General Chemistry II

CHEM 032 | Section D | CRN: 14040

Instructor: Ramya Srinivasan, Ph.D.

Email: Ramya.Srinivasan@uvm.edu **Lecture:** MWF 8:30-9:20 AM (E102, Innovation)

Exams: M 6:40-9:40 PM (Venue based on lab section)

Office: Innovation E329 **Office Hours:** MW 2:00-4:00 PM *or by appointment*

Course Description:

This is the second semester of a two-semester course sequence. Topics include solutions, kinetics, equilibrium, acid-base chemistry, aqueous ionic equilibria, thermodynamics, electrochemistry, and nuclear chemistry.

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; e-text and mastering
In addition to your textbook, we will be using an online program known as Top Hat for in class learning. You will receive an email invitation to sign up for Top Hat.

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 **Monday evenings from 6:40-9:40 PM**. 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 in class and before 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 expected.

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 master 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 eight graded quizzes during the semester.
These will be found online, in Mastering Chemistry. Quizzes will be open for you to complete for one week following the completion of a chapter. **There are no re-takes or make-ups for quizzes**. I will announce, in class, when I open a quiz and its due date. It is your responsibility to complete the quiz before it closes. **No quizzes are dropped this semester**.

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 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. All pre-lab quizzes are conducted during the first 10 minutes of your scheduled laboratory period. If you arrive late you will not be given extra time or allowed to make-up the quiz. The pre-lab write ups and post-lab reports are to be handed in to your TA at the beginning of your lab period. If you are late to your lab/recitation period points will be deducted for your work being handed in as late.

Grading:

Exams*:	3 exams @ 150pts. ea.	450pts.	45.0%
Online Quizzes**:	8 quizzes @ 12.5pts. ea.	100pts.	10.0%
Final Exam***:	comprehensive	200pts.	20.0%
Labs:	10 experiments	250pts.	25.0%
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 will be given a full week to complete each online quiz. **No extensions will be given.**
***You must take the final exam to pass the course.

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.*
Policy on disability certification and student support:
http://www.uvm.edu/~uvmppg/ppg/student/disability.pdf

Academic Integrity:
This policy addresses plagiarism, fabrication, cheating, and collusion.
http://www.uvm.edu/policies/student/acaintegrity.pdf

Code of Student Rights & Responsibilities:
http://www.uvm.edu/policies/student/studentcode.pdf

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/

Exam Schedule and location:

Exam 1: **February 10th**

Exam 2: **March 2nd**

Last day to withdraw: March 27th

Exam 3: **April 13th**

Final exam: **May 7th**

Your exam location is based on your lab section number.

Lab section: **L1 – L8**	Innovation E102
Lab section: **L9 – L12**	Innovation E105
Lab section: **L13 – L24**	Billings 101
Lab section: **L25 – L30**	Williams 301
Lab section: **L31 – L36**	Votey 105

Lecture Schedule and Chapter Homework:

Dates	Chapter	Practice Problems
1/13 – 1/17	13	Ch13: #25 - #115 odds
1/20	**MLK Day – NO CLASS**	
1/22- 1/24	13, 14	Ch14: #27 - #107 odds
1/27	LAST DAY TO ADD/DROP	
1/27 – 1/31	14, 15	
2/3 – 2/7	15	Ch15: #21 - #89 odds
2/10	**EXAM 1**	**Ch 13, 14, 15***
2/12 – 2/14	16	Ch16: #31 - #141 odds
2/17	**PRESIDENTS' DAY – NO CLASS**	
2/19 – 2/21	16, 17	Ch17: #25 - #123 odds
2/24 – 2/28	17	
3/2	**EXAM 2**	**Ch 15, 16, 17***
3/4 – 3/6	17	
3/9 – 3/13	**SPRING BREAK**	
3/16 – 3/20	18	Ch18: #31 - #101 odds
3/23 – 3/27	18	
3/27	LAST DAY TO WITHDRAW	
3/30 – 4/3	19	Ch19: #33 - #119 odds
4/6 – 4/10	19	
4/13	**EXAM 3**	**Ch 17, 18, 19**
4/15 – 4/17	20	Ch20: # 31 - #89 odds
4/20 – 4/24	20	
4/27 – 5/1	REVIEW	
5/7/20	**FINAL (32 D) – 7:30 AM – 10:15 AM (E102)**	**Cumulative Final exam**

Spring 2020 Chemistry 32 General Chemistry 2 Recitation and Experiment Schedule

Dates	Labs	Work Due*
Jan 13 – Jan 16	**NO LABS**	
Jan 20 – Jan 23	**Martin Luther King Holiday Monday** (No lab all week)	

Jan 27 – Jan 30	Laboratory **Check-In** & **Recitation** **Experiment 1**: Molar Mass Det from Freezing Point Depression (Ch 13)	Exp 1 Pre-lab Exp 1 Quiz
Feb 3 – Feb 6	**Recitation** **Experiment 2**: Kinetics Iodination of Acetone (Ch 14)	Exp 1 Post-lab Exp 2 Pre-lab Exp 2 Quiz
Feb 10 – Feb 13	**Recitation** **Experiment 3**: Determination of the Equilibrium Constant (Ch 15)	Exp 2 Post-lab Exp 3 Pre-lab Exp 3 Quiz
Feb 17 – Feb 20	**Presidents' Day Holiday Monday (No labs all week)**	Exp 3 Post-lab
Feb 24 – Feb 27	**Recitation** **Experiment 4**: Acid Neutralizing Potential of Antacids (Ch 16)	Exp 4 Pre-lab Exp 4 Quiz
Mar 2 – Mar 5	**Town Meeting Day Recess Tuesday** (No labs all week)	Exp 4 Post-lab
Mar 9 – Mar 13	*Spring Break*	
Mar 16 – Thu 19	**Recitation** **Experiment 5**: Acid-Base Equilibrium, pH, and Buffers (Ch 17)	Exp 5 Pre-lab Exp 5 Quiz
Mar 23 – Mar 26	**Recitation** **Experiment 6**: Determination of the Solubility Product (Ch 17)	Exp 5 Post-lab Exp 6 Pre-lab Exp 6 Quiz
Mar 30 – Apr 2	**Recitation** **Experiment 7**: Thermodynamics of Hot & Cold Packs (Ch 18)	Exp 6 Post-lab Exp 7 Pre-lab Exp 7 Quiz
Apr 6 – Apr 9	**Recitation** **Experiment 8**: Thermodynamics of Borax (Ch 18)	Exp 7 Post-lab Exp 8 Pre-lab Exp 8 Quiz
Apr 13 –Apr 16	**Recitation** **Experiment 9**: Oxidizing Power of Commercial Bleaches (Ch 19)	Exp 8 Post-lab Exp 9 Pre-lab Exp 9 Quiz
Apr 20 –Apr 23	**Recitation** **Experiment 10**: Electrolysis and Electroplating (Ch 19)	Exp 9 Post-lab Exp 10 Pre-lab Exp 10 Quiz Exp 10 Post-lab
Apr 27 –Apr 30	**Recitation** Laboratory **Clean-up** & Laboratory **Check-Out**	
May 4 – May 8	Final Exams *Good Luck!*	

* All lab quizzes are conducted during the first 10 minutes of your scheduled laboratory period. If you arrive late you will not be given extra time or allowed to make-up the quiz.

* The pre-labs and post-labs are to be handed in to your TA at the beginning of your lab period. If you are late to your lab/recitation period points will be deducted for your work being handed in as late.