

General Chemistry I

CHEM 031 | Section F | CRN: 94782

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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

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.

Required Course Materials:

Textbook: Chemistry Structure and Properties ; 2nd 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-

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.**

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.

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.

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.

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.

Center For Health & Wellbeing:

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

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/>

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 c2 (e elb(n c)-2 c)-2 cr0 5.9 (e

Lecture Schedule

| Dates | Chapter | Practice Homework |
|-------------|-----------------------------|---------------------------------------|
| 8/27 – 8/31 | E & 1 | Ch E: 19-99 odds Ch 1: 35-117 odds |
| 9/3 | LABOR DAY NO CLASS | |
| 9/4 – 9/7 | 1 & 2 | Ch 2: 35-91 odds |
| 9/10 | LAST DAY TO ADD/DROP | |
| 9/10 – 9/14 | 2 | |

9/19

EXAM 1
CHAPTERS E, 1, & 2

6:40 – 9:40
Rowell N/1 05.4 0.48 re 4j EMC /6 0.4

Lab Schedule

| Dates | Experiment | Details |
|---------------|---------------------------------|---|
| 8/27 – 8/31 | NO LABS | Purchase lab materials & view/complete safety stuff on Blackboard |
| 9/3 – 9/7 | NO LABS | |
| 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 | NO LABS | |
| 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 | H°_f of MgO |
| 11/19 – 11/23 | NO LABS | |
| 11/26 – 11/30 | Lab 10 Recitation 6 | Gas Law Determination of MW Ch 9 & 10 |
| 12/3 – 12/7 | Recitation | Check out & Review |

