**CH142A Lecture Instructor:** Prof. Rebecca R. Conry, Keyes 312, x5764, rebecca.conry@colby.edu

**CH142B Lecture Instructor:** Prof. Kevin P. Rice, Keyes 313, x5763, kevin.rice@colby.edu

**CH142A Web Site:** moodle.colby.edu links to course materials and resources: homework, laboratory, course learning goals and slides by chapter, sample exams, your exam keys (posted after each exam), and more.

**CH142B Web Site:** https://wiki.colby.edu/display/ch142 links to course announcements, lecture materials, homework, and more.

**Required Materials:**
- Chemistry (5th Ed.) Olmstead and Williams. (textbook)
- Sapling Learning student account number
  - If you purchased this for CH141 last semester, it is still active (do not buy another one)
  - Otherwise, you may purchase access at www.saplinglearning.com
- A bound, pre-numbered composition type book for lab
- A Sharp EL-501X calculator

**Course Content:** Some or all of textbook chapters 12, 14, 13, 15, 20, 16, 19, 17, and 18. Keep up—class is fast-paced and material will build upon previous content. It will be difficult to catch up if you fall behind. The CH142 material is more complex than that for CH141 and is less likely to have been covered in your high school chemistry class. You may have to spend more time and effort for CH142 than you did in CH141 to receive the same grade!

**Course Grading:**
- 3 hour exams/HW** 18% each
  - Final exam (comprehensive) 26%
  - Laboratory 20%

  - **You must pass the laboratory to pass the class.**

  - **We uphold the Colby affirmation; any student participating in academic dishonesty for an exam will fail the course.**

**Homework** will impact your exam grade positively or not at all. For each exam the recorded score will be the higher of: (1) 100% exam or (2) 80% exam plus 20% homework sets relevant to that exam (≥100% homework scores earn 20%). Thus, a 70% exam + 100% homework grade yields a 76% exam score and a 70% exam + 0% homework grade yields a 70%. With this policy, your homework score can only have a positive effect on your exam score and doing homework will also help you learn the material to earn a higher exam grade. Homework scores for an exam are captured around noon on each hour exam day.

Homework is computer-based in Sapling Learning: http://www.saplinglearning.com. Assignments will typically take ≈ half hour and be due the mornings of class days. Late assignments will receive no credit. As we approach an hour exam, a cumulative problem set covering the material to be on the exam will be due in place of a daily homework set. In addition, a cumulative extra-credit problem set will be available for material leading up to an exam. To do well on exams, you must understand the concepts to be able to answer questions about the material—including conceptual and numerical problems—without taking an excessive amount of time. For most students this means doing MANY problems.

**Hour exams:**
- **Wednesday, March 4** 5:00 to 7:00 pm
- **Thursday, April 2** 5:00 to 7:00 pm
- **Tuesday, April 28** 5:00 to 7:00 pm
It is impossible to select exam dates that are ideal for everyone. However, we have tried to be as fair as possible. For instance, everyone has a chemistry exam the same day as their chemistry lab a maximum of once this term. Anyone who arrives late for the exam start time will forfeit time already missed. Exams will be written to be finished in an hour; however, everyone may take up to two hours to complete the exam.

The Chemistry Department exam policy is: “Students are expected to take all exams at the time that they are scheduled, and there are NO MAKE-UP EXAMS. The grade for an unexcused missed exam is zero. If a student will be away for an official College activity, it is the responsibility of the student to let the professor know of the conflict, well in advance, so that arrangements can be made for the exam to be administered by a college official (such as a coach). In the event of a serious unexpected medical or family emergency, as soon as possible you must have your advising Dean contact your course instructor, who may then excuse you from the exam (note that only your course instructor has the authority to do so). You should expect, however, that only for extremely exceptional circumstances will you be allowed to miss an exam in any chemistry course, and you should expect to fail the course if you miss more than one exam in that term. Because subsequent topics in chemistry classes typically build upon previous course material, it becomes difficult to catch up if you fall behind. Therefore, students missing an exam in a chemistry course will receive an academic warning from the course instructor because of the potential for failure in the remaining portion of the course.”

If at all possible, you should avoid missing an exam. Most students who miss an exam typically end up with a much lower grade in the class than they had previously attained in the class before missing the exam because it is challenging to both catch up and do well on topics that built on the material not yet mastered. Therefore, we would much rather that you make an attempt to study for and take the exam than miss it. If you are dealing with an illness or a family problem, you can tell your instructor about your circumstances ahead of the exam impacted, and we will put a note with that exam score in our gradesheet. We will then take the fact that you were not at your best for that exam into account when assigning your course grade—as long as we can see you tried to do well. Under no circumstances will we do this for you for more than one exam.

Exams will be graded and returned in class as soon as possible. For each exam you will find a letter grade given on the last page of the exam for that exam plus the homework relevant to that exam. The grading scale may or may not be curved depending on the difficulty and length of the exam. When we deem it is appropriate, we only curve to raise student grades from the traditional 90% and above is some sort of an A, etc. (never to lower them).

