

**The Cooper Union**  
**CH110B, General Chemistry, Kolack**  
**Syllabus for Fall 2019**

Place & Time: Fridays, 10AM-12:50PM, room 505

Required: *OpenStax Chemistry, 2<sup>nd</sup> Edition*

<https://openstax.org/details/books/chemistry-2e?Student%20resources>

(download available on Moodle and the link above; print available on link above)

Scientific calculator

Molecular model set highly recommended

Instructor: Kevin Kolack, Ph.D.

Office Hours: Fridays, 1-2PM *and by appointment- please email me*, room 214

E-mail: [kolack@cooper.edu](mailto:kolack@cooper.edu) (sign your emails and use proper netiquette!)

Web page: <https://moodle.cooper.edu/moodle/course/view.php?id=1109>

**Schedule:**

Date	Topic	HW
Sept. 6	Ch. 1- Matter and Measurement	1, 2, 8, 9, 10, 12, 13, 17, 23, 25, 27, 40, 45, 49, 51, 53, 77
Sept. 13	Ch. 2- Atoms, Molecules and Ions	11, 18, 23, 31, 43, 47, 49, 55, 60, 61
Sept. 20	Ch. 3- Composition of substances and solutions	3, 9, 17, 27, 33, 37, 43, 51, 55, 57, 61, 79
Sept. 27	Ch. 4- Chemical Reactions in Aqueous Solutions	3, 9, 11, 17, 20, 21, 23, 31, 41, 49, 53, 61, 67, 81, 87, 93
Oct. 4	Ch. 6 (skip Ch5)- Electronic Structure and Periodic Properties of Elements	9, 11, 27, 35, 45, 49, 53, 61, 67, 71, 77
Oct. 11	EXAM 1	covers chapters 1-4, 6
Oct. 18, 25	Ch. 7- Chemical Bonds	5, 8, 13, 17, 21, 25, 30, 35, 45, 47, 52, 58, 65, 70, 75, 81, 89, 93, 99, 105, 116
Oct. 25	Ch. 8- Bonding Theory and Molecular Structure	6, 7, 12, 21, 27, 29, 41, 47, 49
Nov. 1	Ch. 9- The Gaseous State	5, 13, 15, 29, 35, 37, 53, 61, 75, 89, 101, 103
Nov. 8	Ch. 10 (skip 10.5-10.6)- Intermolecular Forces	2, 11, 13, 17, 21, 25, 31, 43, 51, 58, 63, 65, 69
Nov. 15	EXAM 2	covers chapters 7-10
Nov. 22	Ch. 13 (skip Ch11-12)- Chemical Equilibrium	9, 17, 19, 31, 37, 43, 48, 52, 60, 62, 66, 78
Nov. 27 WED!!!	Ch. 14- Acids, Bases and Acid-Base Equilibria	3, 5, 9, 17, 19, 25, 33, 50, 54, 60, 68, 70, 82, 90
Dec. 6	Ch. 15 (15.1 only)- Solubility	1, 9, 11, 27, 31, 39, 55
Dec. 20	EXAM 3	covers chapters 13-15

**Grading:** Grading is based on your performance on the three exams and unannounced quizzes. The exams will be cumulative in the sense that the material from later in the course will rely on your understanding of concepts introduced earlier on. Homework will not be graded, but should be attempted and discussed in recitation.

Exams are 2 hours and will be discussed immediately thereafter. **THEY CANNOT BE DROPPED OR MADE UP. NO EARLY OR LATE EXAMS WILL BE GIVEN. THIS IS COLLEGE... LEARN SOMETHING THIS SEMESTER.**

Your grade will be determined as follows:

Exam 1:	30%
Exam 2:	30%
Exam 3:	30%
Homework/class particip.:	10%

### **FREQUENTLY ASKED QUESTIONS**

*Why do I have to take this class?*

Most people take this class because it's required for their major. Have you ever considered why? For the most part, it's not the content– it's the way you have to think to do well in the class, the problem-solving skills, the reading and writing skills, the attention to detail– all of these intangible (possibly immeasurable) things are the reason chemistry is required and will benefit you in the future.

*Why didn't you answer my email?*

Did you wait 24 hours? I will respond within a day (during the week), but can't guarantee a faster response. Studies have shown that being overly connected is not productive.

*Do I have to read the book? Do I have to do the homework?*

Based on 25 years of experience and feedback, I know that I am an incredibly good lecturer, but there is no way you are going to learn this material (or this way of thinking) by hearing it from me once in class or on a video. You need to read the book before class, come to class, do the homework and perhaps read the text again before exams. Yes, you have to read the book and do the homework.

*How can I get a good grade in this class?*

The general rule is that you should be studying 3-4 hours outside of class for every hour in class. That means 9-12 hours of studying for CH110. If you're not prepared or able to devote the time required, you're not going to do well. It's that simple. Again, read the book before class, come to class, do the homework and any optional assignments, re-read the book, take the exam, and repeat. This is a 15-week semester...you can do it! If something isn't making sense, visit me during my office hours, form a study group with others in the class, or study with a (free) tutor. Studies show that passive lectures are not the best way of delivering information, yet students are used to it. At Queensborough, I change that up and "flip" the class, delivering lectures by video and working more problems in class. With the recent removal of 1 hour from the course at Cooper and addition of an old-school recitation section, that is not possible here. However, try to make this as active a process as possible by asking good questions and being involved in the class.

*Can I do extra credit to better my grade?*

Students usually ask this right before the final exam. I already offer "bonus" opportunities during the semester. Why should I make more work for myself when you finally realize you're not doing well? Also, I am not a used car salesman, and this is not a negotiation. This is not high school. College is more like "the real world" where no one is going to give you "extra credit." Deadlines are deadlines. You get what you earn. It's time to grow up. You'll learn that, whether or not you learn any chemistry this semester.

*Can I have a review sheet for the exam?*

Wouldn't it be great if life was like that? Where you received only the information that was important to you when you needed it? Part of becoming educated, in any class and in life, involves your learning what is important to you, at that particular point in time. Plus, don't you have your notes, materials from Moodle, and materials already returned to you? I don't know what you want on your review sheet- make your own.