GENERAL CHEMISTRY I
CHEM 1100
Syllabus for Spring 2014

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Office hours: MWF 8:30A -9:30 A and T 11:00A-12:00P

Note: This syllabus is intended to use as a guide and may change as the course progresses.

Class Schedule: MWF 10:00A - 10:50A, Rm N101

Prerequisite: To take this course you must have passed ELM or be exempt from taking the ELM or completed Math 0110 or its equivalent with a C or higher. This course requires that you concurrently enroll in Chem 1102 General Chemistry I Lab or previously passed the lab course.

Required Materials:
- Scientific Calculator
- Scantron 882-E


Catalog Description: Fundamental principles of chemistry emphasizing atomic structure, periodic properties, theories of bonding, kinetic theory of gases, solution chemistry. (reprinted from the CSU Stanislaus Catalog)

Learning Objectives: We will cover Chapters 1-9.

Chapter 1. General organization of the periodic table, Scientific methods and measurements, SI units, Derived units, Unit conversion, Accuracy, Precision, Significant figures, Rounding.

Chapter 2. Law of mass conservation, Dalton’s atomic theory, Law of definite and multiple proportions, Structure of atoms, Atomic number, Atomic mass, Classification of matter, Types of chemical bonds, Nomenclature, Radioactivity.
Chapter 3. Balancing chemical equations, Avogadro’s number, Stoichiometry, Yields of reactions, Limiting reagents, Molarity, Dilutions, Titrations, Empirical formulas, Molecular formulas, Mass spectrometry


Chapter 5. Electromagnetic radiation, quantum phenomena, wavefunctions, shapes of orbitals, atomic spectra, Pauli exclusion principle, electron configurations, anomalous electron configurations, atomic radii.

Chapter 6. Ion electron configurations, Ionic radii, Ionization energies, Electron affinity, Ionic bonds, Group chemistry, Octet rule.


**Grading:**
- Letter grade with plus/minus grading, or Credit/No Credit (optional).
- Tentatively a traditional grading scale will be used for this class, and these are \( \geq 90\% \) A, \( \geq 80\% \) B, \( \geq 70\% \) C, \( \geq 60\% \) D, less than 60\%F and plus/minus (+/-) grading may be used at the discretion of the instructor. However, the percentage final grade cutoff might be lower but not higher than the traditional grading scale.
- Request for Credit/No Credit must be submitted before the Census Date Friday, February 21, 2014 through Enrollment Services using an Add/Drop form. A final letter grade C- or better is required for Credit.

**Grading:** Your grade will be based on four fifty-minute exams, discussion, homework machine and a cumulative final. Exams and final will be comprehensive. Please note that if you are planning to take both General Chem I and General Chem II, there will be an ACS multiple choice comprehensive final for both semesters.

<table>
<thead>
<tr>
<th>Four exams</th>
<th>60%</th>
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<tbody>
<tr>
<td>Friday, February 21, Friday, March 14,</td>
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<tr>
<td>Friday, April 4, Friday, May 9</td>
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<tr>
<td>Discussion</td>
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<tr>
<td>Cummulative Final Exam</td>
<td>20%</td>
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<td>Friday, May 23 (8:30-10:30am)</td>
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**THE HOUR EXAMS AND THE FINAL ARE COMPREHENSIVE.**
Exams and final: You will take four 50 minute midterm exams and a final. All exams and final are comprehensive. Exams and final will typically include a multiple choice portion and short-answer typed of questions.

Discussion: You must be enrolled in one of the discussion sections associated with this lecture. Your discussion instructor will have their own assessment plan, and the final grade from the discussion will be forwarded to the lecture instructor which represents 20% of your final course grade. Generally, the discussion section will discuss topics one week behind the pace of the course so you can have time to review the material.

Supplemental Instruction: THIS IS NOT A DISCUSSION SECTION. To promote students’ success, Supplemental Instruction (SI) will be introduced for this course. Attendance will be voluntarily for SI sessions. The Supplemental Instruction sessions will be led by a SI leader is a student who has successfully taken the course. The SI sessions are not designed to be tutoring sessions but are guided group study sessions. The SI leader will guide you to study habits she or he has used to be successful in the course. Research has shown that students who attended SI sessions have improved their grades by one letter grade or more. I strongly encourage you to attend the SI sessions regularly.

Add/Drop: It is the student’s responsibility to take the necessary steps to add or drop the class by the university deadline. The drop deadline for this semester is Friday, February 21, 2014.

Credit/No Credit: This course does offer a credit/no credit grading option. It is the student’s responsibility to change their grading option to credit/no credit before the last day to change grading options, Friday, February 21, 2014. For students that have selected the credit/no credit option, any course score that would result in a letter grade lower than C- will receive a no credit grade. Department policy prohibits changing of the grading option after the census date, Friday, February 21, 2014.

Tutoring: The tutoring center is located in the library building room 112. Additional tutoring also is available in The Commons in the Naraghi Hall 124. These services are provided free of charge to CSU Stanislaus students but is on a “first come, first served” basis. It is advisable to start getting help early in semester before you fall behind.

Disability Resources Services (DRS): The DRS office is in MSR 210. If you have a documented disability and wish to discuss academic accommodations, or if you would need assistance in the event of an emergency evacuation, please contact the professor as soon as possible.

Academic Dishonesty: Students’ individual assignments shall represent their own sole efforts. If you are caught cheating on an exam, a quiz or the final you and the person that you are cheated from will receive a failing grade for the course there is no warning. All academic dishonesty cases will be reported to the CSU Stanislaus Office of Judicial Affairs.
Comments:

- Please check the course website regularly for any last minute changes to scheduling, assignments, etc.
- You are responsible for all announcements, corrections and material discussed.
- I suggest that you read the appropriate sections of the assigned chapter before you come to class. After you attend the lecture re-read the material and write down the important concepts. Review and preferably re-write the lecture notes before you come to the next class meeting.
- Try not to look in the solution manual until after you work the homework problems and are satisfied with your answers. If you have questions about the problems come to my office hours. There is also free tutoring available for CSU Stanislaus students on a first come/first serve basis at the tutoring center, L112 and in the Commons, N124.
- For this course, Insist for true understanding instead of just memorizing the material. The estimated studying time for this course is at least 3 hours outside of class for every hour in class. Chemistry is very much like a foreign language and is comprehensive in nature. You must master material previously covered, and that is the only way you will be able to comprehend the new material. It is very important that you keep up with your assignments.

General Education Goals *(reprinted from the CSU Stanislaus catalog)*

1. **Subject Knowledge.** To provide an educational experience that will enhance students' understanding of the disciplines' basic principles, methodologies, and perspectives.
2. **Communication.** To provide an educational experience that will enhance the ability to communicate.
3. **Inquiry and Critical Thinking.** To provide an educational experience that will enhance critical thinking skills and will contribute to continuous inquiry and life-long learning.
4. **Information Retrieval and Evaluation.** To provide an educational experience that will enhance the ability to find, understand, examine critically, and use information from various sources.
5. **Interdisciplinary Relationships.** To provide an educational experience that will enhance students' understanding of a discipline's interrelationships with other disciplines.
6. **Global or Multicultural Perspectives.** To provide an educational experience that will enhance the ability to look at issues from multiple perspectives and/or that will describe the discipline's impact on or connection to global issues.