General Chemistry

CHEM 110  Fall 2015

Instructor
Dr. Hyunjin Ko
jinizoa@hotmail.com (put “CSUDH - Chemistry 110” in the subject area)

Office Hours
TBA.

Course Objectives
Standard general chemistry for science and engineering majors, with emphasis on quantitative methods and calculations. Topics include atomic structure, chemical bonding, stoichiometry, gases, liquids, solids, solution chemistry, thermochemistry, and kinetics. Quantitative analysis using analytical balances, gravimetric and volumetric procedures, spectrophotometry, and calorimetry.

Lecture/ Discussion
TTh 8:00 AM – 9:40 AM NSM B252

Required Materials
▪ Text: Chemistry, Third Edition, Gilbert, Kirss, Foster, Davies, Norton ▪ Scientific Calculator – must be nonprogrammable, non-graphing with log functions and exponential notation

Prerequisite
CHEM108 or high school chemistry and satisfactory performance on the General Chemistry placement exam.

Some Important Dates
9/7 Labor Day Holiday / 11/11 Veterans Day Holiday
11/26-11/29 Thanksgiving Holiday

Grading Summary

Approximate Grading Scale
A 91 - 100%  A- 89 – 90%
B+ 87 - 88%  B 82 – 86%
B- 80 – 81%  C+ 77 - 79%
C 73 – 76%  C- 70 – 72%
D+ 66 - 69%  D 60 – 65%
D 50 – 59%  F 0 – 59%

Point Distribution (%)
Exams 30
Lab Works 20
Quizzes / Worksheets /Homeworks 25
Final Exam (Lecture and Lab) 25

Student Learning Outcomes for Course
1. The student will be able to make accurate and precise measurements using different instruments, and perform unit conversions using dimensional analysis.
2. The student will be able to perform stoichiometry and understand the weight relation in chemical reactions. Be able to perform empirical and molecular formula calculations.
3. Be able to name compounds and write balanced chemical equations for simple reactions such as combination, decomposition, combustion, double displacement, & single displacement reactions.
4. Understand the concept of bonding, molecular geometry, molecular polarity, and nature of gases, solids, and liquids.
5. Understand the general concepts of thermodynamics and calorimetry, and their relations to chemical reactions.

Exams
Exam dates are given on the attached Lecture/Lab Schedule. No makeup exams will be given unless verifiable, extraordinary circumstances occur (be prepared to show proof). Simply being unprepared is NOT a valid reason. No make-up exams will be given after the exam has been returned or reviewed in any Chem 110 class. Exams may be given early to students if the circumstances warrant. Please see your instructor as soon as possible (ASAP) before the scheduled exam date if you wish to take an exam early. A point penalty may be assessed for a make-up exam.
A student who earns 50.0% or less on the Final Exam may be dropped one full letter grade.

Quizzes
Quizzes will cover recent material from lecture and lab. No makeup quizzes will be given. However, the lowest quiz score will be dropped at the end of the semester. If your cell phone or pager rings during an exam or quiz, you may lose quiz or test points.

Calculators
You may not share a calculator with another student during quizzes and exams. Also you will frequently need to use calculators on problems completed during class and lab so bring a calculator with you to class every day.

Late Policy
No late assignments will be accepted except in the following circumstances:
1. If you miss an entire class for a valid reason, you may hand in your work at the beginning of the next class.
2. If you are tardy, you must hand in your work as soon as you walk in the door. Points will be deducted according to how tardy you are.
3. One assignment can be turned in late as long as it is turned in before the assignment is returned to the class or keys have been given out. Points will be deducted according to the lateness of the assignment.

Attendance/Dropping
Attendance in lecture, lab discussion, and laboratory is expected and required. Attendance is absolutely critical to understanding the material to be covered in chemistry. Points may be deducted if excessive absences occur (even if only during one class section such as lecture). If points are deducted, each class section (lecture and lab) counts separately and the points will be deducted at the end of the semester. If you are absent, please obtain information about the class and any notes from another student. You are still responsible for handing in work on time. You will be dropped from the class if you do not attend the first class meeting (unless you inform the instructor of your absence by the end of the first day of class).

