

# Chemistry 192 - General Chemistry II

## Course Syllabus

### Spring 2025

#### 1. Instructors:

- Dr. David L. Freeman  
Phone: 874-5093  
Office: Beaupre 474 C  
e-mail:dfreeman@uri.edu  
Office Hours: MWF 11. If you are unable to make normal office hours, please let me know in person or by email so that we can make an appointment.
- Kendra Keenan  
Office: 470 Beaupre  
e-mail: kendrakeenan@uri.edu  
Office hour: By appointment

#### 2. Scheduling: Lecture MWF 9, 105 Beaupre

Recitation M 2, 215 Beaupre

Laboratory Tu 1-3:45, 165 Beaupre

#### 3. Text (lecture): *Chemistry: The Molecular Nature of Matter and Change* by Martin Silberberg and Patricia Amateis, Tenth Edition, McGraw Hill, 2024

#### 4. Prerequisites: CHM 101 and 102 or CHM 191, at least concurrent registration in MTH 141

#### 5. Course requirements:

- (a) Weekly quizzes (almost every Monday during recitation ).  
The lowest two numerical scores will be dropped in  
determining grades. 200

(b) Hour Exams:	
1) Wednesday, March 5	
( <i>No quiz on Monday, March 3</i> )	
and	
2) Wednesday, April 16	
( <i>No quiz on Monday, April 14</i> )	200
(c) Laboratory	150
(d) Final exam	
(Monday, May 5, 8:00 AM - 10:00 AM)	<u>200</u>
(e) Total	750

Grades are to be determined using a combination of an absolute scale and a curve. To pass CHM 192, at least 50% of the points must be earned. To obtain a C- or higher, at least 60% of the points must be earned. The remainder of the grades are determined using a curve. Based on past experience, the median grade tends to be a C. Incompletes are given only for valid medical reasons. A note from a medical professional is required to obtain an incomplete. If a quiz or exam is missed owing to illness, contact the instructor to arrange an accommodation. If a quiz or exam is canceled owing to weather or any other reason, the quiz or exam will be given during the lecture portion of the course on the next date the class meets.

Chemistry is a laboratory science, and the laboratory portion of this course is essential to mastering the subject. **For the laboratory portion of CHM 192, any student submitting 5 or fewer laboratory reports for grading will receive an F as their final course grade in CHM 192. Students submitting only 6 or 7 laboratory reports for grading will receive 0 points for the laboratory portion of the course. Keep in mind that the laboratory portion of the course represents 20% of the total possible points.**

## 6. Overview:

As you are all aware, CHM 192 is the second semester of the full year general chemistry course sequence. Most generally, this semester we seek to understand the physical principles that govern chemical reactions. Those principles include understanding the factors that govern how fast reactions occur, the nature of the equilibrium state, and the thermodynamic principles that govern the direction of spontaneous change. Special topics include the behavior of acids and bases, precipitation reactions and electrochemistry.

As in CHM 191 the course includes 3 lectures per week, 1 recitation section per week and 1 three-hour laboratory period per week. Success in CHM 192 requires that you attend and satisfy the requirements of all three aspects.

You will receive a separate syllabus for the laboratory portion of the course. The laboratory experiments are designed to illustrate the principles learned in the lecture/recitation parts of the course.

The lecture and recitation section portions of the course are closely coupled. The recitation section has two purposes. First, with a few exceptions, each recitation section will begin with a 15 minute quiz covering the material from the previous week. For those recitation periods having a quiz, after completing the quiz and reviewing the quiz solution, the remainder of the recitation section will be used to solve problems that illustrate the principles of the course.

Success in CHM 192 requires constant practice in solving problems. To help with such practice, problems sets are to be posted on Brightspace each week. The problem sets will not be collected and graded, but the problem sets are most helpful if they are treated as if they are to be collected and graded. After a portion of time solutions to the problems sets will also be posted. You are encouraged to try to solve the problems by yourselves before examining the solved problems. Keep in mind that it is far easier to understand a solution to a problem than it is to solve the problem on your own. You will need to solve the problems on your own when taking quizzes and exams.

#### 7. Web Access:

In this course all problem sets, problem set solutions, quiz solutions and exam solutions are to be posted on Brightspace. No paper copies of the problem sets are to be distributed.

8. Course outline:

<u>Topic</u>	<u>Book Chapter</u>
1. Review	3-5
2. Principles of Chemical Equilibrium	17
3. Acids and Bases	18, 19.1-19.3
4. Ionic Equilibria	19.4-19.5
5. Spontaneous Change: Entropy and Free Energy	20
7. Electrochemistry	21
8. Chemical Kinetics	16
9. Nuclear Chemistry (time permitting)	24
10. Final Exam	Comprehensive

9. URI Information

- (a) Viral Illness Precautions Statement - The University is committed to delivering its educational mission while protecting the health and safety of our community. Students who are experiencing symptoms of viral illness should NOT go to class/work. The Centers for Disease Control and Prevention (CDC) recommends that all people who are experiencing viral illness should stay home and away from others until symptoms improve and they are fever free (without medications) for 24 hours. They should take added precautions for the next 5 days.
- (b) Academic Honesty - Students are expected to be honest in all academic work. A student's name on any written work, quiz or exam shall be regarded as assurance that the work is the result of the student's own independent thought and study. Work should be stated in the student's own words, properly attributed to its source. Students have an obligation to know how to quote, paraphrase, summarize, cite and reference the work of others with integrity. [Faculty are encouraged to include details regarding course-specific expectations, including the use of generative AI tools.]
- (c) Excused Absences - Absences due to serious illness or traumatic loss, religious observances, military service, or participation in a university sanctioned event are

considered excused absences. Students are responsible for work missed during an excused absence but will not be penalized by grading or assignment/exam make-up policies. Students should notify faculty in advance of absences due to religious observance or university-sanction events, and as soon as possible for other absences See University Manual sections 8.51.11-8.51.16 for details.

