

CHEMISTRY 1492

Introduction to Chemistry Lab

Summer 2016

I. General Information

Instructor: Clarissa Sorensen-Unruh, M.S. Section: 103 (7:30-11:15am R in L208)
Office Hours*: 11:15am-12:30pm (TR), 8:30-9:45am (M)
Office Number: Main Campus, JS 312B Phone #: 505-224-4000 (ext. 50078)
Email: csorensen@cnm.edu Website: <http://learn.cnm.edu>
Twitter Handle: @RissaChem YouTube Channel: <https://www.youtube.com/user/csoren1>

*Office hours are subject to change. Other office hours may be scheduled by appointment.

II. Course Description

Meeting for one four-hour period each week, students perform experiments and complete lab reports complementing the material covered in Introductory Chemistry (Chem 1410). The laboratory allows students to develop basic chemical laboratory methods and practices that can be applied to various laboratory situations in many scientific disciplines. Chem 1492 requires concurrent enrollment in Chem 1410 (or previous completion of Chem 1410). If a student does not meet the corequisite for this course, he or she may be dropped from the class at any time during the term.

III. Textbooks/Materials

The following are required materials:

- **Exploring Chemistry: Chemistry 1492 Lab Manual**
- Students are also required to purchase **splash goggles** from the CNM Bookstore or other local supplier. ("Safety spectacles" are not sufficient protection. If in doubt, ask instructor.)
- **Access to CNM email:** Important class announcements and learning materials will be made to your CNM email and you should check it at least 2-3 times a week.
- **A scientific calculator** is required for this course as well. Inexpensive models may be purchased at stores such as Wal-Mart, K-Mart, Target, OfficeMax, Staples, etc. Two-line displays, such as those found in the series TI 30X II, tend to work best.

IV. Student Learning Outcomes

Students will:

1. employ laboratory skills, including proper safety and emergency procedures.
2. identify the capabilities and limitations of measurements.
3. examine and perform a variety of chemical reactions and the equations used to describe them.
4. collect and process numerical data.
5. interpret experimental results and draw conclusions from them.

V. Course Requirements/Attendance

Compliance with Safety Agreement: Students are required to comply with CNM's Safety Policy, including the wearing of safety goggles at all times in the laboratory required by the instructor and limiting unnecessary skin exposure to chemical contact (i. e., no shorts or sandals at any time). All students must view the Safety Video during the first lab period. Any student who is not present for the video during the

first laboratory period must make arrangements with their instructor to view the video prior to working in the laboratory. Children and other visitors are not allowed in the laboratory due to possible hazardous conditions. **Failure to comply** with the conditions of the safety agreement may result in a grade of zero for the lab session or the student being dropped from CHEM 1492. **Please be on time for lab. Important safety information is presented during the pre-lab session. Students who arrive late may not be allowed to work in the lab during that lab period.**

Dress Code: All CNM student, faculty, and staff are required to be properly clothed at all times while working in or attending chemistry lab classes. Clothing must cover the body from the shoulders to the feet with no exposed skin showing. Approved safety goggles will be worn by all personnel in the lab while chemicals or glassware are in use in the laboratory. High heeled shoes, sandals and other open-toed footwear are not acceptable for foot protection. Wearing of short shorts, short skirts, short shirts, exposed midriffs, and tank top shirts are not allowed (shirts and tops must cover the torso). Lab coats that extend below the knees can be substituted as appropriate clothing, but they must be buttoned in front. Long hair will be confined. Students wearing inappropriate clothing will be directed to leave the laboratory and obtain safety appropriate attire.

Attendance: According to CNM regulations, students enrolled for credit or audit are expected to attend all class sessions. **Students who miss the equivalent of 15% of contact time may be dropped from the course by the instructor.** Students must keep in mind, however, that it is ultimately their responsibility to withdraw from the course. Absences from class do not relieve students from responsibility for missed assignments, material covered in class or exams.

PreLab Assignments: The student is responsible for reading the assigned laboratory experiments entirely, paying particular attention to the procedure and safety precautions. The student must complete the prelab assignment found at the end of most experiments in the lab manual. Material from the prelab assignment will be covered in the regular quizzes.

