textbooks have chapters of interest such as an Environmental, or Medicinal, or Energy, of Cosmetics related chapters and this textbook does not offer any of those special topics.
- The textbook does not provide numerical problems at the end of chapters, rather they present what they define as "Review and Discussion Questions". The text book is more of a "primer" type book for chemistry. Does not go into sufficient detail pertaining to the essential topics of stoichiometry, limiting reagents, combustion analysis, calorimetry, oxidation- reduction, nuclear chemistry and etc...
- What is presented is at a very simplistic level. The textbook is 122 pages whereas most general chemistry textbooks are at about 1,200 pages.
- The text book does meet the requirement of having a Table of contents as well as at the back having an Index of topics.

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: 19 out of 35

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

- It does not contain any numerical problems for homework assignments.
- There are a very few figures that are provided but they are very simple diagrams.

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: 10 out of 25

Please provide comments on any editorial aspect of this textbook:

- There are numerous graphs throughout the text. It appears the graphs were inserted as a "cut and paste". The graphs and related text to them are blurry and fuzzy (i.e. pages 114, 116, and 122).
- Many of the molecular structures are too big for the text such as throughout Chapter 6 with regard to Lewis structures (i.e. page 172).
- The diagrams of page 85 are too large. For example the equations are too small compared to the rest of the font size on pages 178 &179 (equations 16.5 and 16.8).
- The charges associated to the proton and hydroxide on page 105 equation 10.11 are missing their related charges.

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: 21 out of 25

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

- The text book provides the topics in a very superficial manner. Which would be adequate for a G.E. level course however, does not provide the usually included special topics in chemistry one would expect.

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: 1 out of 10

Overall Comments

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

- At best it could be considered as a primer to a select number of general chemistry topics.

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

- Much more in-depth presentation of all the topics.
- Needs to include many more numerical problems and homework problems at the back of each chapter.
- Needs to include much better figures, diagrams, graphs.
- All font problems must be resolved.
- Needs to include many topics not presented such as nuclear chemistry, oxidation reduction, electrochemistry and etc...

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
CSU + CCC + UC

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