



## Syllabus for Chem 2 – Introduction to Chemistry

### Course Information

- Semester & Year: F2023
- Course ID & Section #: Chem 2 - E5706
- Instructor's name: Sartori
- Day/Time of required meetings: MWTh - 11:40am-12:55pm and T 10:00am - 1:10pm
- Location: SC 106
- Course units: 5 units (4 lecture and 1 lab)

### Instructor Contact Information

- Office location: HU 108I or SC 106
- Office hours: MWTh By Appointment: 11:00am - 11:30am, 2:30pm - 3:00pm, 5:00pm - 5:30pm
- Phone number: 707-476-4231
- Email address: [tony-sartori@redwoods.edu](mailto:tony-sartori@redwoods.edu)
- Canvas inbox: This is the best way to contact me.

### Catalog Description

- An introduction to basic chemical principles. Serves as a beginning course for allied science students, including nursing, and as general education. Students learn to classify matter and to describe physical and chemical phenomena such as atomic structure, compounds, energy, solutions, acids and bases, nuclear chemistry, and organic chemistry, both qualitatively and quantitatively, at an introductory level. Includes a coordinated lab experience

### Course Student Learning Outcomes

1. Analyze the fundamental features of chemistry including measurement, mathematical conversion of measured physical properties such as mass, volume, density, pressure, temperature, solutions, concentrations and dilutions.
2. Demonstrate knowledge of the qualitative features of chemistry including physical and chemical properties, naming and writing chemical formulas of compounds and evaluating chemical reactions.
3. Differentiate typical acid and base formulas and compare/contrast the behavior associated with acids and bases.
4. Analyze chemical reactions to quantitatively determine theoretical yield.

### Prerequisite

- Elementary Algebra

### Accessibility

College of the Redwoods is committed to making reasonable accommodations for qualified students with disabilities. If you have a disability or believe you might benefit from disability-related services

and accommodations, please contact your instructor or [Disability Services and Programs for Students](#) (DSPS). Students may make requests for alternative media by contacting DSPS based on their campus location:

- Eureka: 707-476-4280, student services building, 1<sup>st</sup> floor
- Del Norte: 707-465-2324, main building near library
- Klamath-Trinity: 530-625-4821 Ext 103

If you are taking online classes DSPS will email approved accommodations for distance education classes to your instructor. In the case of face-to-face instruction, please present your written accommodation request to your instructor at least one week before the needed accommodation so that necessary arrangements can be made. Last-minute arrangements or post-test adjustments usually cannot be accommodated.

## Student Support

- Good information and clear communication about your needs will help you be successful. Please let your instructor know about any specific challenges or technology limitations that might affect your participation in class. College of the Redwoods wants every student to be successful

## Attendance and Wait List

- Students not attending the first two days of class will be dropped unless there is prior agreement with the instructor.
- Students who do not attend the first two days of class will not be added.
- If there is room, wait-listed students will be added in order of position on the wait list.

## Evaluation & Grading Policy

- **Course Grading:** Let the instructor know, in advance, if possible, if you cannot take a scheduled exam so that other arrangements may be made. Late materials are not generally accepted. Graded materials normally will be returned two weeks after submission.

Exams	50%
Final	20%
Quizzes	10%
<u>Lab Assignments</u>	<u>20%</u>
Total	100%

- **Lab Assignments:**
  - Worth 20% of the overall grade.
  - Submissions must be neat and organized. Ask me if you're not sure if you're neat and I'll let you know.
  - Show your work:
    - When calculations are required so that it is easy to follow, the correct answer without the work is zero points. Also, include brief explanations for answers that do not require calculations. This behavior will be modeled in lectures.
    - Use units in calculations and labels when appropriate, also modeled in lectures.
  - Late assignments are not accepted.
  - Due dates are listed with the lab in Canvas. The available date is about one week prior to the due date.