Missing 18 or more class hours may result in your being dropped from the class (3 tardies = 1 absence). However you should not assume that the instructor will drop you. It is your responsibility to formally withdraw from the class through Admissions and Records should you decide you no longer wish to be enrolled. Otherwise you may receive an “F” in the course.
Tardy Policy
If tardiness becomes a problem, points will be deducted. Each class section (lecture and lab) count separately. The number of points deducted will depend on the number of tardies and will be deducted at the end of the semester.

Academic Honesty
CSUDH and your instructor believe that academic honesty is a cornerstone of the educational community. Cheating includes, but is not limited to, copying another person’s work, using unauthorized materials on a quiz or exam, removal of reserve materials, copying an old lab report key, looking at another student’s papers during an exam or quiz, or discussing in advance the content of an exam or quiz with another student. Any form of academic dishonesty, whether it occurs inside or outside the classroom will result in a score of zero for that exam, quiz, or assignment without option of dropping and may result in an “F” or dismissal from the course. Studying in groups is encouraged. However, if, in the judgment of your instructor, one student knowingly allows another student to copy from his/her assignment, both students will be punished.

COURSE EXPECTATIONS AND DECORUM
Re-grading Policy: No re-grades unless there is a clear error in the adding of points. Each student should keep track of his/her points earned in class to that on blackboard for consistency when points have been assigned by the instructor.

Expectations of Students:

1. Students will be in class at the start of class every day, will stay for the whole class, participate and do every class outside and in class assignment, and will attend every class and laboratory.

2. Students will not bring visitors to the class without special permission. Students cannot bring visitors to laboratory because of safety concerns.

3. Student will notify the instructor if they are going to miss class. This can be done in person, by e-mail, or by a phone call in an emergency situation.

4. Students will be prepared when they come to class and lab. Students are expected to read the chapter before coming to lecture, and read the experiment and complete the pre-lab exercises before coming to lab.

5. Students will complete the lab during the scheduled time.

6. Students should do the assigned homework. It is best to do the homework the same day as the lecture. Students should plan to spend about 1.5 hours each day after class, and about 4 hours on the weekend studying for this class. Students who are unwilling to devote the time to studying will not pass the class. (This is a 5 unit class, so it must be assumed that homework will take at least 10 hours per week.) Students who are unwilling to devote the time to studying will not pass the class.

7. Turn off all cell phones, pagers, and electronic devices when in class! Students will not disrupt the class with cell phones, late arrivals, excessive noise, eating and drinking, etc. Late arrivals, side-discussions and other unprofessional behavior will be addressed at the instructor’s discretion. Please be respectful of others.

8. Students will clean up their own messes.

9. Students will not cheat or plagiarize otherwise a F grade will be given and disciplinary action will be taken. This includes copying someone else’s lab report or lab data. Dishonest students will be reported to the administration for further disciplinary action. No programmable calculators or devices with alphanumerical text storage capacity will be allowed in the exams (including language translators and cell phones). Communicating with another student during the exam will result in a zero.

University Policy on Academic Integrity: “Academic integrity is of central importance in the university community and involves committed allegiance to the values, the principles, and the code of behavior held to be central in that community. Integrity concerns honesty and implies being truthful, fair, and free from lies, fraud, and deceit. Cheating or plagiarism is cause for formal university discipline and is justification for an instructor to assign a lower grade or a failing grade.”

10. Students will ask questions in class, of other students, and of the instructor. Questions are encouraged as long as they relate to the lecture subject. Sincere questions are never stupid and you will not be ridiculed or degraded for asking them.

11. Students will form study groups and help each other learn.

12. Students will notify the instructor of a medical condition or disability which may prevent the student from compliance with the course syllabus. CSUDH adheres to the Americans with Disabilities Act with respect to providing reasonable accommodations for students with temporary or permanent disabilities. To receive accommodations, students with disabilities must register with Disabled Student Services. For more information, please contact their office in Welch Hall B250 at 310-243-3660 or 310.243-2028.

Succeeding in Chemistry • Read all material before coming to class Come to all classes
Do not fall behind
Complete problems following each chapter
Complete all handouts and review exercises
Learn definitions and understand concepts

***All cellular phones, pagers, or similar electronic devices must be “OFF” during lecture or lab, ***

Ringing of electronic devices during class (especially during a quiz or test) may result in the loss of points.
Acknowledgement of Syllabus:

By signing and returning this sheet, I acknowledge that I have read the California State University Dominguez Hills General Chemistry I CHE110, Syllabus for Spring 2014 given by Professor Ko and that I have understood all of its contents.