Every hour exam will have a mix of numerical and short answer type questions; constants will be provided but typically very few, if any, equations (please note only the most important equations will be tested, as announced for each exam). Exam questions come from lecture, text, homework, and/or laboratory material (which all cover the same content, but sometimes slightly differently). Exam problems will address the learning goals (find a link to the document containing these on the CH142A Web site); we will write problems that you should be able to answer if you understand the concepts and how to do various kinds of problems on the topics we have covered. We will remove redundancies (a typical example is nomenclature: notice how many problems give both the chemical formula and the name for a compound, but you should by now be able to arrive at one from the other). Each exam will be a mix of more challenging questions, medium-level ones, and easier ones.

Academic Dishonesty: Working together in small groups to study for this class and to prepare thoughts for laboratory reports is encouraged, as such discussions are useful to generate ideas to solve problems and make learning more interesting. However, ALL materials that YOU submit for a grade must be uniquely the results of YOUR work only. This includes exams, pre-lab assignments, lab notebooks, laboratory reports, and homework problems. This is consistent with the Colby Chemistry Department dishonesty policies found at the following Web address: http://www.colby.edu/chem/about/chemistry-attendance-and-exam-policy/.
Comprehensive Final: A standardized exam from the American Chemical Society for 2nd semester general chemistry given during the registrar-assigned time, Sun. 5/18 9 am-noon, with or without additional problems.

Students with a Learning Difference: We are making hour exam situations as open access as possible, so nothing need be done if your learning difference accommodations only require extended time. However, if you have been diagnosed with a learning difference that requires other reasonable exam accommodations, you MUST follow the Colby Chemistry Department policy (http://www.colby.edu/chem/about/chemistry-attendance-and-exam-policy/) to receive those accommodations. In addition, for the standardized American Chemical Society final exam, we need to have documentation in order to give you additional time. Thus, you must bring a letter from the Dean of Student’s office to your instructor explaining that you have been diagnosed with a learning difference and detailing the recommended accommodations as soon as possible, but no later than a week before an exam.

Exam Grading and Regrades: For calculational problems on exams, usually 1 pt is earned for the numerical answer, 1 pt for the units, 1 pt for significant figures, and the remaining points are given for the work leading up to the answer. Partial credit is given for this work, so you have to show your work to earn full credit.

The graders occasionally make unintentional grading or addition mistakes. If feel you were not given enough credit on a problem or you find an addition error, you can turn in your exam for regrading. You have one week from the day exams are returned to turn in any regrade requests. To do so, do not change or write on your exam but instead attach a note to your exam detailing which problem and exactly why you think you deserve more credit (i.e., explain your answer including what you did right and what you did wrong remembering that sometimes a lack of credit reflects a difficulty in following your work). To help you, answers to your exams will be posted on the CH142 Web site as soon as possible after the exams are returned. Please do not ask your instructor in person whether or not more credit is deserved–if you really think you deserve more credit you can defend that assertion in writing. Please avoid arguing over a few points because one or two points on an exam or even on every exam will NOT make a difference in your course grade. This is because we always automatically examine all student scores near a grade break to determine which course grade is most appropriate for each. We look for reasons to give a student with a borderline grade the higher grade, for instance, an improvement in exam grades along the way, a much higher final exam grade, or significantly more than 100% on the homework.

Sample Exams: A blank copy of hour exams from a previous semester of CH142 will be available on the CH142 Web site. Your exams will be different than the sample exams. You can use the problems on the sample exams covering the same material covered in class to test your readiness in that area and can see the types of problems we might ask. Work out your own solutions, timing yourself to give you an idea if you need to pace yourself differently on exam day. You are welcome to come to office hours to get help with these problems, or you can ask questions about them at the question and answer sessions. In addition, answers to each sample exam will be posted on the CH142 website a few days before the exam.

Exam Question and Answer Sessions (the class period before each hour exam):

During class Monday, March 2; Wednesday, April 1; and Monday, April 27

These optional exam question and answer sessions are scheduled during the class period before the exam to make sure everyone can attend. If you are uncomfortable asking a question in front of the class, you are welcome to drop your instructor a handwritten note or an e-mail message with your question(s) on it.
Chemistry Help Center: Student tutors (usually chemistry majors) are available for you to drop in and see for help as needed from 7:30 - 9:30 PM in Keyes 104 Monday through Thursday.

Instructor Office Hours: Prof. Conry will announce office hours weekly with different times each week to try to fit into your schedule at least some of the time. Prof. Rice has on open door policy during all ‘business’ hours, but invites students to make appointments using the Colby calendar system (see CH142B website for more details). During these times, you are invited to show up unannounced to ask CH141 and/or CH142 questions, etc. You are also welcome to see either course instructor. With such a large class, this is the best way for your instructor to get to know you—so please drop by, introduce yourself, and get your questions answered. We enjoy interacting with you on a more personal level than lecture allows. Please do not leave if you arrive to find another CH142 student there (which typically happens only right before an exam). We usually invite everyone in and alternate questions because students often have the same questions, plus there is usually something everyone to learn on each question. We typically have fewer office hours during non-exam weeks and as many as we can manage just before exams.

