Course Information

- Darren L. Williams, Ph.D. (a.k.a. DW)
  - Office: CFS 317 G, Office hours are 10 to 11 AM, MTWTF, and other times by appointment. Email is the preferred method for making appointments.
  - Contact (936)294-1529, williams@shsu.edu, http://www.shsu.edu/~chm_dlw/, and www.facebook.com/pchem4all
- Lecture will meet in CFS 103 on Monday, Wednesday, and Friday from 11 to 11:50 AM.

Course Description

This course is for chemistry and other science majors who have satisfied these prerequisites:

1. Minimum grades of C in CHM 1311, and MTH 170 or equivalent math.
2. The following topics are studied: chemical changes and laws governing them, gas laws, reactions involving oxygen, hydrogen, acids, bases, and salts, ionization, metathesis, periodic classification, and atomic structure.

Course Objectives

- To gain factual knowledge (terminology, classifications, methods, trends). (IDEA Objective #1)

Enabling Objectives: **Upon successful completion of this course, students will:**

1. State the characteristics of liquids and solids, including phase diagrams and spectrometry.
2. Articulate the importance of intermolecular interactions and predict trends in physical properties.
3. Identify the characteristics of acids, bases, and salts, and solve problems based on their quantitative relationships.
4. Identify and balance oxidation-reduction equations, and solve redox titration problems.
5. Determine the rate of a reaction and its dependence on concentration, time, and temperature.
6. Apply the principles of equilibrium to aqueous systems using LeChatelier's Principle to predict the effects of concentration, pressure, and temperature changes on equilibrium mixtures.
7. Analyze and perform calculations with the thermodynamic functions, enthalpy, entropy, and free energy.
8. Discuss the construction and operation of galvanic and electrolytic electrochemical cells, and determine standard and non-standard cell potentials.
9. Define nuclear decay processes.
10. Describe basic principles of organic chemistry and descriptive inorganic chemistry

Required Textbook and CALCULATOR

- Chemistry: The Central Science 10th Edition, Brown, Lemay & Bursten, Prentice Hall (ISBN:0131096869)
- No cell phone or programmable calculators will be allowed. **Only the TI-30** series calculator will be allowed to be used for the exams in this course.

Table 1: Numerical Average Weighting Factors

Category Scores (0 – 100%)	Weighting Factor
Attendance Score	0.05
Homework Average	0.10
Exam Average (includes final)	0.85

Grading Scheme

The numerical average will be computed according to the weighting factors in the Table 1. Specific letter grade cut-off values are not predetermined because of the semester-by-semester variation of exams, classes, and circumstances. To determine the course letter grade, the student's numerical average will be compared to course requirements, to peer performance, and to the definitions set forth in the University Catalog (http://www.shsu.edu/catalog/scholasticrequirements.html) In an effort to reduce anxiety over grades, Dr. Williams will post TENTATIVE letter grades in the online grade book after each exam. There is no curve until after the final exam. Then, Dr. Williams may elect to curve the grades upward.

Attendance Policy

In accord with university policy, students will not be penalized for absences of up to three hours as long as examinations and other assigned work have not been missed. Table 2 explains the attendance score. Lecture attendance is mandatory, and each student must sign the class roll every day. The student is responsible for signing the roster at the beginning of each class period. Comments: Giving points for attendance is a gift for simply showing up and signing your name on a roster. Students always do better on exams if they actually come to class. Attendance is the pathway to a good exam grade.

Table 2: Attendance Grading Scheme

Number of Absences	Attendance Score
1 to 3	100%
4	80%
5	60%
6	40%
7	20%
8 or more	0%

Forgetting to sign the roster is equivalent to an absence.

Homework Assignments

The homework assignments will be multiple-choice tests using the Blackboard online system. The homework assignments (pdf file) should be printed and worked with pencil and calculator. Do all of your chemistry homework in a single notebook or composition book. *This "Book of Problems" will be a valuable resource for studying and for review in the future when you need to use this material again.*

Once complete, the online test can be taken where the answers can be entered. The electronic test and the hard-copy assignment are identical. The student is encouraged to rework the problems that were missed. The electronic test can be taken three times so a 100% grade on the homework is within everyone's reach. Academic performance on the homework problems is based upon the honor system. The student should have enough self-respect to do their own work. If students depend upon others to tell them which answers to choose, **it is very likely that the cheating student will fail the mid-term exams**.

It is up to the student to check their grades on the Blackboard system. If an online homework test is not properly completed, then the gradebook shows a locked "in progress" in the gradebook. If this lock does not go away after a few minutes, email Dr. Williams as soon as possible to reset the attempt.

The gradebook in Blackboard will be updated after each exam. At that time, Dr. Williams will change the most recent homework grades to the most recent exam grade if the exam grade is higher. *In general, your homework grades can be higher, but not lower than your exam grades.*

Exams

The exam schedule will be continually updated throughout the semester on Blackboard.

BRING A SCANTRON 882-E and a pencil to each exam. The exams and scantrons will remain the property of SHSU as a record of student performance. The students are welcome to compare their exams to the key in DW's office. DW does not give make-up examinations. In the unfortunate case, where a student misses an exam, DW will discuss possible remedies with the student provided that all the following conditions are met:

1. The student was absent on the exam date.
2. The student telephoned in advance or left a voice mail message or email message alerting Dr. Williams to their absence along with a description of why they are to miss the exam. (All information will be kept in strict confidence.)

DW reserves the right to modify the grading scheme such that the final exam may compensate for the missed exam course percentage. DW also reserves the right to assign an exam grade of 0% should he deem the absence was not properly handled or was unjustified. Appeals will be handled in accord with University Policy Statement 900823, Academic Grievance Procedures for Students.

The 2-hour final **comprehensive** exam will most likely be on Wednesday, December 14, 2009 from 11 AM to 1 PM.

Tell your family and friends that you CANNOT leave town early for vacation or work or leadership conferences or rodeo finals or anything. **Modify your plans NOW to fit your academic schedule**. The final exam will be weighted equally with the other exams in computing the exam average.

Employment and Scholarship Recommendations

For Your Information: Dr. Williams only writes recommendation letters for students who make a B or better. Additionally, it is very difficult to write recommendations for students who sit in the back of class, never participate, and essentially remain anonymous. Get to know your professors.

Academic Dishonesty

Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The University may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating, plagiarism, and the abuse of resource materials.

DW reserves the right to ask for an oral explanation of work submitted to determine if the student actually performed the work. This should not be construed as an accusation of academic dishonesty. Only in cases where the student cannot demonstrate the most basic explanation of what they submitted as their original work will there be any question of dishonesty.

Additional Disclaimers: Rules of Conduct Cell phones must be turned off before class begins. Students are prohibited from **text messaging**, emailing, Facebooking, or engaging in any other form of distraction. Students who are especially disruptive will be asked to leave and may be reported to the Dean of Students for disciplinary action. **Americans with Disabilities Act:** No disability accommodations can be made until the student registers with the Counseling Center. **Visitor Policy:** Dr. Williams will decide whether or not visitors will be allowed to remain in the classroom. **Religious Holidays** University policy (APS 861001) and state law (Section 51.911(b), Texas Education Code) require that a student who is absent from class for the observance of a religious holy day fill out form (see APS 861001) in the first week of class. This

form must be signed by the instructor, the student, and approved by the departmental chair.