



## 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](http://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 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:

### Chemistry



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Find it: [eTextbook Website](#)

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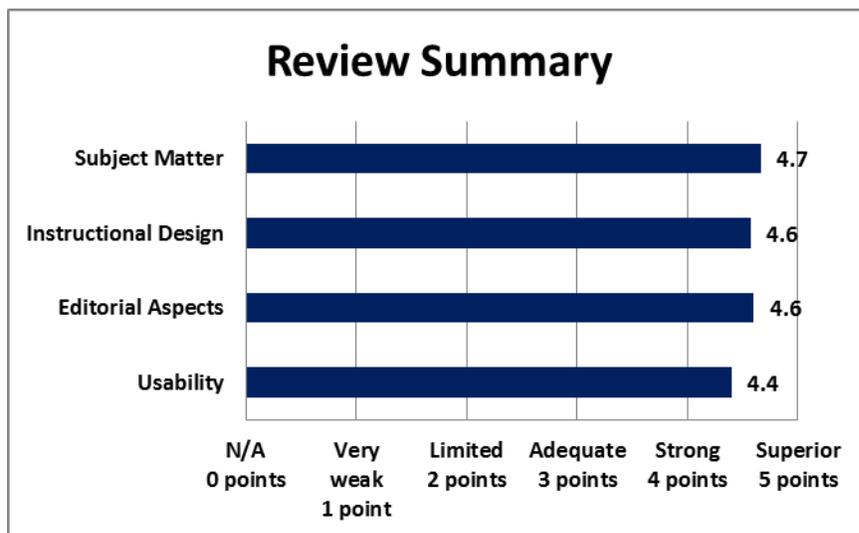
Professor

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: 28 out of 30

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

- I currently provide a course outline based on this textbook for the first quarter sequence of our two quarter general chemistry course. Here is my preferred ordering of the sections up to the gas law chapter 9. COURSE OUTLINE (Based on the textbook - Openstax College Chemistry):
  - Essential Ideas.  
Chapter 1. Sections: 1.1 - 1.6
  - Atoms, Molecules, and Ions  
Chapter 2. Sections: 2.1 - 2.3, 2.5 - 2.7
  - Composition of Substances and Solutions  
Chapter 3. Section: 3.1
  - Stoichiometry of Chemical Reactions.  
Chapter 4. Sections: 4.1
  - Atoms, Molecules, and Ions  
Chapter 2. Section: 2.4
  - Composition of Substances and Solutions  
Chapter 3. Section: 3.2
  - Stoichiometry of Chemical Reactions.  
Chapter 4. Sections: 4.3 - 4.5
  - Composition of Substances and Solutions  
Chapter 3. Sections: 3.3 - 3.4
  - Stoichiometry of Chemical Reactions.  
Chapter 4. Section: 4.2
  - Electrochemistry.  
Chapter 17. Section 17.1
- The remaining chapters I cover # 9, 21, 6, 7 , 10 in this order are fine.
- With regard to the sections covered in our second quarter with regard to Thermodynamics, Chemical Equilibrium, Acid/Base and etc. I would suggest the following:
  - Chapter 12. I would like to see the presentation of analysis of reaction orders based on half-life trends
  - In chapter 14, the titration of a weak acid/ strong base should be presented as a 4 point analysis (prior to base, prior to equivalent point, at equivalent point, after equivalent point). Also the titration analysis should be provided as I.C.E. tables along with analysis as presented.

- In Chapter 14, the presentation of Salts and hydrolysis should be presented as a 4 case study (strong/strong, weak/strong, strong/weak, and weak/weak) along with tabulated results with regard to effect on pH.
  - Section 15.2 with regard to the definition of Lewis structures should be provided at the end of chapter 14.
  - Missing is the presentation of the Van't Hoff equation is presented in Chapter 16.
- The hard copy of this text book is now offered through Amazon. The hard copy is very big and heavy, should a student want to purchase it along with having the free on-line or PDF version. The hard copy is 1227 pages. It is felt it is about 200 pages too much. I would recommend decreasing its size by removing Chapter 18 (Representative Metal) and Chapter 20 (Organic) and providing these chapters as special topics booklets.
  - This textbook meets all the typical requirements of a general chemistry textbook. Included is a Table of Contents, back of book index, figures, multiple homework problems at the back of chapters, good Appendices, and etc.

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: 32 out of 35

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

- The textbook is well designed. It provides the instructor with power points and test banks.

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
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:

- It has good diagrams, good worked out problems throughout the chapters, good links to external video clips.

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: 22 out of 25

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

- The text book is easily accessible. It also is now available in a hard copy version through Amazon.

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: 9 out of 10

## Overall Comments

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

- Its content is at the appropriate level for a science major course in general chemistry.
- It has very good figures.
- It has good problems at the end of each chapter.
- It is visually pleasing to look at.
- In general it is a well formatted general chemistry textbook.

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

- The places I feel could use improvement have been identified in the previous section titled "Please provide comments on any aspect of the subject matter of this textbook".
- I have currently provided my students with a course outline related to this textbook.

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.)



For questions or more information, contact the [CA Open Educational Resources Council](#).



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