AUGUSTA UNIVERSITY

Principles of Chemistry I
CHEM 1211
Fall 2018

Instructor information

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Office Hours: MWF 10-11:00 am; T 11 am - noon
Course Hours: MWF 11 – 11:50 am, SCI E1049

BEFORE YOU START

Math 1111, grade of C or better (or a higher placement) is a pre-requisite for CHEM 1211. If your chemistry or math background is weak (or non-existent), you should consider taking Chemistry 1151 first. CHEM 1151/1152 are the recommended courses for pre-nursing. Consult your advisor. CHEM 1211L is a co-requisite for this course. Unless you already have credit for CHEM 1211L, you must be signed up for that course as well as this one. Normally, if you withdraw from one course, you must also withdraw from the other. Withdrawal from course and lab only counts as one withdrawal. If you are planning to enroll in Chemistry 1212 next term (and you should be!), you should be aware that precalculus (Math 1113) is a prerequisite, as is a C in this class and 1211L. It is not recommended that you skip a semester between CHEM 1211 and CHEM 1212.

DURING THE TERM

Course description: CHEM 1211 is an introduction to the language and fundamental skills of the chemist. Much of the terminology is applicable in other scientific fields. Topics include: the nuclear atom, quantum theory, bonding, the mole concept, chemical reactions, solutions, electrolytes, concentration, and the behavior of gases. Every topic discussed in this course will be applied in further chemistry (and most biology) courses you take, such as CHEM 1212 and the organic sequence. More detailed objectives will be shared on D2L and daily objectives may be shared during the class.

Course-Level Student Learning Outcomes: Students will be able to…

1) understand, appreciate, and apply the concepts of measurements in scientific experiments
2) understand the many phases in which matter is found, including both pure substances and mixtures
3) understand the components of atoms and molecules and their relationship to formula and nomenclature
4) display skills in creating Lewis Structures and utilizing such models in determining various properties of matter
5) use dimensional analysis to convert between various modes of expressing measurements and variables
6) understand the concept and utilization of the mole and Avogadro's number in the structure and reactions of matter

Required Materials: Knewton Alta – an online course objective mastery system (homework and applied content). Scientific, nonprogrammable calculator (i.e. TI-30X (S or IIS) or TI-36X). **No** graphing calculators will be permitted in class or on tests or on quizzes nor will calculators equivalent to these. (i.e., TI numbers 40 or higher are **NOT** permitted.)

Recommended Materials: You may find *The Official Guide: Preparing for the ACS Examination in General Chemistry* helpful as you will be taking an ACS Exam as your final exam in both 1211 and 1212. If you want a hard copy text book, my favorite is written by Nivaldo Tro from Pearson. Another good one is written by Gilbert, Kirss, Foster and Bretz from Norton. (You do not need the most recent edition.) A full list of recommended texts is on D2L.

Assignments: To assure you keep up with the pace of the course, there will be multiple, graded assignments of various types. Some of these assignments will consist of a few questions to be completed after lecture on D2L (posted as quizzes). Homework assignments may also be posted on D2L, these are due at the beginning of class. Many Fridays will also feature an in-class assignment. Each assignment will be graded out of 10 points (some may be worth 11—extra credit!). A small number of your lowest assignment grades will be dropped (at least 3). Check D2L at least 24 hours before class as assignments will take longer than a few minutes. Nothing posted after 6 pm on a class day will be due at or before the following class.

Knewton Alta: After each class (by 6 pm) there will be one or more learning objectives posted in Knewton Alta. Your grade will be your percent mastery of these assignments. Because occasionally you might forget or miss a deadline, two of them will be dropped and the rest averaged for the "Mastery" portion of your grade.

FINAL ASSESSMENT

Grading	In class Exam average (4 exams, highest 3--15% each, lowest--10%)	55 %
	Assignment average (drop ≥2 lowest)	15 %
	Mastery in Knewton Alta	5%
	Final Exam (normalized scores, sum both parts)	25 %
	Course Average	100%

Final Exam Information: The final exam consists of 2 portions, a standardized multiple choice exam and a departmental word problem and short answer portion. Students must meet the departmental standard on the ACS national exam portion of the final exam in order to earn a C or better for the course and be eligible for progression to the next chemistry course. If your course average is passing but the ACS score is below the departmental standard, you will receive a D for the course. If you meet the departmental standard on the standardized portion of the final, then course averages above 90% will earn an A; course averages over 80% will earn at least a B; course averages over 70% will earn at least a C; course averages over 60% will earn at least a D. Course averages less than 60% will earn an F.