____________________________________
Signature

____________________________________
Printed full name

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Date (Month/Date/Year)
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Text</th>
<th>Lecture Topic</th>
<th>Quizzes/Assign</th>
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<tbody>
<tr>
<td>1</td>
<td>8/25</td>
<td>1.1-1.5</td>
<td>Introduction, Matter, Measurements</td>
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<td>8/27</td>
<td>1.6-1.10</td>
<td>Significant Figs, Dimensional Analysis</td>
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<td>2</td>
<td>9/1</td>
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<td>Worksheet #1</td>
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<td></td>
<td>9/3</td>
<td>2.1-2.4</td>
<td>Atomic Theory, Nuclear Atom</td>
<td>PS#1 Due, Quiz #1</td>
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<tr>
<td>3</td>
<td>9/8</td>
<td>2.5-2.6</td>
<td>Atomic Mass, Periodic Table, Nomenclature</td>
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<td>9/10</td>
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<td>Worksheet #2</td>
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<td>4</td>
<td>9/15</td>
<td>3.1-3.5</td>
<td>Chemical Equations, The Mole, Stoichiometry, Limiting Reagent, % Yield</td>
<td>PS#2 Due, Quiz #2</td>
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<td>9/17</td>
<td>3.6-3.9</td>
<td>% Comp, Empirical/Molecular Formulas</td>
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<td>Withdraw without &quot;W&quot; Deadline</td>
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<td>5</td>
<td>9/22</td>
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<td>Worksheet #3</td>
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<td>9/24</td>
<td>4.2-4.3.6</td>
<td>Molarity, Dilution, Solution Stoichiometry</td>
<td>PS#3 Due, Quiz #3</td>
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<td>9/29</td>
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<td>Worksheet #4, Review for Exam #1</td>
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<td>10/1</td>
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<td>Exam #1</td>
<td>PS#4 Due</td>
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<td>10/6</td>
<td>5.1-5.4</td>
<td>Thermochemistry, Enthalpy, Heat Capacity</td>
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<td>10/8</td>
<td>5.4-5.8</td>
<td>Calorimetry, Hess’s Law, ΔHº</td>
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<td>8</td>
<td>10/13</td>
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<td>Worksheet #5</td>
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<td>10/15</td>
<td>6.1-6.7</td>
<td>Gas Properties, Gas Laws, Density, Gas Stoichiometry</td>
<td>PS#5 Due, Quiz #4</td>
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<td>9</td>
<td>10/20</td>
<td>6.8-6.9</td>
<td>Kinetic Molecular Theory &amp; Real Gases</td>
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<td>Worksheet #6</td>
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<td>10/27</td>
<td>7.1-7.6</td>
<td>Quantum Theory, Quantum Mechanics, Bohr Model</td>
<td>PS#6 Due, Quiz #5</td>
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<td>10/29</td>
<td>7.7-7.12</td>
<td>Atomic Orbitals, Electron Configurations, Periodic Properties</td>
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<td>11/3</td>
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<td>Worksheet #7</td>
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<td>Exam #2</td>
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<td>11/10</td>
<td>8.1-8.6</td>
<td>Covalent Bond, Lewis Structure, Resonance, Formal Charges</td>
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<td>11/12</td>
<td>8.7-8.8</td>
<td>Bond Polarity, Bond Energy</td>
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<td>13</td>
<td>11/17</td>
<td>9.1-9.3</td>
<td>Molecular Geometry, VSEPR, Dipoles</td>
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<td>11/19</td>
<td>9.4-9.7</td>
<td>Valence Bond Th, Hybridization, MO Theory</td>
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<td>14</td>
<td>11/24</td>
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<td>Worksheet #8</td>
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<td>11/26</td>
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<td>Thanksgiving Holiday - no class</td>
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<td>10.1-10.4</td>
<td>Liquids, Intermolecular Forces, Properties</td>
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<td>12/8</td>
<td>10.5</td>
<td>Phase Diagrams, Worksheet #9</td>
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<td>12/10</td>
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<td>Comprehensive Final Exam</td>
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