

1. **DOCUMENT TITLE:** COURSE SYLLABUS
2. **COURSE NUMBER/DESIGNATION/SECTION:** CHM 119.1x
3. **COURSE TITLE:** General Chemistry II: Laboratory
4. **CREDIT HOURS:** 1
5. **SEMESTER, YEAR:** Fall 2007
6. **LOCATION OF CLASS MEETING:** Sam Houston State University Campus, CFS
7. **MEETING TIMES:** Afternoons Monday -Thursday
8. **OFFICE LOCATION:** TBA for faculty office hours.
9. **OFFICE HOURS:** To be established by teaching assistant
10. **OFFICE PHONE, E-MAIL ADDRESS, WEB-SITE, ETC.:** We use Blackboard and e-mail for all official communication.

#### 11. COURSE DESCRIPTION

Descriptive chemistry, equilibria, kinetics, thermodynamics, electrochemistry, and oxidation-reduction reactions are presented. Prerequisite: Minimum grades of C in CHM 138, C118 and MTH 170. Fall, Spring, Summer II. Concurrent enrollment in CHM 139 is strongly recommended.

#### 12. COURSE OBJECTIVES

Chemistry 119 is the companion course to Chemistry 139 so the same topics and requirements are assumed. Chemistry 139 is a continuation of Chemistry 138 thus the material covered in that course, to include formula and equation stoichiometry, periodic properties of the elements and chemical reactivity, and solution and gas phase chemistries, constitute required material in this course. The student will build on the successful completion of Chemistry 138 by mastering the principles and concepts associated with descriptive chemistry, equilibria, kinetics, thermodynamics, electrochemistry, and oxidation-reduction reactions. The student will continue to develop his/her skills related to solving abstract problems in chemistry and applying chemical principles to enhance the understanding of the world around us.

#### 13. TEXTBOOK(S) AND ALL REQUIRED SUPPLIES

**What text is required?** Chemistry 119, General Chemistry Laboratory Manual by The Faculty and Student in the Department of Chemistry and Chemistry: The Central Science by Brown, Lemay, and Bursten, 10th Ed. (the 9<sup>th</sup> will do)

**What kind of calculator is required?** The TI-30x is at minimum a good scientific calculator. Calculators or PDAs having the capacity to store alphanumerics (names, formulas and equations) will be disallowed. You can't use them on exams. The only calculator allowed on exams is a TI-30 series. This does not include a TI-36 series, only ones with "30" in the name. These are the same ones required in your CHM138/139.

**Is any other equipment required?** Each student must purchase approved goggles for eye protection. Your midterm and final exams each require a Scantron 882-ES and #2 pencil(s).

## 14. COURSE REQUIREMENTS

- **Exams**

**What are the test like?** The test will **NOT** be simply multiple-choice, Scantron exams. There are basically several types of exercises: nomenclature (formulas and names), predicting products and writing chemical equations (knowing about chemicals) in a long-answer format and traditional chemistry problems relating to comprehensive laboratory simulations and conceptual material illustrative if second semester chemistry in a multiple-choice format.

- **Grading Plan**

**How is my exam “grade” to be determined?** The exams are scaled from the percent correct. The best set of students in the class determine the domains of the actual scaling equations used on each exams. Usually our best students are performing at the >90% level. It is expected that minimally “passing” students must perform at about half of that of our “best” students. The anticipated scaling will occur as follows: >88% as 4.99-4.00 scaled, 87-76% as 3.99-3.00, 75-64% as 2.99-2.00, 63-50% as 1.99-1.00 and <47% as <0.99 scaled or a failing grade. The scaled numbers correspond to letter grades familiar to us through the university GPA scale.

**How is my laboratory activity “grade” to be determined?** The laboratory performance grades are determined by your section’s teaching assistant. He or she will grade each week’s activities and these should include a quiz or in-class activity, the laboratory report and subjective assessment of how you did that day in the lab to include points attributed to lab space cleanliness and equipment care. Your teaching assistant is strongly encouraged to provide meaningful feed back to you the students. This means that he or she should have a weekly grade distribution that is over at least three letter grades. The point distribution returned to the class each week should reflect a reasonable range, not all A’s, 9ans B’s! (In that case the professor will be forced to reassign the grades.) So make certain that your T.A. gives you meaningful laboratory grades. This information should include a ratio of points-received to points-possible, your class rank, and his/her estimate of daily activities (A, B, C, or 4.3, 2.2, etc.) The lowest weekly lab grade will be dropped as a means accommodate the university make-up policy. At the end of the semester these composite laboratory grades, expressed as a percent of the total points the TA used that semester and a grade on the GPA scale, will be provided to the supervising faculty member who has the authority and responsibility to assign course grades. Thus, there are three kinds of “grades” for you to consider, lab grades, exam grades and your course grade.