- (d) Mental Health and Wellness - We understand that college comes with challenges and stress associated with your courses, job/family responsibilities and personal life. URI offers students a range of services to support your mental health and wellbeing, including the URI Counseling Center, TELUS Health Student Support App, the Wellness Resource Center, the Psychological Consultation Center, the URI Couple and Family Therapy Clinic, and Well-being Coaching.
- (e) Land Acknowledgement - The University of Rhode Island land acknowledgment is a statement written by members of the University community in close partnership with members of the Narragansett Tribe. The statement recognizes and pays tribute to the people who lived on and stewarded the land on which the University now resides. The statement seeks to show gratitude and respect to Indigenous people and cultures and build community with the Narragansett Nation and other Native American tribes. University of Rhode Island Land Acknowledgment The University of Rhode Island occupies the traditional stomping ground of the Narragansett Nation and the Niantic People. We honor and respect the enduring and continuing relationship between the Indigenous people and this land by teaching and learning more about their history and present-day communities, and by becoming stewards of the land we, too, inhabit.
- (f) Anti-Bias Syllabus Statement - We respect the rights and dignity of each individual and group. We reject prejudice and intolerance, and we work to understand differences. We believe that equity and inclusion are critical components for campus community members to thrive. If you are a target or a witness of a bias incident, you are encouraged to submit a report to the URI Bias Resource Team at [www.uri.edu/brt](http://www.uri.edu/brt). There you will also find people and resources to help.
- (g) Disability, Access, and Inclusion Statement - Your access in this course is important. Please send me your Disability, Access, and Inclusion (DAI) accommodation letter early in the semester so that we have adequate time to discuss and arrange your approved academic accommodations. If you have not yet established services through DAI, please contact them to engage in a confidential conversation about the process for requesting reasonable accommodations in the classroom. DAI can be reached by calling: 401-874-2098, visiting: [web.uri.edu/disability](http://web.uri.edu/disability), or emailing: [dai@etal.uri.edu](mailto:dai@etal.uri.edu).
- (h) Academic Enhancement Center (AEC) - All Academic Enhancement Center support services for Spring 2025 begin on January 27th and are offered at no added cost to undergraduate students. Visit [uri.edu/aec](http://uri.edu/aec) for more information about our programs described below. Appointments can be scheduled in TracCloud located

in Microsoft 365.

- (i) STEM & Business Tutoring Get peer tutoring for many 100 and 200 level STEM, Business, Nursing, and Engineering courses. Choose weekly or occasional sessions through TracCloud or visit the Drop-In Center in Carothers Library LL004.
- (j) Academic Skills Development Meet one-on-one with a peer academic coach to build habits and strategies around time management, goal setting, and studying. Contact Heather Price (hprice@uri.edu) for more information. Click here for more details. UCS 160 and UCS 161 are 1 credit courses designed to improve your academic skills and strategies. Consider enrolling in one of these courses! Contact David Hayes (davidhayes@uri.edu) with any questions or to schedule a professional staff academic consultation.
- (k) Undergraduate Writing Center Receive peer writing support at any stage of your writing process. Schedule in-person or online consultations through TracCloud or stop by Roosevelt Hall Room 20 -new location! Click here for more details.
- (l) Center for Career and Experiential Education - The Center for Career and Experiential Education (CCEE) supports undergraduate students with career preparation through one-on-one advising, 24-7 online resources, career education courses, and career events that prepare you for life after graduation and connect you with employers and community partners. Your Career Education Specialist (CES) is available to meet with you all year long, as early as your first-year, both in-person and virtually, to assist with exploring your career options, resume and cover letter writing, interview preparation, job and internship search, and more. We use Handshake to connect you to on and off campus jobs and internships and RhodyServes to connect you with volunteer opportunities in RI. Our team on the first floor of Roosevelt Hall can help you learn how to use Handshake effectively to find amazing opportunities. For more information or to meet with a CES, go to [uri.edu/career](http://uri.edu/career).
- (m) Rhody Outpost Basic Needs Pantry - Food insecurity affects up to 30% of college students. That means you might not have enough food to get through a day or week, you don't have money to purchase groceries or personal products, or you are primarily eating foods that don't provide a lot of nutrition because they're all you can afford. This can all impact your academic success. Rhody Outpost provides URI students who are food insecure with emergency food services and resources. The Outpost is housed at the Dining Services Warehouse at 10 Tootell Road, between Flagg Road and West Alumni Avenue. We are open every Monday and Wednesday from 3-5pm. Any student in need should fill out an intake form. If you have questions about food or housing insecurity, contact Barbara Sweeney, Coordinator of Food Security Outreach, at [barbara\\_sweeney@uri.edu](mailto:barbara_sweeney@uri.edu), or 401-874-5633. We want to help all students succeed and make URI a place with #NoRamHungry.