- The lowest lab assignment will be dropped.
- **Quizzes:**
  - Worth 10% of the overall grade.
  - About one quiz per module.
  - Multiple-choice.
  - Unlimited attempt until due date (listed in Canvas).
  - Highest score is kept.
  - No late quizzes accepted for any reason.
  - Lowest quiz is dropped.
- **Homework**
  - Worth 0% of the overall grade as it is NOT SUBMITTED (or 70%, depending on how you look at it as described below).
  - Doing homework is the best way to prepare for exams.
  - Listed in each module along with the key.
  - Try this:
    - Try problems, writing out solution.
    - Compare your **WRITTEN** solution to answer key.
    - Improve by repeating these and trying other problems in the book.
    - You are ready for the exam when you can do problems like those in the homework with your index card and calculator.
- **Exams:**
  - Regular exams:
    - There will be four regular exams, three modules per exam.
    - Each exam is worth 12.5% of the overall grade.
    - No exams are dropped.
    - Make-up exams can be taken for a limited time with an acceptable reason (e.g. death in family, injury, possibly contagious with a virus, etc.). Contact the instructor as soon as you can, given the emergency.
    - Regular exams are short answer questions that may require definitions, descriptions, lists, and/or calculations.
    - Periodic Table provided.
    - Students are allowed one side of a 3"x 5" card of hand-written notes for each exam, which is submitted with the exam.
    - Lecture problems and the homework keys demonstrate the type of work that is to be submitted for exams.
  - Final Exam
    - Cumulative, worth 20% of the overall grade.
    - Multiple-choice, 55 questions, modeled after the module quizzes.
    - Periodic Table provided.
    - Students allowed to use one side of an 8.5" x 11" sheet of paper.
    - No make-up.
    - The final module will have previous quizzes for practice.
- **Grading:** Feedback on assignments submitted on time will normally be within two weeks of submission. Exams are returned to students to examine but must be returned to the instructor.

- **Grades:** Grades will be earned based on the following total percentages, using rules of rounding to round to the one's place:

A	93-100%	B+	87-89%	C+	77-79%	D	60-69%
A-	90-92%	B	83-86%	C	70-76%	F	0-59%
		B-	80-82%				

## **DSPS Accommodations**

- Submit the proper documents to the instructor.
- Schedule exam at the testing center for extended time and/or quiet room for the date of the exam as I cannot give extended time in class.
- Remind the instructor two days before the exam about the accommodation. This can be done email through inbox in canvas.

## **Academic dishonesty**

- In the academic community, the high value placed on truth implies a corresponding intolerance of scholastic dishonesty. In cases involving academic dishonesty, determination of the grade and of the student's status in the course is left primarily to the discretion of the faculty member. In such cases, where the instructor determines that a student has demonstrated academic dishonesty, the student may receive a failing grade for the assignment and/or exam and may be reported to the Chief Student Services Officer or designee. The Student Code of Conduct ([AP 5500](#)) is available on the College of the Redwoods website. Additional information about the rights and responsibilities of students, Board policies, and administrative procedures is in the [College Catalog](#) and on the [College of the Redwoods website](#).
- Most of the materials in Canvas are my intellectual property. Posting any of the materials on the internet is prohibited.

## **Disruptive behavior**

- Student behavior or speech that disrupts the instructional setting will not be tolerated. Disruptive conduct may include but is not limited to unwarranted interruptions; failure to adhere to instructor's directions; vulgar or obscene language; slurs or other forms of intimidation; and physically or verbally abusive behavior. In such cases where the instructor determines that a student has disrupted the educational process, a disruptive student may be temporarily removed from class. In addition, the student may be reported to the Chief Student Services Officer or designee. The Student Code of Conduct ([AP 5500](#)) is available on the College of the Redwoods website. Additional information about the rights and responsibilities of students, Board policies, and administrative procedures is in the [College Catalog](#) and on the [College of the Redwoods website](#).

## Inclusive Language in the Classroom

- College of the Redwoods aspires to create a learning environment in which all people feel comfortable in contributing their perspectives to classroom discussions. It therefore encourages instructors and students to use language that is inclusive and respectful.