Prelab Lecture: At the beginning of each lab, the instructor will clarify any changes in the procedure, highlight safety precautions that must be followed, and answer questions. **You will not be allowed to do the experiment without attending the prelab session.**

Quizzes: Quizzes will be given mostly as take home quizzes. You will be allowed one week to complete the take home quiz. Please bring a scientific calculator to each class. Please be on time for each prelab session. The lowest quiz score will be dropped. **Quizzes comprise 35% of the final lab grade.**

Report Sheet: During lab, the student will make observations and collect data. The report sheet will be filled out in class, and calculations and questions will be completed by the following week, and handed in at the beginning of the next week's lab session. No late papers are accepted. One lowest report grade will be dropped. **Data tables comprise 35% of the final lab grade.**

Final Exam: It is a Math, Science & Engineering Division policy that all courses have final evaluations. The final exam, will be given during the 11th week, during the normally scheduled lab time. *(Note: In the event CNM closes during finals week, final grades for students will be calculated on the work assessed up to that point.)* A review sheet will be available to assist the student in preparing for the lab final. It will be available in class one week prior to the exam. **The final comprises 30% of the final lab grade.**

VI. Grading

The course grade will be determined from the following:

Report Sheets: 35%

Quizzes: 35%

Final Exam: 30%

Grades assigned as follows:

100-90%=A

89.9-80%=B

79.9-70%=C

69.9-60%=D

below 60%=F

VII. Additional Items

Classroom Disruption by Electronic Devices: In CNM classrooms and laboratories, all cellular telephones and pagers must be turned off or switched to silent or vibrator mode. Electronic entertainment devices are to be turned off and headphones removed.

PaperCut: PaperCut is an element of the sustainability effort at CNM. Its purpose is to reduce paper usage. Each student has an online account with an allotment of 150 free printer pages per term. If this allotment runs out, additional pages may be purchased by the student. For more information, go to the PaperCut website: <http://cnm.edu/papercut>.

Compliance with Honor Code: I understand that any work which I submit for course credit will imply that I have adhered to this Academic Honor Code: I will neither give nor receive unauthorized aid nor will I tolerate an environment which condones the use of unauthorized aid.

The following will constitute violations of the honor code for Chemistry 1492 at CNM.

1. The use of any unauthorized aid (notes, tables, neighbors, etc.) during any examination or quiz. Only your instructor can authorize any aid.
2. The representation of any work done in consultation with another student, faculty member or any other person as solely one's own work. This does not preclude the pooling of data or other work in assigned laboratory or lecture groups as assigned by the instructor.
3. Bringing completed laboratory reports or data tables from prior semesters to laboratory for either submission or for reference.
4. Submission of assignments from prior semesters in place of current assignments.
5. Submission of a laboratory data table containing data for experiments not completed.
6. Plagiarism in any form in either lecture or laboratory assignments.

Students committing these offenses are subject to penalty ranging from a "0" on the assignment or test, to an "F" for the course. (CNM Catalog)

Accessibility: If you are having difficulties, consider contacting the connect center at your campus. The Connect Center offers access to Achievement Coaches, Study Rooms and Study Space, a Computer Lab and general student support. You can call 505-224-3186 with any questions. If you have a physical, psychological or medical condition that may affect your performance in the class, please consider enrolling with Disability Resource Center as soon as possible. They can provide a quiet place to take the tests, additional time, as well as the possibility of a note-taker and additional services, if there is a medically documented need. For more info, go to <http://www.cnm.edu/depts/disability-resource-center>.

VIII. Chemistry 1492 – Laboratory Schedule Summer 2016

Week	Dates	Experiment(s)
1	5/16-5/21	<i>Lab Safety, Math Skills Using Physical and Chemical Properties(instructor demos)</i>
2	5/23-5/28	<i>Check In, Making Measurements Using Physical and Chemical Properties(student portion)</i>
3	5/31-6/4	<i>Preparation of Elements from Compounds & Observing Atomic Line Spectra</i>
4	6/6-6/11	<i>Identifying Ionic Compounds in Solution Naming Compounds (through ionic compounds)</i>
5	6/13-6/18	<i>Identifying Cations in a Mixture Naming Compounds (covalent compounds and acids)</i>
6	6/20-6/25	<i>Chemical Reactions</i>
7	6/27-7/2	<i>The Mole in Chemical Formulas, Lewis Structures and Molecular Models</i>
8	7/5-7/9	<i>Preparation of Rochelle Salt: Synthesis of a Compound and Stoichiometric Calculations</i>
9	7/11-7/16	<i>Organic Models and Nomenclature Organic Demos</i>
10	7/18-7/23	<i>Acids and Bases Review for Final Exam</i>
11	7/25-7/30	Final Exam (during regular lab period)
12	8/1-8/6	<i>Enzymatic Decomposition and Analysis of H₂O₂</i>

Note: The last day to drop without a grade of F or to change your grading option (letter grade, CR/NC, Audit) is **July 15th**. If you have any questions, please discuss them with lab instructor and/or your advisor. **Some changes may occur in the schedule as we proceed through the course. Changes will be announced in class and through email with Office 365 (through CNM Learn).**