**How is my course grade to be determined?**

- Your T.A. does not determine the course grade, he/she only provides a distribution of points such that the professor in charge of all the laboratory sections will generate your course grade.
- Your course grade will be weighted 25% weekly laboratory activity average, 37.5% mid-term exam and 37.5% final exam. This means that a student who thinks he/she got an “3.5” average on lab work but low “1.4” average on exams will probably get a D for a course grade.

**NOTE: The course grade is a weighted average: 75% exams and 25% lab activity!**

- If your TA provides his or her lab grades such that all students look the same, then your laboratory activities grade will be scaled such that your section’s central tendency for laboratory activities grade matches the section’s central tendency on the exams and such that your section’s high laboratory activities grade matches the section’s exams. (Scaling considers central tendency and range.)

**A section without any A’s on the exams, should not expect any A’s as course grades.**

- Once again, your section is to be evaluated relative to other sections on the midterm and final because these assessments are the only collective assessments taken by all the students in the course. This is the mechanism used to scale the sections to each other using the two common data sets. It is the only *fair* way to compensate for different TA’s and TA evaluation styles.

• Hint: You should pay attention to your standing in class, ( ex. upper quarter, above the median, or bottom quartile.) All students are not "above average". How do you stand? Ask your T.A. ; demand a detailed answer.

- **Assignments**

Students are expected to turn in the assigned in-class work at the end of the laboratory period when the TA calls for the work. It is not to be turned in early. It is not to be turned in the next lab period. If the TA assigns out-of-class work, then that work is due at the very beginning of the next laboratory period. The TA is instructed to NOT accept late work.

- **Attendance**

*The Faculty Handbook provides that regular and punctual class attendance is expected of each student at Sam Houston State University and that it is expected that each faculty member will keep a record of student attendance. A student shall not be penalized for three or fewer hours of absences when examinations or other assigned classwork have not been missed. Each instructor is obligated to clarify policy regarding absences in writing at the beginning of the semester and summer session.*

- Excessive absences, tardiness, or leaving early will adversely affect the student's grade.
- There are no "excused absences" as attendance is a binary matter: present or absent.
- It is the student's responsibility to sit in the assigned seat if assigned seats have been given.
- It is the student's responsibility to register only his or her attendance. Failure to do so constitutes academic dishonesty and the period counts as an absence for all involved.
- Students will be allowed three class hours of absence without penalty. Any absences over this will result in grade reduction in the course grade. One lab grade will be dropped in computing the weekly laboratory average to accommodate this absence policy. Just one lab is dropped.
- The course grade will be lowered one-half letter grade for each absence over three class hours.

- **What happens if I miss an exam?** There are no excused exams or delayed exams, just missed exams. If you miss an exam it is your responsibility to notify me so you will be allowed to use the comprehensive final to replace the exam that you missed. Thus, the final's grade will effectively count twice. The final may not be used to replace low test grades!!! If you miss two exams; see you next semester!!! (Note: There are no make-up quizzes or late homework or late labs.)

- **Academic Honesty**

*The Faculty Handbook states that the University expects all students to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. Furthermore, the University and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials.*

If the faculty member or his official representative concludes that submitted academic work was totally or partially derived by dishonest means then that material will receive a zero grade and resubmission will be disallowed. At the time of the academically dishonest behavior, at the instructor's or his representative's discretion, the behavior shall be designated disruptive and the student will be asked to leave the class.

- **Proper Classroom Demeanor/Rules of Conduct**

Students will refrain from behavior in the classroom that intentionally or unintentionally disrupts the learning process and, thus, impedes the mission of the university. Please turn off or mute your cellular

phone and/or pager before class begins. Students are prohibited from eating in class, using tobacco products, making offensive remarks, reading newspapers, sleeping, talking among each other at inappropriate times, wearing inappropriate clothing, or engaging in any other form of distraction.

One behavioral requirement that is often overlooked by students is the expectation that they will perform in a professionally responsible manner at all times. A specific example of this is noting that you are responsible for the cleanliness and neatness of your work area. If a student fails to return his or her equipment to the drawer, or if he/she leaves trash and/or spilled chemicals and debris in the assigned individual work space or around the collective work space, like the balances, then the TA is instructed to reduce that student's weekly laboratory grade by 50% or 100%. This is not only a professional issue but it is a safety issue.

Inappropriate behavior in the classroom that diminishes the quality of the educational experience for the class as a whole shall result in, minimally, a directive to leave class or being reported to the Dean of Students for disciplinary action in accordance with university policy. If a student is dismissed during any time in the lab period then that class period will be counted as an absence and the weekly grade recorded as a zero.