## Setting Your Preferred Name in Canvas

- Students have the ability to have an alternate first name and pronouns to appear in Canvas. Contact [Admissions & Records](#)
- To request a change to your preferred first name and pronoun. Your Preferred Name will only be listed in Canvas. This does not change your legal name in our records. See the [Student Information Update form](#).

## Canvas Information

- Canvas is used to post content for this class. It is broken into twelve modules and a Resources Module. The dues dates can be found at the bottom of windows in each module. Students are expected to keep up with the modules as they are published.
- Log into Canvas at <https://redwoods.instructure.com>
- Password is your 8-digit birth date
- For tech help, email [its@redwoods.edu](mailto:its@redwoods.edu) or call 707-476-4160
- Canvas Help for students: <https://webapps.redwoods.edu/tutorial/>
- Canvas online orientation workshop: [Canvas Student Orientation Course \(instructure.com\)](#)

## Community College Student Health and Wellness

- Resources, tools, and training regarding health, mental health, wellness, basic needs and more designed for California community college students, faculty and staff are available on the California Community Colleges [Health & Wellness website](#).
- [Wellness Central](#) is a free online health and wellness resource that is available 24/7 in your space at your pace.
- Students seeking to request a counseling appointment for academic advising or general counseling can email [counseling@redwoods.edu](mailto:counseling@redwoods.edu).

## Emergency procedures / Everbridge

- College of the Redwoods has implemented an emergency alert system called Everbridge. In the event of an emergency on campus you will receive an alert through your personal email and/or phones. Registration is not necessary in order to receive emergency alerts. Check to make sure your contact information is up to date by logging into WebAdvisor <https://webadvisor.redwoods.edu> and selecting 'Students' then 'Academic Profile' then 'Current Information Update.'
- Please contact Public Safety at 707-476-4112 or [security@redwoods.edu](mailto:security@redwoods.edu) if you have any questions. For more information see the [Redwoods Public Safety Page](#).

- In an emergency that requires an evacuation of the building anywhere in the District:
  - Be aware of all marked exits from your area and building
  - Once outside, move to the nearest evacuation point outside your building
  - Keep streets and walkways clear for emergency vehicles and personnel
- Do not leave campus, unless it has been deemed safe by the campus authorities.

## **Del Norte Campus Emergency Procedures**

- Please review the [Crescent City campus emergency map](#) for campus evacuation sites, including the closest site to this classroom (posted by the exit of each room). For more information, see the [Redwoods Public Safety Page](#).

## **Eureka Campus Emergency Procedures**

- Please review the [campus emergency map](#) for evacuation sites, including the closest site to this classroom (posted by the exit of each room). For more information on Public Safety go to the [Redwoods Public Safety Page](#). It is the responsibility of College of the Redwoods to protect life and property from the effects of emergencies within its own jurisdiction.
- In the event of an emergency:
  1. Evaluate the impact the emergency has on your activity/operation and take appropriate action.
  2. Dial 911, to notify local agency support such as law enforcement or fire services.
  3. Notify Public Safety 707-476-4111 and inform them of the situation, with as much relevant information as possible.
  4. Public Safety shall relay threat information, warnings, and alerts through the Everbridge emergency alert system, public address system, and when possible, updates on the college website, to ensure the school community is notified.
  5. Follow established procedures for the specific emergency as outlined in the College of the Redwoods Emergency Procedure Booklet, (evacuation to a safe zone, shelter in place, lockdown, assist others, if possible, cooperate with First Responders, etc.).
  6. If safe to do so, notify key administrators, departments, and personnel.
  7. Do not leave campus, unless it is necessary to preserve life and/or has been deemed safe by the person in command.

## **Klamath Trinity Campus Emergency Procedures**

- Please review the responsibilities of, and procedures used by, the College of the Redwoods, Klamath-Trinity Instructional Site (KTIS) to communicate with faculty, staff, students and the general public during an emergency. It is the responsibility of College of the Redwoods, Klamath-Trinity Instructional Site (KTIS) to protect life and property from the effects of emergency situations within its own jurisdiction.
  1. In the event of an emergency, communication shall be the responsibility of the district employees on scene.
    - a. Dial 911, to notify local agency support such as law enforcement or fire services.
    - b. If safe to do so, notify key administrators, departments, and personnel.
    - c. If safe to do so, personnel shall relay threat information, warnings, to ensure the school community is notified.
    - d. Contact 530-625-4821 to notify of the situation.

