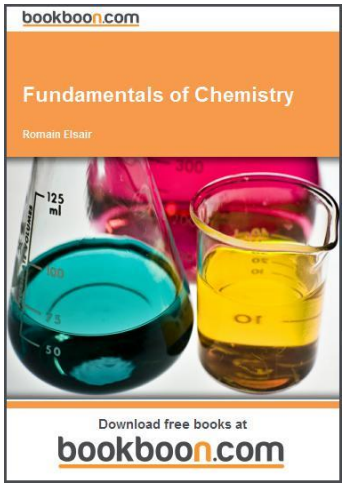
Faculty Review of Open eTextbooks

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:

Fundamentals of Chemistry



Find it: eTextbook Website

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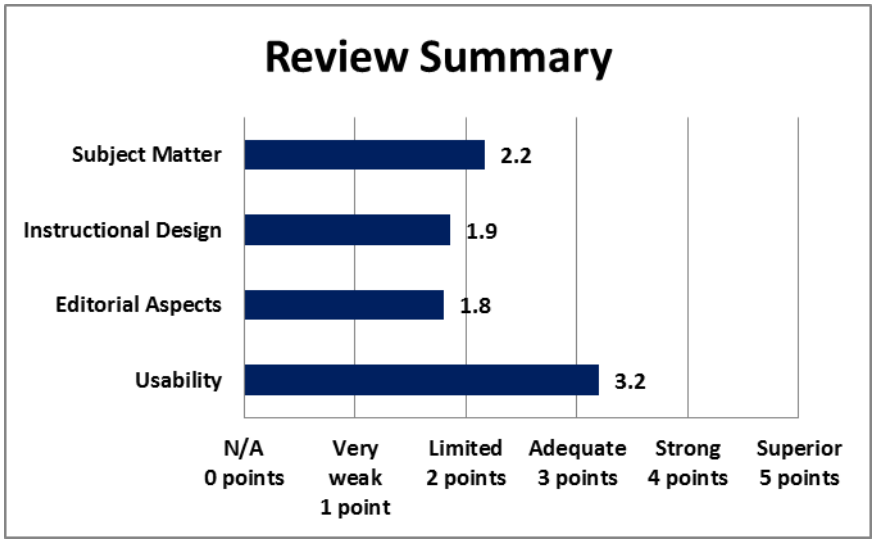
Title/Position:
Professor

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: 13 out of 30

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

- Significant errors in nomenclature section.
- Significant figures are virtually ignored.
- Molar stoichiometry and solution stoichiometry, combustion and gravimetric analysis ignored.
- No Valence Bond Theory or Molecular Orbital Theory introduced in bonding material.
- I very much liked the application of mass spec to the introduction of relative atomic mass and x-ray crystallography in atomic structure.
- Periodic trends subject is well-covered.
- No test bank that I could find.
- No end of the chapter problems.

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:

- Weak theoretical background on such topics as energy. Erratic coverage of various topics. For example, much groundwork and application when covering the concept and determination of relative mass of the atom. But comparatively weak background and theory when covering the topics of energy and bonding.
- No index or glossary.
- No end-of-chapter homework.

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: 9 out of 25

Please provide comments on any editorial aspect of this textbook.

- Many of the graphics are blurry. Poor editorial presentation including errors in problems -- notably nomenclature, fonts (subscripts, superscripts), lack of consistent font and size.

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: 16 out of 25

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

- The copious number of 1/4 to 1/2 page advertisements in this book make it cumbersome to read and difficult/expensive to print therefore limiting its accessibility.

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?

- Good discussions of analytical instrumentation and its relationship to basic topics in chemistry.
- Topic of light emission and absorption well done.
- Periodic trends interesting and well done.

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

- Nomenclature, measurements and calculations, energy, bonding.

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.