

# General Chemistry I

## CHEM 031 | Section F | CRN: 94782

**Instructor:** Amy Hoeltge, Ph.D.

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**Office:** Hills 011

**Lecture:** TR 1:15-2:30 Votey 105

**Office Hours:** MWF 10:00-12:00 *or by appointment*

**Exams:** W 6:40-9:40 Rowell N/A HLTH 103

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**Course Description:** This is the first semester of a two-semester course sequence. Topics include matter, stoichiometry, gas laws, thermochemistry, quantum theory, atomic structure, electronic configurations, bonding, and intermolecular forces.

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### Required Course Materials:

**Textbook:** Chemistry Structure and Properties ; 2<sup>nd</sup> Ed.; Tro, N.

Plus, Mastering Chemistry online access (ISBN: 978-0-13-429393-6)

*Three ways to obtain your textbook and Mastering Chemistry:*

- Online for approximately \$300; text and mastering
- UVM bookstore for approximately \$160; text, solutions manual, and mastering
- Digital access for approximately \$120; etext and mastering

**Lab Manual:** You will find all experiments as individual PDFs on your lab section's BB website. You are responsible for printing out each one and bringing it with you to lab.

**Lab Notebook:** A carbon-less copy notebook is required. You can find these in the UVM bookstore.

**Safety eyewear:** Everyone must wear OSHA approved safety glasses or goggles while in the lab. Students not observing this rule will receive a **zero** for the experiment, warnings will not be given. Safety eyewear can be purchased at the UVM bookstore or in Discovery's Stockroom.

**Calculator:** A non-programmable, non-graphing calculator to be used for exams in this course. You can find one at the UVM bookstore, or nearly anywhere, for about \$10.

**Exams:** Dates for each exam are listed on the lecture schedule. These three exams will be given on Wednesday evenings from 6:40-9:40. Only non-programmable, non-graphing calculators are permitted for these exams. You will not be allowed to use cell phones, laptops, tablets, or any programmable devices on exams. Students caught with any other electronic devices will receive a grade of **zero** for the exam.

Attendance at all examinations and labs is required. A grade of zero will be assigned to any student who misses an exam or lab except in the case of an excused absence. In the case of an excused absence **it is the student's responsibility to inform the instructor of the absence BEFORE it occurs** and make up work prior to that absence if at all possible.

The most important point in the preceding two paragraphs is that it is the student's responsibility to confer with the instructor prior to any anticipated absence. Failure to do so will result in the automatic assignment of a grade of zero to the lab or exam missed. There are some valid reasons for missing work, but not many. **There are no valid reasons for failing to notify the instructor.**

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**Review Sessions:** Review Sessions will be held on the week before each of the three exams. These sessions represent an opportunity for students to ask questions about homework and class topics in preparation for the exams. If you keep up with the course work on a daily basis you will be best prepared to benefit from these sessions. Attendance is optional but highly recommended for students having difficulty with the course.

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**Homework:** A long list of suggested practice problems can be found at the end of this syllabus, in the lecture schedule. These exercises will not be collected or graded. However, failure to attempt these problems will certainly not lead to a wildly successful experience in this course. You can check your answers by referring to the appendix of your textbook.

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**Online Quizzes:** There will be ten graded quizzes (best 10 out of 12) during the semester. These will occur once we finish a chapter and will be found online, in Mastering Chemistry.

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**Lab:** Students must attend the lab section for which they have enrolled. Attendance is mandatory and anyone missing more than two experiments will receive an **F** for the course.

Only the academic dean of your college may assign an incomplete. An unexcused absence will result in a **zero** for the laboratory experiment. Official documentation of sickness or a family emergency is required for an excused absence. In order to attend a lab section other than the one for which you have enrolled, you must furnish this documentation and obtain permission from me **a week in advance**.

Please arrive on time with your experiment PDF printed out, wearing close-toed shoes, safety eyewear, and your lab notebook. There is no eating or drinking allowed in the laboratory.

Prior to the beginning of the first lab, please visit the lab website on BB, view the safety presentation, and complete the safety quiz.

Prior to each lab session, you must watch the video that accompanies the experiment you will be performing. These videos are very helpful and demonstrate the procedure and proper use of the chemicals/equipment. You will find the lab videos here:

<https://www.youtube.com/channel/UC8r6fR2K-8xAtsf-a8edMg>.

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### Grading:

Exams*:	3 exams @ 125pts. ea.	375pts.	37.5%
Online Quizzes:	12 quizzes (top 10 counted) @ 12.5pts. ea.	125pts.	12.5%
Final Exam**:	comprehensive	250pts.	25%
Labs:	10 experiments	250pts.	25%
	Safety quiz @ 1pt		
	Pre-lab @ 3pts ea.		
	Reports @ 15pts ea.		
	Quizzes @ 8pts ea.		
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Total Course		1,000pts	100%

\*If one of your three mid-semester exams is lower (percentage wise) than your final exam, the percent you have earned on the final will count as that mid-semester exam score. This will only happen for **one of your mid-semester exams, not all three.**

\*\*You must take the final exam to pass the course.

