Chemistry 2335
Quantitative Analysis
Syllabus for Fall 2009

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Prerequisites: CHEM 1441/1442 will be drawn on heavily. It is highly unlikely you will be successful in CHEM 2335 if you are not familiar with the material from those courses. In addition, a solid foundation in basic algebra is required (as a minimum, you should know how to solve quadratic equations, systems of two equations in two unknowns and perform linear regressions using your calculator).

Class Schedule: M, W, F: 10:00-10:50 a.m. – Rm 125 Science Hall (SH)
Attendance: Attendance is critical! (See below)

Exams: 4 Tests - see below
Final (Comprehensive)
All exams emphasize problem solving.

Description and Goals of the Course: Each of the following topics will be covered during the course. You will be expected to develop insight into the chemical basis of each topic AND be able to set up and work problems related to each section. Problems from the text will be suggested to develop the skills needed.

Module 1: Chapters 1, 3, 4, 5, Chapters 6, 8, 13
Measurements, error analysis, statistics, calibrations, chemical equilibria, activity, systematic treatment of coupled reactions and equilibria, the use of spreadsheets.

Module 2: Chapters 9, 10
Monoprotic acid-base equilibria, polyprotic acids and bases.

Module 3: Chapters 14-15
Fundamentals of electrochemistry and electroanalysis.

Tools for Success
Disciplined study is the single most important factor critical to your success in this course. It is essential that from the beginning of class, you commit yourself to keeping up with the material being covered. It is very difficult to “recover” from getting even one week behind in the course material. If you are having trouble with the material, deal with it immediately.
Attention to the following list of suggestions will ensure your success in this course:

1. Prior to class, read the chapter that will be covered.
2. Attend every lecture.
3. Review your lecture notes after each class. Correct obvious errors and note topics, which require further study or clarification.
4. Work all of the suggested homework problems. Do not look up the answer until you have given your best effort to solve the problem on your own.
5. Spend the necessary amount of time studying after each lecture. The rule of thumb for succeeding in Chemistry is three hours of study for every hour of lecture.
6. Don't procrastinate. These concepts take time to sink in, and you may have to practice these exercises over a period of many days in order to master the necessary skills.
7. Form a study group. This is your first avenue for getting help. Be able to communicate with each other on short notice, not just before class.

Tests, Finals, Grades
There will be four (4) one-hour tests interspersed throughout the semester. These will count toward 69% of the total grade (low grade dropped out of the four). The comprehensive final will carry 31% of the total grade.

Final Date & Time: Monday, December 7, 2009 - 8:00 – 10:30 a.m.
No tests will be postponed under any circumstances; no make-up exams will be given. It is the student's responsibility to take these tests on the specified days. Similarly, the Final Examination date is fixed by the University and cannot be made-up on another day.

The following grade scale gives an approximate indication of the letter grade – overall score correlation.

<table>
<thead>
<tr>
<th>Numerical Score</th>
<th>Letter Grade</th>
</tr>
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<tbody>
<tr>
<td>85 and above</td>
<td>A</td>
</tr>
<tr>
<td>70-84</td>
<td>B</td>
</tr>
<tr>
<td>60-69</td>
<td>C</td>
</tr>
<tr>
<td>46-59</td>
<td>D</td>
</tr>
<tr>
<td>45 and below</td>
<td>F</td>
</tr>
</tbody>
</table>

Dropping the Course: When dropping the course, YOU are responsible to see that all the proper paperwork is done by checking with the Chemistry Department. Failure to follow these instructions will result in grade of “F”.

Drop for non-payment of tuition: If you are dropped from this class for non-payment of tuition, you may secure an Enrollment Loan through the Bursar's Office. You may not continue to attend class until your Enrollment Loan has been applied to outstanding tuition fees.

Grade Replacement Policy: Students enrolling in this course with the intention of replacing a previous grade earned in the same course must declare their intention to do so with the registrar no later than Census Date of the same semester in which they are enrolled.
Pass/Fail: If P or F is a grade option in this class and you intend to take this class for a pass/fail grade instead of a letter grade, you MUST inform me, through the necessary paperwork, **BEFORE** the census date.

Bomb Threat Policy: In the event of a bomb threat to a specific facility, University Police will evaluate the threat. If required, exams may be moved to an alternate location, but they will not be postponed. UT-Arlington will prosecute those phoning in bomb threats to the fullest extent of the law.

Americans with Disabilities Act
The University of Texas at Arlington is committed to the spirit and letter of federal equal opportunity legislation. The Americans with Disabilities Act (ADA) provides those with disabilities with the same opportunities as all citizens.

If you require an accommodation based on disability, I would like to meet with you in the privacy of my office, during the first week of the semester, to make sure you are appropriately accommodated.

Academic Dishonesty:
All students are expected to pursue their scholastic careers with honesty and integrity, and the Department of Chemistry and Biochemistry will not tolerate academic dishonesty in any form. “Scholastic dishonesty includes but is not limited to cheating, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.” (Regents’ Rules and Regulations, Part One, Chapter VI, Section 3, subsection 3.2, Subdivision 3.22)

Examples of academic dishonesty include:
- exchanging answers or information during a test or Final
- looking at another student’s paper during a test or Final
- bringing unapproved notes in any form into the test or Final, including written notes (crib sheets), digitally stored information (including formulas, constants, alpha-numeric material or text), or notes stored in any other medium
- looking at a book or other unapproved source during the test or Final

During exams, students are not allowed to use any hand-calculators or computers which possess the capability of storing alpha-numeric or textual material. If the instructor allows the use of calculators on a particular test, then students may only use scientific calculators which are non-programmable. In addition, students are not allowed to have access to digital pagers during any exam. Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and dismissal from the University. Since dishonesty harms the individual, all students and the integrity of the University, policies on scholastic dishonesty will be strictly enforced.
Other Resources Available
Science Learning Center: The Science Learning Center, located in Room 105 of the Life Science Building, provides a variety of materials for assisting Chemistry students.
SOAR Cost Share Tutoring: SOAR (Students Obtaining Academic Readiness) is located in 132 Hammond Hall and offers free academic support for qualifying students and low-cost services for all students, including Cost Share Tutoring.

Lab syllabus

Students with Pregnancies: For students who are pregnant, it is recommended by the Chemistry and Biochemistry Dept. that you do not enroll into a chemistry lab at this time. If you become pregnant during the semester, we recommend dropping the course as soon as possible and special provisions will be made to assist you in finishing the course at a later date. Please see your faculty instructor for assistance.