

CHEM 31 (60066): General Chemistry Summer 2017

I. Lecture

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Office Hours: Mon-Thurs, 12:00pm – 1:00pm

Lecture Time: Mon-Fri, 9:00am – 12:00pm

Location: Stafford 101

Lecture: The lecture each week will be used to cover new material and concepts along with sample problem solving. My class lecture notes for the entire semester are posted on Blackboard.

Textbook: “Chemistry An Atoms-Focused Approach” 3rd Ed., by Gilbert (Full text ISBN: 978-0393912340) can be purchased at the UVM bookstore. The solutions manual comes with the text and has the odd numbered solutions to all the assigned problems. The study guide while not required can be a great help during problem solving. There is also an online eText available from wwnorton.com.

Problems: Problem sets will be assigned after each lecture and a complete list for the textbook can be found on page 5 of the Syllabus. I strongly encourage you to do as many problems as possible, the more you practice the better you will get. Also, blank old exams from my 2015 and 2014 classes as well as their answer keys are posted on Blackboard. These are a great way to evaluate what you understand and what you do not. Remember though that test questions will change but the format and concepts will remain the same. **Do not study with just the old exams!** Also there are sample homework problem videos posted on Blackboard for extra “at-home” help.

Recitations: Throughout the semester I will also hold recitations on Thursday afternoons from 1:00-2:30pm in Fleming Museum 101. These problem sessions are meant to address your specific questions about lecture topics and/or homework problem solving, so come prepared with questions.

Exams: The exams are scheduled to be on either **Friday mornings from 9:00am-12:00pm in Stafford 101**. There are no scheduled make up dates. Only non-programmable non-graphing calculators are permitted. No other electronic devices are allowed (i.e. no cell phones, mp3 players, ipods, etc.). It is the responsibility of the student to bring a non-programmable non-graphing calculator to the exams, since there will be no extras provided. **Students caught using any other electronic device other than a non-programmable non-graphing calculator will receive a zero for the exam.**

Exam Dates:

Exam 1 June 23 (Friday)

Exam 2 June 30 (Friday)

Exam 3 July 7 (Friday)

Final Exam July 14 (Friday)

II. Laboratory

Lecture Time: Mon – Wed, 1:00– 4:00pm **Location:** Discovery Bldg. W205, W207, or W208

Lab Manuals: All experiments can be found online on the Sapling website as individual pdfs. Please make sure you ***print out each experiment and bring to lab.***

Lab Notebook: A notebook with carbon-less copies is required for recording lab data. All data is to be recorded in ink (not pencil). A carbon-less copy lab notebook can be bought at UVM's bookstore.

Safety Eye Wear: Everyone in the lab must wear OSHA approved (EZ87stamped) safety glasses or goggles once any experimentation has been started. 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 Cook A143. ***Contact Lenses are a potential health hazard and can be worn in the laboratory only if no other types of corrective lenses are available. If you have to wear contact lenses then you must wear goggles and please let your TA know.***

Footwear: Only shoes that cover fully the toes are permitted in lab. Sandals, flip-flops and any other open toed shoes are not permitted. You will be asked to change your shoes or receive a **ZERO** for the experiment.

Prior to Start of Lab: Purchase your lab manual, lab notebook, breakage card, and safety glasses. Also, on Blackboard review and complete the Safety Presentation and Safety Quiz. ***If you have not purchased or completed these items you will not be able to begin the lab portion of the course.***

Attendance: Students must attend the lab section they are assigned to. If more than two labs are missed you will receive an **F** for the course. Only the academic dean of your college may grant an incomplete. An unexcused absence will result in a **ZERO** grade for the laboratory experiment. Official documentation of sickness or a family crisis is required for an excused absence. If there is a need to reschedule your lab time to one that is not your assigned time you must obtain permission from me a week in advance.

Lab Videos: Prior to attending your lab it is mandatory to view the video that accompanies the lab. These videos demonstrate the proper use of new equipment and the safe handling of chemicals. Videos can be found at <http://www.uvm.edu/~chem/courses/?Page=31Videos.html>.

III. Course Grade

Percent Ranges for Grades:

A+ ≥ 96	A ≥ 91	A- ≥ 89	B+ ≥ 86	B ≥ 80	B- ≥ 77	C+ ≥ 73
C ≥ 65	C- ≥ 63	D+ ≥ 61	D ≥ 56	D- ≥ 54	F < 54	

How to Calculate Your Points:

1) Class = **600 total points** (75% of grade; exams and homework)

Exams = **400 points** (100 points/exam; unweighted)

400 exam points X 1.5 = **600 weighted exam points**

Only five grades are counted for your class points. If your final is your lowest grade it will count only as one unit. If one of the hour exams is your lowest grade then your final will count as two units. The lowest hour exam grade will be replaced by the grade on the final. If you are absent from an exam official documentation of sickness or family crisis is required or you will receive a **ZERO** for the exam. Students with legitimate excuses will be permitted to take the exam early. Except in very unusual circumstances makeup exams will not be administered after the scheduled exam time.

Example 1:

	Exam 1	Exam 2	Exam 3	Final
Actual:	85	45	78	75
Counted:	85	75	78	75

Exam Points = 313 x 1.5 = 469.5 weighted exam points

Example 2:

	Exam 1	Exam 2	Exam 3	Final
Actual:	67	78	76	68
Counted:	67	78	76	68

Exam Points = 289 x 1.5 = 433.5 weighted exam points

2) Laboratory = **200 lab points** (20% of grade)

Prelab (2 pts/per)	20 points
Lab Reports (10 pts/per)	100 points
Quizzes (8 pts/per)	<u>80 points</u>
	200 points

(Obtained from the lab TA, the average grade is normally an 80% or 160 points)

3) Course Grade Determination

Add up your points from class and lab and then use the chart at the beginning of this section to determine your course grade.