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### Accommodations:

Student Learning Accommodations Statement

*"In keeping with University policy, any student with a documented disability interested in utilizing accommodations should contact ACCESS, the office of Disability Services on campus.*

*ACCESS works with students to create reasonable and appropriate accommodations via an accommodation letter to their professors as early as possible each semester."*

Contact ACCESS: A170 Living/Learning Center - 802-656-7753 - [access@uvm.edu](mailto:access@uvm.edu).

Policy on disability certification and student support:

<http://www.uvm.edu/~uvmppg/ppg/student/disability.pdf>

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**Academic Integrity:** This policy addresses plagiarism, fabrication, cheating, and collusion.

<http://www.uvm.edu/policies/student/acaintegrity.pdf>

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### Code of Student Rights & Responsibilities:

<http://www.uvm.edu/policies/student/studentcode.pdf>

**Center For Health & Wellbeing:**

<http://www.uvm.edu/~chwb/>

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**Counseling & Psychiatry Services (CAPS):**

<http://www.uvm.edu/~chwb/psych/>

*If you are concerned about a UVM community member or a specific event, we encourage you to contact the Dean of Students Office at (802) 656-3380.*

If you would like to remain anonymous, you can report your concerns online by visiting the Dean of Students website at:

<http://www.uvm.edu/~saffairs/>

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**Use of Electronics in Class:**

*“May I use my cell phone, computer, or tablet in class?”*

Yes... and no. There are many good reasons to want these electronic devices in class. However, there are many disruptive (to you and the rest of us) reasons not to have them. If you would like to bring an electronic device to class, please put it in “airplane mode” and disable WiFi. You will still be able to take notes but this will reduce the temptation to respond to emails, text messages, cruise social media, watch videos, etc. For the duration of our class, I expect your full attention. I will appreciate it and so will your classmates.

*If you have an emergency (family member is sick or having surgery or the like) and expect a text/call during our class time, please tell me before I begin lecture. This way, when you leave the room to take the call/message, I will understand.*

## Lecture Schedule

Dates	Chapter	Practice Homework
8/27 – 8/31	E & 1	Ch E: 19-99 odds Ch 1: 35-117 odds
9/3	<b>LABOR DAY NO CLASS</b>	
9/4 – 9/7	1 & 2	Ch 2: 35-91 odds
9/10	<b>LAST DAY TO ADD/DROP</b>	
9/10 – 9/14	2	
<b>9/19</b>	<b>EXAM 1 CHAPTERS E, 1, &amp; 2</b>	<b>6:40 – 9:40 Rowell N/A HLTH 103</b>
9/17 – 9/21	3	Ch 3: 41-135 odds
9/24 – 9/28	4	Ch 4: 29-137 odds
10/1 – 10/5	4 & 5	Ch 5: 25-101 odds
10/8	<b>NO CLASS</b>	
10/8 – 10/12	5	
<b>10/17</b>	<b>EXAM 2 CHAPTERS 3, 4, &amp; 5</b>	<b>6:40 – 9:40 Rowell N/A HLTH 103</b>
10/15 – 10/19	6	Ch 6: 25-61 odds
10/22 – 10/26	11 & 7	Ch 11: 35-51 odds Ch 7: 15-85 odds
10/29	<b>LAST DAY TO WITHDRAW</b>	
10/29 – 11/2	7 & 8	Ch 8: 21-99 odds
11/5 – 11/8	8 & 9	Ch 9: 31-123 odds
<b>11/14</b>	<b>EXAM 3 CHAPTERS 6,7,8,&amp; 11</b>	<b>6:40 – 9:40 Rowell N/A HLTH 103</b>
11/12 – 11/16	9	
11/19 – 11/30	<b>THANKSGIVING BREAK</b>	
11/26 – 11/30	10	Ch 10: 25-127 odds
12/3 – 12/7	10 & 11	Ch 11: 53-93 odds
<b>12/14</b>	<b>FINAL EXAM</b>	<b>10:30 – 1:15 Votey 105</b>

## Lab Schedule

Dates	Experiment	Details
8/27 – 8/31	<b>NO LABS</b>	Purchase lab materials & view/complete safety stuff on Blackboard
9/3 – 9/7	<b>NO LABS</b>	
9/10 – 9/14	Lab 1 ..... Recitation 1	Check in & Density Determination ..... Ch E, 1, & 2
9/17 – 9/21	Lab 2 ..... No Recitation	Flame Emission Spectra of Metals
9/24 – 9/28	Lab 3 ..... Recitation 2	Ionization Energy & Atomic Radius ..... Ch 3 & 4
10/1 – 10/5	Lab 4 ..... Recitation 3	Determination of Chemical Formula ..... Ch 4 & 5
10/8 – 10/12	<b>NO LABS</b>	
10/15 – 10/19	Lab 5 ..... No Recitation	Chemical Models 2 (VSEPR)
10/22 – 10/26	Lab 6 ..... Recitation 4	Intermolecular Forces .....
10/29 – 11/2	Lab 7 ..... No Recitation	Chemical Reactions
11/5 – 11/9	Lab 8 ..... Recitation 5	Acid/Base Titration ..... Ch 7 & 8
11/12 – 11/16	Lab 9 ..... No Recitation	$\Delta H_f^\circ$ of MgO
11/19 – 11/23	<b>NO LABS</b>	
11/26 – 11/30	Lab 10 ..... Recitation 6	Gas Law Determination of MW ..... Ch 9 & 10
12/3 – 12/7	Recitation	Check out & Review