General Polices

Attendance: You are expected to attend lecture sessions regularly. If you miss a lecture session, it is your responsibility to find out what material was covered and what announcements were made. If you are absent from five lectures you will be dropped from the course. An attendance sheet for you to initial will be passed around at the beginning of each class. *Arriving more than ten minutes late will be recorded as an absence*. It is the student's responsibility to be sure their attendance record is correct. Missing an exam without a legitimate excuse is also grounds for withdrawal. This instructor will only withdraw a student after midterm (10/8) with the accompanying WF grade, regardless of when your absences occurred. Midterm is the last day that a student may withdraw from a course with a grade of W. Disruptive students will be asked to leave the class.

Make-ups: There will be NO MAKE-UP ASSIGNMENTS. (Remember, there are drops!) If you are aware of an upcoming, excused absence (e.g., athletics) you must turn in the assignment or take the exam early. *If you miss an exam*, and submit authoritative documentation related to your absence in a timely manner, your Final Exam grade will be used as the missed exam grade, but will also automatically be the exam weighted at 10%.

Course website: The course websites (D2L and Knewton Alta) will be updated (as needed) by 6 pm on class days. You are responsible for all information posted on these websites, particularly information in the announcement section on D2L. You are expected to check the website about 24 before each class period.

Calculators: Calculators may not be shared; you are expected to bring yours to *every* class. Only nonprogrammable-scientific calculators are permitted for use on tests and quizzes. If you are not sure if yours is acceptable—ask! If you did not bring a calculator (or the appropriate one) you must complete the test/quiz without one. I will not provide calculators.

Test Procedure: Only a pencil (not a pen!) with eraser and an appropriate calculator may be with you at your desk during a test (including the final exam). You may bring a drink, but by doing so you have given permission for me to inspect it. Other materials (bookbags, phones, etc.) must be left at the front of the classroom, this includes smart watches or watches that even appear moderately intelligent. Any other items found at your desk will be considered an attempt to cheat and you will receive a zero on that exam.

Electronic Devices: *Cell phones* going off in class are rude and should be turned off before coming to class. Nobody wants to hear your Avicii tribute ringtone. *Electronic devices* may only be used for class-related activities. A student whose device is disruptive or is found using it for non-class related activity (as determined by the instructor) will be asked to leave for the remainder of the class. Laptops may only be used if you are seated in the back row of class (the screen distracts people behind you even when used appropriately). Any electronic device (other than an approved calculator) visible during a quiz or test will be considered an attempt to cheat and you will receive a zero on that exam. This includes watches.

Academic Honesty: Cheating/plagiarism will not be tolerated. This includes collaborating on graded homework, quizzes or on exams. You may discuss homework, but daily problems and homework sets should be your own words and reflect your own work. Copying someone else's answers IS cheating and will receive a zero at best. Do not post online (or otherwise share) any course material without instructor permission. Students who violate the academic honesty policies of the university or those set forth in this syllabus may face consequences ranging from a zero on the assignment to a failing grade for the course. Cheating on any portion of the Final Exam will result in a failing course grade. See the academic honesty policy: https://augusta.policytech.com/dotNet/documents/?docid=1036&public=true

Grading Errors: If an error was made in the grading of an exam or quiz, the student has two class days after it was returned *to the class* (regardless of whether or not the student was present) to request, in writing (hand-written, typed, ….), a reevaluation of the grade. Attach your request to the exam and return both to the instructor. It is the student's responsibility to pick up any quiz or test if they were not present when it was returned to the class.

Emergencies: In the case of an emergency evacuation, please proceed to the nearest available exit door to exit the building. Please do not use the elevator. Once outside the building, the assembly point for the Science Hall is the large sports field beside the Amphitheatre. If the alarm occurs during a quiz or test, turn it in while evacuating. If you do not turn it in, you will not be allowed to complete it. However, DO NOT jeopardize your personal safety to turn in the assessment or assignment in the case of an actual emergency.

Note: The course instructor reserves the right to make changes to the course syllabus and schedule with reasonable notice to the students. The most up-to-date syllabus will be posted on the course website.

Important Dates **The following schedule is tentative, and subject to change.**

9/3: Labor Day holiday
9/7: Test 1 over basic skills, nuclear chemistry/atomic theory, basic mole concepts
10/5: Test 2 over quantum chemistry, bonding and naming
10/8: Midterm/last day to withdraw
10/11-12: Fall Pause – No Class
11/2: Test 3 over molecular shapes and chemical reactions (stoichiometry)
11/21-23: Thanksgiving
11/30: Test 4 over solution stoichiometry, various reaction types and gas laws
12/5: Last day of class
12/11: FINAL EXAM 11 am – 1 pm