- e. Contact Hoopa Tribal Education Administration office 530-625-4413
- f. Notify Public Safety 707-476-4111.
- 2. In the event of an emergency, the responsible district employee on scene will:
  - a. Follow established procedures for the specific emergency as outlined in the College of the Redwoods Emergency Procedure Booklet.
  - b. Lock all doors and turn off lights if in lockdown due to an active shooter or similar emergency.
  - c. Close all window curtains.
  - d. Get all inside to safe location Kitchen area is best internal location.
  - e. If a police officer or higher official arrives, they will assume command.
  - f. Wait until notice of all is clear before unlocking doors.
  - g. If safe to do so, move to the nearest evacuation point outside the building (Pooky's Park), directly behind the Hoopa Tribal Education Building.
  - h. Do not leave the site, unless it has been deemed safe by the person in command. Student Support Services (required for online classes)

## Student Support Services

- The following online resources are available to support your success as a student:
  - [CR-Online](#) (Comprehensive information for online students)
  - [Library Articles & Databases](#)
  - [Canvas help and tutorials](#)
  - [Online Student Handbook](#)
- [Counseling](#) offers assistance to students in need of professional counseling services such as crisis counseling.
- Learning Resource Center includes the following resources for students
  - [Academic Support Center](#) for instructional support, tutoring, learning resources, and proctored exams. Includes the Math Lab & Drop-in Writing Center
  - [Library Services](#) to promote information literacy and provide organized information resources.
  - [Multicultural & Diversity Center](#)
- Special programs are also available for eligible students include
  - [Extended Opportunity Programs & Services \(EOPS\)](#) provides services to eligible income disadvantaged students including textbook award, career academic and personal counseling, school supplies, transportation assistance, tutoring, laptop, calculator and textbook loans, priority registration, graduation cap and gown, workshops, and more!
  - The TRiO Student Success Program provides eligible students with a variety of services including trips to 4-year universities, career assessments, and peer mentoring. Students can apply for the program in [Eureka](#) or in [Del Norte](#)
  - The [Veteran's Resource Center](#) supports and facilitates academic success for Active-Duty Military, Veterans and Dependents attending CR through relational advising, mentorship, transitional assistance, and coordination of military and Veteran-specific resources.
  - Klamath-Trinity students can contact the CR KT Office for specific information about student support services at 530-625-4821

## Academic Support Information

- Academic support is available at [Counseling and Advising](#) and includes academic advising and educational planning, [Academic Support Center](#) for tutoring and proctored tests, and [Extended Opportunity Programs & Services](#), for eligible students, with advising, assistance, tutoring, and more.

## Behavior

- Students are expected to adhere to the Administrative Procedures (AP) and Board Policies (BP) and should familiarize themselves with AP 5530 (Student Conduct Code and Disciplinary Procedure), AP 5550 (Students Rights and Grievances), BP 5530 (Standards of Conduct), and BP (Student Complaints). These procedures and policies can be found on the CR website.
- These are my policies:
  - Disruptive students will be asked to cease the disruption. Noncompliance will be followed by immediate dismissal from class. The student is then required to contact the instructor outside of class, subject to instructor availability, before returning to class.
  - Missed exams and quizzes without an excuse will result in a zero for that exam or quiz respectively. At the instructor's discretion, a written excuse from a doctor or other authority may be required. This includes exams missed due to removal from class due to disruptive behavior.
  - Students found cheating, directly or indirectly, will earn a zero for that assignment or exam. This is a subjective call, based on my years of experience.

