CHEM V01A: General Chemistry I (CRN: 31821)
Spring 2019

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Class Meetings: MW 11:30am-12:45pm in SCI-313
Office Hours: MW 12:45pm-2:15pm, TTh 8am-8:30am, 5:20-5:50pm or by appointment
Please feel free to stop by my office at any time as I am more than happy to help whenever I can. Let me know if you wish to set up an appointment for additional help. I am also very available via e-mail and text, even during off hours, so please contact me whenever you have questions or concerns!

Free peer tutoring and computer access is available at the LRC and BEACH.

Required Materials: Non-programmable scientific calculator
Sapling Product Key
http://www.saplinglearning.com/ibiscms/course/view.php?id=87544_
Recommended Materials: *Chemistry*, OpenStax (https://openstax.org/details/books/chemistry)

Prerequisites: MATH V03 or one year of high school intermediate algebra (Algebra II) **AND** CHEM V20 & V20L or high school chemistry with grades of C's or better
Who should take this course? This course, when combined with ChemV01B, is a comprehensive study of all areas of chemistry. The purpose of this course is to prepare students for scientific fields with core knowledge necessary for physics, engineering, biology, medicine, and others. It is both challenging and demanding; you should attend every class and be spending 10-12 hours a week outside lecture for study. Mastering chemistry is hands-on; the more work you put in, the more success you will get out.
By the end of this course you will be able to:

1.) Solve quantitative chemistry problems by applying mathematical procedures, including dimensional analysis and conversions.
2.) Understand and explain the basic structure of atoms and molecules from a geometric and quantum mechanical perspective.
3.) Describe how the structure of atoms and molecules leads to the macroscopic properties of a material, such as its reactivity, boiling point, melting point, polarity, etc.
4.) Analyze, predict, and represent chemical changes and transformations with chemical formulas, nomenclature, chemical equations, stoichiometry, thermodynamics, and reaction types.
5.) Predict and calculate the behavior of gases, liquids, solids, and solutions.

See http://www.venturacollege.edu/faculty_staff/academic_resources/core_competencies/index.shtml
Course Objectives: Upon successful completion of this course, the student will:

A. Apply the scientific method to chemistry data and problems, including hypothesis development, testing, and evaluation.

B. Write balanced chemical equations including n et ionic and oxidation-reduction equations.
C. Assess the different models of the atom.
D. Use standard nomenclature and notation.
E. Calculate the formula weight, mass percentages, and empirical formula.
F. Evaluate mole and limiting reactant stoichiometry calculations.
G. Analyze the ideal gas law and predict derivations from ideal behavior.
H. Calculate enthalpies of reaction using bond energies.
I. Determine the relative strengths of acids, bases, and electrolytes.
J. Diagram hybridization, geometry, and polarity for simple molecules.
K. Evaluate bonding in compounds and ions.
L. Differentiate between solids, liquids, gases, and phase changes.
M. Evaluate metallic bonding and semiconductors.
N. Analyze concentration units for solutions and solving solution stoichiometry problems.
O. Evaluate colligative properties of solutions.
P. Carry out various calculations involving particles, moles, grams, unit conversions, scientific notation, multi-variable equations, etc., using a scientific calculator.

Attendance: Attendance is mandatory and will be taken every class period. Doing well in this course requires your initiative and involvement at all times. School policy states that students missing two weeks' worth of class will be dropped. If you are absent, it is your responsibility to catch up on what you have missed or make arrangements by speaking with me beforehand. Absence is not a valid excuse for missing assignments and cannot be used to avoid late penalties or to make up exams.

Academic Integrity: Cheating on or plagiarizing any assignment or examination is strictly prohibited and will result in a zero for that assignment and further disciplinary measures taken. This includes, but is not limited to, talking and using notes, references, or prohibited electronic devices during exams and copying homework assignments from online resources, tutors, or other students. Be mature; cheating is always unacceptable, no matter the circumstances.

Classroom Conduct: Courtesy is required in the classroom at all times. This includes, but is not limited to, punctuality, turning off all electronic devices, and refraining from talking or other disruptive behavior during class. Continual behavior in this manner will lead to your removal from the classroom and loss of points. You made the effort to be in class; you should get the most out of it – be mature!

Grading Policy: Grades are posted on Canvas. Your grade in this course will be determined by:

Homework (best 14 of 15)	10 pts each for a total of	140 pts
Quizzes (best 5 of 6)	30 pts each for a total of	150 pts
Exams (all 4 of 4)	125 pts each for a total of	500 pts
Final Exam		210 pts
	Total Possible Points	1000 pts

Tentative Points to Grade:	1000 to 900 points earns an	A
	899 to 800 points earns a	B
	799 to 700 points earns a	C
	699 to 600 points earns a	D
	599 to 0 points earns a	F

Extra credit may appear as unexpected assignments, but should not be anticipated.

Homework: Assigned end-of-chapter questions are found online on the Sapling website, available by the first class meeting and due at the beginning of class on the dates listed on the schedule. Late work can be turned in up to three calendar days past the original due date for a 10% penalty per day late (exception: HW# 15); any work done past three days late will receive an automatic zero. **Your lowest homework score will be dropped.** Homework is designed to help you study; take it seriously and work independently! These assignments are where your exam questions come from. Working with tutors or other students on homework sets is both acceptable and encouraged but simply copying down answers from a classmate or online is plagiarism and will be subject to disciplinary measures.

Quizzes: A quiz will be given during the first 10 minutes of class on the dates listed on the schedule. The question will be taken from the homework assignment due that week. **No late quizzes will be given** and tardy students will not be given extra time to complete it. **Your lowest quiz score will be dropped.** You will always be allowed, and often required, to bring a calculator for every question.

Exams: Exams will be given during the class period on the dates indicated on the schedule on two to three chapters' material. The questions will be a combination of homework and in-class examples as multiple choice, short answer, and/or calculations. If you must miss an exam due to an extreme emergency, you must contact me no later than the scheduled day and time of the exam with written documentation and arrange to make it up within three calendar days**.** You will always be allowed and required to bring a calculator for every exam; sharing calculators or using phones is not allowed. If you require alternative classroom or test accommodations, please contact me and the Educational Assistance Center at 654-6300 so that your needs may be met as soon as possible.

Final Exam: The final exam is cumulative and mandatory. It will cover the last chapter and all material discussed in class over the entire term. School policy dictates that it must be taken at the scheduled time during finals week. **Your final exam is Monday, May 13 from 10:15am-12:15pm.**

A Final Note: This course is both demanding and difficult; chemistry is a very challenging subject. **Do not fall behind!** Every day is cumulative and builds upon the previous. Please never feel timid about asking for help; that really is the only way to do well. Use the many resources at your disposal between myself, your classmates, at VC, and online to help you master this rigorous but rewarding subject.