#### 15. OTHER ADMINISTRATIVE MATTERS

- **Americans with Disabilities Act:** According to University policy, requests for accommodations must be initiated by the student. A student seeking accommodations should go to the Counseling Center and Services for Students with Disabilities (SSD) in a timely manner. Every semester that the student desires accommodations, it is the student's responsibility to complete a Classroom Accommodation Request Form at the SSD office and follow the stated procedure in notifying faculty. Accommodations for disabled students are decided based upon documentation and need on a case-by-case basis by the Counseling Center. The class instructor will support the center's directives.
- **Religious Holidays:** University policy states that a student who is absent from class for the observance of a religious holy day to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence. The student, not later than the 15<sup>th</sup> calendar day after the first day of the semester, or the 7<sup>th</sup> calendar day after the first day of a summer session, must notify the instructor of each scheduled class that he/she would be absent for a religious holy day.

#### 16. MISCELLANEOUS (AS NEEDED OR DESIRED)

- **Visitors in the Classroom**  
*Unannounced visitors to class must present a current, official SHSU identification card to be permitted in the classroom. They must not present a disruption to the class by their attendance. If the visitor is not a registered student in this class, [visitation] is at the instructor's discretion, thus the visitor will NOT be allowed to remain in the classroom.*
- **How important is laboratory safety?** Your safety in this lab is our highest priority. As you learn through your experiences think "safety first!" After all, "Only a Dumb Bunny Depends on Luck to Prevent Accidents"
- **What about chemical wastes?**
  - You must think safety, safety, safety!! If you have any questions about safe procedures and safe handling of materials ask!
  - This includes safe disposal of the chemicals used in each lab period. Do not toss stuff down the sink or into a trash can!!!
  - For each lab period your T.A. will provide properly labeled waste containers for your section. He/she will provide instructions at the beginning of the period for dispensing with wastes particular to that experiment..

-You must follow the instructions of the laboratory T.A. such as experimental procedure or waste disposal, and failure to comply or cooperate with your instructor can result in expulsion from that lab thus forfeiture of the points for that day.

**What are “Breakage Fees”?**

-You must check in and check out of this laboratory section. FAILURE TO CHECK OUT OF YOUR DRAWER WILL RESULT IN A \$25.00 CHARGE IN ADDITION TO ANY BREAKAGE THAT HAS ACCRUED. Both lab partners must participate in this process.

-You are responsible for being prepared for the lab which includes having read the exercise, and bring the necessary supporting material.

-Drawers left unlocked will be locked and a \$5.00 locking fee assessed. Lost keys will result in charges invoiced to the department from the university locksmith (\$25.00-\$50.00). Major pieces of the equipment and glassware that you signed for during check-in are yours for the semester and your responsibility. “Stuff” that is not there at check-in is assumed to be lost or broken. You will be charged the replacement cost. Charges over \$25.00 are reported to the university and you will be required to pay this fee before enrollment the next semester or prior to release of any transcripts.

- **Is there tutoring or are there help sessions?** Yes, CHM 138/139 has regularly scheduled sessions provided by the teaching assistants who provide supervision in the labs. These are thus peer-directed activities where students may feel more comfortable asking questions. If you become a student with other than A or B performance on the exams, it is expected that you will attend one of these sessions each week.

## 17. COURSE OUTLINE

### Chemistry 119

Spring 2007

Section: \_\_\_\_\_

Teaching Assistant: \_\_\_\_\_

TA's Office: \_\_\_\_\_

TA's Office Hours: \_\_\_\_\_

**TEXT: Laboratory Manual for Chemistry 119** by the Department of Chemistry

**Chemistry: The Central Science** by Brown, Lemay, and Bursten, 9th Ed

<b>Week of</b>	<b>Laboratory Activity</b>	<b>Assigned Readings (in Brown, LeMay, et.al)</b>	<b>Lab Experiment</b>
Sept. 10	Check-in, Safety & Policies, Review	Sec.2.6 - 2.8, 3.2, , 4.2 - 4.4	Nomenclature & Reactivity
Sept. 17	Titration Lab	Sec. 4.5 - 4.6	Exp. 1.
Sept. 24	Colorimetry Lab	Sec. 4.5, pg. 532 (Fig. 14.5)	Exp. 2.
Oct. 1	LeChatelier's Principle	Chapter 15	Exp. 3.
Oct. 8	Ka of Acids and Bases and Equilibrium Dry-lab	Sec. 16.6-16.10	Exp. 6.
Oct. 15	<b>Midterm Exam</b>	<b>Midterm</b>	<b>Midterm</b>
Oct. 22	Qualitative Analysis	Sec. 17.6 - 17.7	Exp. 4 & 8.
Oct. 29	Copper Tartrate	TBA	Exp. 7
Nov. 5	Specific Heat	Sec. 17.1, 17.4 - 17.5	Exp. 9
Nov. 12	Nernst Relationship	Sec. 20.1 - 20.8	Exp 10
Nov. 19	Thanksgiving Week	No Labs	No Labs
Nov. 26	<b>Final Exam, Check-out</b>	<b>Final Exam</b>	<b>Final Exam</b>

**You are required to go to Blackboard to obtain the full Syllabus for this class. It include a detailed description of the grading procedures and course expectations. You are required to wear safety goggles at all times. Bring them or buy them the first day, you will need them for the titration lab.**