The only time it is inappropriate to have a group session is when one of us is having a personal discussion with a student, which you can discern from the position of the office door. If the door is completely open during office hours, come on in without knocking. If it is mostly or completely closed, a private conversation may be occurring, so please knock first and wait for “come in” before entering.

The most productive office visits are ones where you come with reasonably specific questions or problems to cover. Thus, “I need help with problem 5” or “could you explain oxidation numbers again” are most helpful. Identify questions on your lecture notes, chapter notes, and/or for homework (for instance, with a different colored pen or highlighter). We do not in any way look down upon you to return at a later time. You are invited to show up unannounced to ask CH141 and/or CH142 questions, etc.

You can take your chances at finding one of us in our office with available time at other times than announced office hours. Some of the time you may catch one of us in and available, but at other times we may not be in or may ask you to make an appointment to return at a later time. You can help by asking as you enter if that instructor has the amount of time you think you will need at that time, or whether a later time should be arranged. This in no way implies that we don’t care to help you, only that you have come at a bad time (very busy with other classes and obligations, or when a time commitment is imminent).

It is also very efficient to send an e-mail message asking to set up an appointment with your instructor. Please include in this message your open times for the next few days and an estimate of the amount of time needed to find a mutually agreeable time to meet as soon as is possible. The only time we do not make individual appointments is the last couple of days before an exam. However, during those days we always schedule as many office hours as we can fit into our schedules and those office hours are open to everyone in the class, including you.

Phone Calls/Electronic Mail: We try our best to respond to these timely, however, sometimes we can be slow in answering messages when we get busy or are out of town (we apologize in advance for this). We do not frequently check office phones for messages but do check e-mail more regularly unless we are away. However, we do not recommend asking serious chemistry questions by phone or e-mail anyway, as we can better help you with chemistry problems in person. In addition, we don’t recommend using these media for last-minute exam questions because we cannot guarantee that we will be able to respond in time. Instead, plan to come see one of us with questions during office hours or bring them to your question and answer session or to the Chemistry Help Center.
Tutors: We are very glad that we have provided you with so many opportunities to get help for this course (instructor office hours, instructor question and answer sessions, plus the student-staffed help center). However, if you have used these opportunities extensively and still feel that you could benefit from a tutor for this class, contact Lisa Miller (lisa.miller@colby.edu or x5752) as early in the term as you are able.

Lecture: We will do the best we can with these 2.5 hours a week. In lecture your instructor’s role is perhaps best described as tour guide or coach. We will discuss the important material from each chapter, illustrate representative problem solutions, and give you hints. Since there is a serious time limit, we cannot do every possible kind of problem and cannot always make everything crystal clear to each of you, or teach you everything you need to know in lecture alone. In other words, you have to do more than just come to lecture to understand this material! Learning a new subject is just like learning to play a musical instrument or an unfamiliar sport. It involves not only watching/learning from someone that knows how to play, but it also involves a lot of practicing on your own (in this case textbook reading, homework, lab, etc.).

In addition, to get the most out of lecture, for most people it is best to read or at least skim the upcoming material before the lecture on it (the second time you are exposed to a subject always makes more sense than the first). Please also use the available extra help (described above) as you need it: question and answer sessions before exams, the Chemistry Help Center, and the instructor’s office hours. In all of these we will be better able to help you understand material that you do not quite get in lecture (after all, one lecture cannot always fit all, especially in larger classes where students have very different backgrounds) and/or during your studying. Please feel free to ask relevant questions in class as well.

The Colby Chemistry Department has a formal attendance policy at the following Web address: http://www.colby.edu/chem/about/chemistry-attendance-and-exam-policy/

Your Professors are Human! We don’t always think of all possible interpretations for what we say and we do inadvertently make mistakes. If one of us offends you in any way, please be assured that this was not intentional. However, if that occurs, please let that individual know in person, or by note (anonymous if you prefer) to avoid doing it again. We will not necessarily know a comment is hurtful to you unless you tell us.

Slides: Any useful slides used in class that are not from your textbook will be put on your course Web site to refer back to later if you choose.

Chemical Trivia: For fun, we may include some "Chemical Trivia" in or before lecture. You will not be tested on this material. These little snapshots are included for a little variety and to show some cool and/or relevant aspects of chemistry that otherwise wouldn't be covered in the class. Suggested topics are welcome.

Laboratory: The best way to view the laboratory is a separate course from the class, where you have a chance to see some of the concepts in action—sometimes before they are covered in lecture and sometimes afterwards (either way, the second time should be clearer!). Further laboratory information, including the syllabus, is provided to you via the CH142A Web page as well as during the lab periods.

Further Study Suggestions: To succeed in this course you should work through lots of problems without looking at the answer key including practice “pencil and paper” problems (not just Sapling Learning ones) given that the exams are completed that way. Also look for suggested study strategies on the CH142A site.

Your instructors for this course have been and will be expending an incredible amount of time and effort to make this class as enjoyable and educational as they reasonably can make it. They wish you the best!