Example 1:

$$\begin{array}{r} 469.5 \text{ class points} \\ + \quad \underline{160 \text{ lab points}} \\ \hline 629.5 \text{ total points} / 800 \text{ points} = 78.68\% \text{ B-} \end{array}$$

Example 2:

$$\begin{array}{r} 433.5 \text{ class points} \\ + \quad \underline{160 \text{ lab points}} \\ \hline 593.5 \text{ total points} / 800 \text{ points} = 74.18\% \text{ C+} \end{array}$$

To summarize:

$$[(\text{Ex1} + \text{Ex2} + \text{Ex3} + \text{Final}) \times 1.5] + \text{Lab} = \text{Total Points}$$

$$(\text{Total Points}) / 800 \times 100 = \text{Total Percent}$$

Academic Integrity

Offenses against the Code of Academic Integrity (i.e. cheating) are deemed serious and insult the integrity of the entire academic community. Any suspected violations of the code are taken very seriously and will be forwarded to the Center for Student Ethics and Standards for further investigation.

IV. Lecture Schedule and Chapter Homework

<u>Dates</u>	<u>Chapters</u>	<u>End-of-Chapter Homework Problems</u>
June 19	1	Ch1: 11,15,17,21,27,33,41,45,47,51,57,65,69,71,79,85,90,94
June 20	2	Ch2: 11,13,21,23,25,33,43,45,49,55,61,64,67,78,81,95,97,103,105,108,115
June 21	3	Ch3: 1,3,7,10,19,23,33,39,41,43,49,55,62,67,75,77,81,91,95,103,107,109,115,120,127,128
June 22	3 and 4.4	
June 23	EXAM 1	Chapters 1, 2, 3, and 4.4
June 26	4	Ch4: 1,9,11,16,27,33,37,43,49,57,67,73,77,85,97,105,109,117,123,127,133,135,145,159,161,167,173
June 27	4 and 5	Ch5: 13,16,23,27,35,39,45,51,57,59,65,69,71,75,81,85,99,103,107,113,119,125,131
June 28	5 and 6	Ch6: 1,3,5,13,17,23,27,29,35,37,40,45,49,53,59,61,67,73,
June 29	6	
June 30	EXAM 2	Chapters 4, 5 and 6
July 3	7	Ch7: 4,13,19,21,23,27,31,35,39,41,44,47,53,57,61,63,67,69,71,73,75,79,81,85,97,103,109
July 4	Independence Day	
July 5	7 and 8	Ch8: 11,13,19,23,27,29,33,39,43,47,51,55,59,65,67,71,73,75,77,89,96,101,103,111,113,123,125,129
July 6	8 and 9	Ch9: 2,4,15,17,19,23,29,32,35,41,45,47,51,53,55,59,63,65,69,73,77,83,87,91,96,103,109,115,119,123
July 7	EXAM 3	Chapters 7, 8, 9.1-9.?

July 10	9	
July 11	9 and 10	Ch10: 3,7,13,19,21,25,29,33,43,49,53,57,61,65,67,71 73,75,77,83,85,89,91,93,95,99,105,107,113,115,117, 123,139,143,147
July 12	10	
July 13	10 and review	
July 14	Final Exam	Cumulative

V. Laboratory Schedule

<u>Date</u>	<u>Experiment</u>	<u>Description</u>
June 19	Check In	Purchase breakage card, lab manual and safety glasses On Blackboard, review and complete the Safety Presentation and Safety Quiz (Chap 1)
	Recitation 1	
June 20	Experiment 1 Recitation 2	Density Determination (Chap 1-2)
June 21	Experiment 2 Recitation 3*	Flame Emission Spec of Metals (Chap 3)
June 26	Experiment 3 Recitation 4	Ionization Energy/Atomic Radius (Chap 3)
June 27	Experiment 4 Recitation 5	Chemicals Models 2 (VSEPR) (Chap 4-5)
June 28	Experiment 5 Recitation 6	Intermolecular Forces of Attraction (Chap 6)
July 3	Experiment 6 Recitation 7	Determination of a Chemical Formula (Chap 7)
July 4	No Lab	
July 5	Experiment 7 Recitation 8	Chemical Reactions (Chap 8)*
July 10	Experiment 8 Recitation 9*	Acid Titration of a Food Product (Chap 8)*
July 11	Experiment 9 Recitation 10	ΔH_f° of MgO Heat Capacity of a Calorimeter (Chap 9)*
July 12	Experiment 10 Recitation 11 Check Out	Gas Law Determination of MW (Chap 10)

*Due to the possibility of this being a long lab, recitation may be shortened or pushed back to the following week.

V. ACCESS Accommodations and Religious Holidays

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.

ACCESS Office: <http://www.uvm.edu/~access/>

Policy on disability certification and student support:

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

Religious Holiday Policy Statement

Religious Holidays: Students have the right to practice the religion of their choice. If you need to miss class to observe a religious holiday, please submit the dates of your absence to me in writing by the end of the second full week of classes. You will be permitted to make up work within a mutually agreed-upon time.

Illness Accommodations

The Center for Health and Wellbeing does not provide students with notes verifying medical illness. This approach makes the best use of their limited medical resources by not having students who are required to provide verification of a recent illness utilize appointment times which can be used for students who require evaluation and therapy. Instead, contact your college's Dean's office so they can report your illness to all of your professors.

When students experience a serious illness requiring hospitalization or when an extended absence from class is foreseen, a Center staff member will (with the student's permission) notify the Dean's Office of the student's College or School so that faculty members can be made aware and the student supported in working successfully through the absence.