## Required Materials

- Textbook title: Fundamentals of General, Organic, and Biological Chemistry
  - Edition: 8<sup>th</sup>
  - Author: McMurry
  - ISBN: 8<sup>th</sup>: 9780134015187
  - E-text Subscription: <https://www.pearson.com/en-us/subject-catalog/p/fundamentals-of-general-organic-and-biological-chemistry/P200000006840/9780135213759>
- Other options for the text:
  - Check out 3<sup>rd</sup> or 4<sup>th</sup> edition from EOPS for the semester (for EOPS students).
  - Check out 3<sup>rd</sup> or 4<sup>th</sup> edition from the library reserves for the semester.
  - Purchase any edition from a used book source (abebooks, amazon, betterworldbooks, etc).
    - 3<sup>rd</sup> Edition: ISBN-10, 0130418420; ISBN-13, 9780130418425
    - 4<sup>th</sup> Edition: ISBN-10, 0131486845; ISBN-13, 9780131486843
    - 5<sup>th</sup> Edition: ISBN-10, 0131877488; ISBN-13, 978-0131877481
    - 6<sup>th</sup> Edition: ISBN-10, 0136054501; ISBN-13, 978-0136054504
    - 7<sup>th</sup> Edition: ISBN-10, 0321776127; ISBN-13, 978-0321776129
  - Last option: use the "cliff notes" version at [https://chem.libretexts.org/Bookshelves/Introductory\\_Chemistry/Map%3A\\_Fundamentals\\_of\\_General\\_Organic\\_and\\_Biological\\_Chemistry\\_\(McMurry\\_et\\_al.\)](https://chem.libretexts.org/Bookshelves/Introductory_Chemistry/Map%3A_Fundamentals_of_General_Organic_and_Biological_Chemistry_(McMurry_et_al.))
- Scientific Calculator (cannot be a smart device). The TI-30XIIS is preferred as that is the one I will use in class.

## Course Content:

- Law, theory, and hypothesis.



- Modeling of natural phenomena.
- Element, compound, pure substance and mixture.
- Measurements and uncertainty.
- Atomistic and compound models of matter.
- Periodic Table.
- Physical and chemical properties.
- Electron configurations.
- Ions.
- Atomic Weight and molar mass.
- Electron-dot structures and Lewis Structures.
- Molecular geometry and polarity.
- Stoichiometry and chemical equations.
- Energy, heat, and temperature.
- Elementary thermodynamics.
- States and Changes of State.
- Kinetic-molecular theory of matter.
- Ideal gas law.
- Acid, Bases, and Salts.
- Solutions and Aqueous systems.
- Nomenclature.

### **Additional Information**

- **Lecture:** Lectures will focus on chapter materials in the order presented in the book. Students are expected to have read the chapter before lecture. Main points will be summarized and details discussed. Expect to spend a significant amount of time working through Chapter Problems during lecture. PowerPoint slides, although not required, will be made available through the LMS and can be examined before lecture.
- **Laboratory:** Lab activities are designed to reinforce or add to materials learned in lecture. Prepare for lab by reading relevant materials. You will need to purchase materials for the lab, as listed below.
- **Lab Safety:** The lab activities are designed to minimize dangers of performing lab activities. However, it cannot be designed to eliminate them. Therefore, it is the responsibility of each student to follow all safety protocols relevant to the lab.
- **Instructor Drop:** Students that miss more than one exam or who do not submit more than three lab assignments may be dropped from the course by the instructor before the withdrawal deadline. Extenuating circumstances will be considered but the instructor has the authority to make the final decision.

### **Necessary Computer Skills**

- Online courses require adequate computer skills. You must be able to:
  - navigate the course Learning Management System (Canvas)
  - receive and respond to your CR email (this means you need to CHECK your CR email!)
  - It is your responsibility to meet the technological demands of the course, which may often include troubleshooting technological adventures.

