

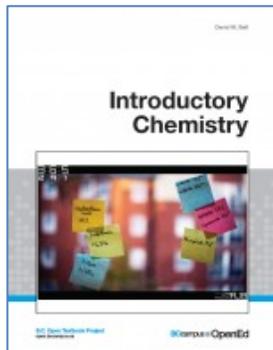


Faculty Review of Open eTextbooks

The [California Open Educational Resources Council](http://www.cool4ed.org) 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 no/low cost and open eTextbooks 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:

Introductory Chemistry



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Find it: [eTextbook Website](#)

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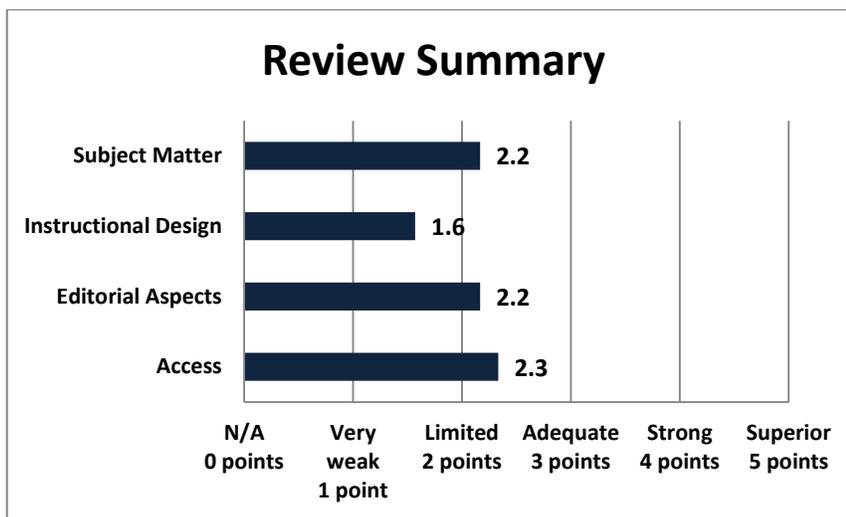
Format Reviewed:

[Online](#) and [PDF](#)

A small fee may be associated with various formats.

Date Reviewed:

August, 2014.



California OER Council eTextbook Evaluation Rubric

CA Course ID: [CHEM 110](#) or [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			

Subject Matter (30 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 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:

- The writing style of this textbook is clear and easy to read. However, the subject matter is inadequate for the level of students in a yearlong college course in general chemistry.
- Many major topics in the curriculum are missing from this textbook. Of the topics that are covered—in almost all instances—the degree of detail and complexity are more appropriate for a preparatory chemistry course (or a high school remediation course).
- Most end-of-chapter exercises have questions that are more knowledge based and lack the synthesis type questions (per Bloom's taxonomy) that one would expect from a college level textbook.
- Very few of the illustrations in the textbook convey the relationships between the microscopic (i.e., molecular or atomic level depictions) and the macroscopic (a major pedagogical tool in modern chemistry instruction).

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: 11 out of 35 points

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

The instructional design of this textbook is fairly basic. Learning chemistry requires conceptualization and visualization skills as well as mathematical and problem solving skills. In addition, it requires the ability to integrate different perspectives of chemical phenomena at the macroscopic, molecular, symbolic, and graphical levels. Many beginning chemistry students have difficulty integrating these different viewpoints unless their relationships are emphasized, reinforced, and presented concurrently during instruction. Unfortunately, the instructional design of this textbook lacks this approach.

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 laid out 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			

Editorial Aspects (25 possible points)	N/A (0 pts)	Very Weak (1pt)	Limited (2 pts)	Adequate (3pts)	Strong (4 pts)	Superior (5 pts)
How effective are multimedia elements of the textbook? (e.g. graphics, animations, audio)		X				

Total points: 13 out of 25 points

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

This textbook lacks many of the extra features that other commercial textbooks provide (i.e., an integrated online homework system, power points of illustrations for instructors, test banks, animations, simulations, visualizations, etc.).

Access (30 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: 14 out of 30 points

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

- This textbook was easily accessible using most standard Internet browsers and was easy to navigate and interact. However, I could not find a way for students to annotate the textbook.
- Also, the glossary of terms was missing.

Overall Ratings (10 possible points)						
	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					

Overall Comments

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

- The writing style of this textbook is clear and easy to read.

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

- This textbook would require major revisions. Overall, it is too basic and appropriate for a preparatory chemistry course, rather than a college level chemistry course.
- The table of contents would have to be strengthened by adding more chapters and the depth of coverage of the core concepts and principles would have to be much more rigorous.

We invite you to add your feedback on the textbook or the review to [the textbook site in MERLOT](#).
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