

CH142 Spring 2012: Lecture Syllabus

Section A

Instructor: Tyler Morin

Office: Keyes 312

Tel: x5776

e-mail: tjmorin@colby.edu

Section B

Instructor: Tom Shattuck

Office: Keyes 213

Tel: x5759

e-mail: twshattu@colby.edu

Office hours: Our doors are open to provide help at any time, or by appt.

Course webpage: <http://www.colby.edu/chemistry/CH142/CH142.html>

Lectures meet: Section A M-W-F—9:00-9:50 in Keyes 105

Section B M-W-F—10:00-10:50 in Keyes 105

Required course materials:

Textbook: Chemistry, The Central Science, 12th Edition; Brown, Lemay, Bursten, Murphy, Woodward

Lab: Bound laboratory notebook

Anticipated course topics:

Week	Chapter	Topic	Test
1-2/1	15.1-3	Chemical Equilibrium	
2-2/6	15.4-7, 14.1-3	Chemical Equilibrium, Kinetics	
3-2/13	14.4-7	Chemical Kinetics	
4-2/20	16	Acid-Base Equilibria	
5-2/27	17.1-3	Additional Aspects of Aqueous Equilibria	3/1 (Ch14-16)Thurs.
6-3/5	17.4-6	Additional Aspects of Aqueous Equilibria	
7-3/12	18.1-2 19.1-3	Chemistry of the Atmosphere Chemical Thermodynamics	
3/19		Spring Break	
8-3/26	19.4-7	Chemical Thermodynamics	
9-4/2	20.1-6	Electrochemistry	4/2 (Ch17-18)Mon
10-4/9	20.7,9 21.1-6	Electrochemistry Nuclear Chemistry	
11-4/16	22.1-5	Chemistry of the Non-metals	
12-4/23	22.6-11	Chemistry of the Non-metals	4/24 (Ch19-21)Tues
13-5/30	23.1-4	Chemistry of Coordination Compounds	

Grading:

- Exam 1 (13%)—Thursday March 1 from 5:30-6:30 PM in Keyes 105.
- Exam 2 (13%)—Monday April 2 from 5:30-6:30 PM in Keyes 105.
- Exam 3 (13%)—Tuesday April 24 from 5:30-6:30 PM in Keyes 105.
- Final Exam (26%)—Cumulative and the specific date is TBA.
- Laboratory (25%)—Attendance is mandatory. You must pass lab to pass CH142. For more information on the Lab, please visit the CH142 webpage for more information.
- Mastering Chemistry Homework (10%)—See below for information.

Departmental policies:

1. Student collaboration

All material that you submit for a grade must be the result of your own thoughts and work. That said, we strongly encourage students to work together in preparing for class. Small group discussions are very useful in generating

ideas that aid in problem solving and stimulate learning. Problem solving is an important part of chemistry and often it is the best way to learn material in chemistry courses. Thus, you are encouraged to work together on practice problems from the text. Academic dishonesty can take many forms including but not necessarily limited to:

- Looking at or copying material from another student's work, or allowing another student to copy any of your work.
- Using any sources or materials during an exam that are not expressly allowed by the instructor, creating such materials and leaving them in a location where they might be used by you or another student (all such materials should not be brought to the exam; they may not be on the floor, hidden in your exam, written on your hand, programmed into an electronic device, left in the bathroom, halls, or surrounding area, etc.).
- Altering your exam in any way after it is returned when asking for regrading of a portion of an exam.

Graded work includes exams, on-line homework, pre-lab assignments, and laboratory reports. This policy includes both calculations and answers to questions in laboratory write-ups. In lab, your collaboration ends with collection of data. These policies are consistent with both the College's policy on academic honesty as discussed in the Student Handbook as well as the Chemistry Department's policy: www.colby.edu/chemistry/Attend_Exam.html.

2. Extra help

Please see your Professor as soon as possible if you have any questions about course or lab material. Help is also available at the Chemistry Help Center, staffed by experienced and knowledgeable chemistry majors, which is open four evenings per week in Keyes 104 (M-Th, 7:30-9:30). These students will be happy to answer questions and help with problems. If you feel the need for further help, tutors are available—see Lisa Miller (Keyes 310; Immiller@colby.edu) to make arrangements.

3. Exams

There will be three one-hour exams (see dates above) and a final exam during the exam period. Exam questions may come from lecture, lab, the text, and/or homework and will be a mix of multiple choice, numerical problems, and short answers. Please note that you must show your work on arithmetical problems for credit and so that partial credit may be given. There will be practice exams available on the course webpage. These practice exams give you additional practice and help you gauge typical lengths of exams, but are not intended to serve as the primary resource for exam preparation. The actual exam will be, *at most*, only somewhat similar to the practice exam.

Students are required to take all exams, and there are NO MAKE-UP EXAMS. If a student is expected to be away for a College activity, we will try to arrange for exams to be administered by a coach or other non-student person that accompanies the student. It is the responsibility of the student to let the instructors know, well in advance, of any possible trips and to arrange with a person (for example, your coach) to administer the exam.

If an exam is missed without a verified medical cause or other prior approval by your Professor, the student shall receive a zero for that exam. The grade for an exam missed due to an excused absence will be calculated based on your next exam's grade relative to the class (unadjusted for the subsequent test). Some students may have approval from the Dean of Students' Office for time extensions on exams. These students must establish with the Dean of Students an appropriate time extension prior to the first exam. Please make these arrangements as soon as possible and at least 48 hours before the first exam. (see www.colby.edu/chemistry/Attend_Exam.html)

Important note: To encourage students to perform to the best of their abilities and to work towards improvement, all hour exams will be adjusted based on future test scores. All hour-exam grades will be adjusted upwards by replacing the exam score with the average of that exam grade and the subsequent exam grade, if the subsequent grade is higher. The final will be used to adjust the third exam grade. This adjustment will only increase your grade!

4. Homework assignments

You will be using an online homework program called "Mastering Chemistry". You will be required to purchase an individual access code (many of you will purchase this bundled with the textbook). There is no way to share or transfer access codes, so every student will need their own. Approximately each week there will be an online assignment, and your homework grade will be based on completion and performance on each assignment. It is an *excellent* idea to do additional practice problems from each chapter of the book. A complete solutions manual for those problems from the text will be on reserve in the Science Library and will also be available in the Chemistry Help Center if you would like to check your answers.

Previous experience suggests that you will find the material in CH142 more challenging than in CH141. The key to success in this course is to do lots of problems. Every additional problem that you do should increase your understanding and improve your chances of success. In fact, you may need to do many additional problems to be able to tackle a given type of problem quickly enough to complete it in a reasonable time on an exam.