## Contact Information

- If you have a question or concern, please get ahold of me. I am very available to help you, as long as you are polite and respectful. Here are some guidelines to follow:
  - Post questions for other students in discussions.
  - Is your message private? Please send me a message in Canvas, using the messaging tool (just click on INBOX button in the left toolbar). You are also welcome to email me (tony-sartori@redwoods.edu), but I get a lot of emails, and I don't want your message to get lost. If you do email me, always include "CHEM-2" in your subject line.
  - Remember, email is not a good way to have a conversation about complex issues, but it can be done. For problems, it helps if you attach a photo of your work, line by line, with each line numbered. That way I can easily say line two is OK but three should be....
  - Regardless of how you reach out, if you don't hear back from me within 48 hours of sending your message, you can assume I did not receive it...so please resend.
  - Finally, always be polite. In an online environment, this is called Netiquette. Just be respectful to your classmates and be considerate and forgiving in all of your posts in the discussion forums. Adhere to the same standards of behavior online that you should follow in real life.
  - Note: I reserve the right to establish additional policies, as I deem necessary to provide you with the best learning environment possible.

## Course Updates/Announcements/Emails/Inbox

- I expect students to check their CR email, their inbox, and announcements for course information, Monday through Thursday.

## Course delivery:

Lecture and labs are 100% in-person.

The Canvas course is organized into modules. There are different types of modules, as listed below:

- Resources
- Module 1 – Matter
- Module 2 – Measurements
- Module 3 – Atoms and the Periodic Table
- Exam 1
- Module 4 – Ionic Compounds
- Module 5 – Molecular Compounds
- Module 6 – Chemical Reactions – Classification and Stoichiometry
- Exam 2
- Module 7 – Chemical Reactions – Energy, Rates, Equilibrium
- Module 8 – Gases, Liquids, Solids
- Module 9 – Solutions
- Exam 3
- Module 10 – Acids and Bases
- Module 11 – Nuclear Chemistry
- Module 12 – Organic Chemistry
- Exam 4
- Final Exam

Modules 1 - 12 are “chapter” modules, usually divided into three categories:

- Lectures Videos, Powerpoint Presentations, and notes from lecture (recordings from 2021, ppt from publisher, lectures from class)
  - Lecture videos are from 2021 and are like class lectures. These are not equivalent to class lectures.
  - The 3<sup>rd</sup> and 4<sup>th</sup> edition ppt have fewer slides.
  - The notes will be pdf files of the Smart Board notes from in-class lecture.
  - If possible, zoom recordings of lectures will be available.
- Homework, Discussion, Quiz (quizzes have graded work).
  - Homework is used to prepare for the exams but is not submitted for grading.
  - Discussion is for students to post questions about the material. Students are encouraged to reply and add images of work. Be kind and courteous in using discussions. The instructor will not be participating.
  - Quiz is multiple-choice.
- Lab
  - Usually a document that has background information.
  - May include videos.
  - Includes an assignment with a due date.

#### Exam Modules

- Study guide.
- Practice exam.
- Discussion for students to post answers and comments.
- Answers are not provided by the instructor to promote discussion between students.

#### Final Exam Module

- Practice quizzes from the semester.

### **Course Attendance:**

- Lecture and labs are 100% in-person.
- Attendance is required to perform labs, submit lab work, and to take exams.
- Students missing three labs, or more, or two exams will be dropped from the course.
- I expect students to attend all lectures.

### **Covid-19 Protocols**

- Students are encouraged to wear a mask when they are sick.
- Students must wear a mask to approach the instructor or keep six feet from the instructor.
- Doors will be kept open or ajar, depending on the temperature, to improve air circulation.
- Down draft fans in the splash guard will be kept on.
- Do not attend class if sick (this is another acceptable excuse).

- Students are only allowed to use the hallway door to enter and to exit the class, unless there is an emergency (like a fire).
- Students exhibiting any symptoms of Covid-19 should not attend class and should seek testing (PE 103B).
- Should the instructor test positive for Covid-19, pre-recorded lectures in the modules will be used in lieu of in-person lectures, and online labs will be used in lieu of in-person labs. In-person class will resume when approved by the district.

### **California Higher Education Code Section 55002.5 Credit Hour Definition**

- (a) One credit hour of community college work (one unit of credit) shall require a minimum of 48 semester hours of total student work or 33 quarter hours of total student work, which may include inside and/or outside-of-class hours.
- This class requires 240 hours of work, or about 15 hours per week.

### **Caveat**

- The terms of this syllabus may be changed during the course at the discretion of the instructor.