

Chemistry 341 - Syllabus

Prof. J.L. Yarger & M. Levitus, Elem. Phys. Chem., Spring 2008

January 15, 2008

General Information:

- Class: TTH 9:40-10:55 AM
Physical Sciences Building (PS), Room H153 (Tempe)
3 credit hours, ASU Schedule Line # 10956
- Teachers: Course Instructors: Dr. Jeff Yarger, ISTB1 L2-63 (& PSB251/255)
jeff.yarger@asu.edu
Dr. Marcia Levitus, Biodesign A124,
Marcia.levitus@asu.edu
Teaching Assistants: Kaushik Gurunathan, Biodesign
Kaushik.Gurunathan@asu.edu
- Office hours: Yarger: 8:00-9:00 AM, T, 11:00 AM - Noon, Th, or by appointment.
Levitus: TBA (2nd half of the semester)
TA Office Hours: 3:30-4:30PM, Fri., in PS-H137.
- Tutorial Rm: Learning Resource Center (LRC) is located in the Physical Sciences Bldg.
Room H137. It is open M-Th 8:30AM-9:30PM and Friday from 9-5PM.
- Web Sites: <http://myasucourses.asu.edu>
<http://yarger.asu.edu/chm341/>
<http://www.public.asu.edu/~mlevitus/chm341/>

Textbooks and required material

1. *Physical Chemistry for the Biosciences*. by Raymond Chang.
2. A calculator with capabilities for square root, logarithm, and exponential notation operations.
The calculator will be used for exams, quizzes and homework.

Lectures

Lectures are designed to outline, discuss, and demonstrate principles presented in your textbook. Lecture notes will be posted on the class web site.

Homework

Homework will be assigned in class and posted on the course web site. Solutions will be provided one week after the homework has been posted. Homework will not be graded, however, similar questions and concepts will be used on quizzes and exams.

Quizzes

Quizzes will be posted and graded on the course website. In order to take these quizzes, it will be necessary to login to BlackBoard (myasucourses.asu.edu). Instructions for creating a BlackBoard account and logging into the class site are provided on the course web site. Quizzes will count for 20% of your total grade and will be given periodically throughout the semester. ALL QUIZZES WILL BE ADMINISTERED USING ASU BLACKBOARD.

Exams

Exam 1:	Tues., Feb. 12	9:40-10:50 AM	PS-H153	200 pts.
Exam 2:	Thurs., Mar. 6	9:40-10:50 AM	PS-H153	200 pts.
Exam 3:	Tues., Apr. 8	9:40-10:50 AM	PS-H153	200 pts.
Final Exam:	Thurs., May 1	7:40-9:30 AM	PS-H153	200 pts.

Makeup Exams: If you know you will miss an exam **and have an official University excuse** (from the Office of Student Affairs), you may schedule a time to take the exam **prior** to the official exam date. After the exam has been given to the class, no makeup exams will be allowed.

Grades

To receive a grade in this class you must be registered on Blackboard. All grades will be recorded in Blackboard and each student can view his or her individual test and quiz scores. See the course web site for details. There is a maximum of 1000 points and is divided up as follows:

Three semester exams (200 pts. each)	600 pts
Quizzes (25 pts each, best 8 quiz scores)	200 pts
Final Exam	200 pts
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Course total	1000 pts

The following list provides the breakdown of grades. *There will be no curve or scaling.*

A+	950 pts	C+	650 pts
A	900 pts	C	600 pts
A-	850 pts	C-	550 pts
B+	800 pts	D	400 pts
B	750 pts	F	Below 400 pts
B-	700 pts		

Academic Dishonesty

As college students you are expected to observe high standards of intellectual integrity and honesty. Plagiarism of the work of fellow students or authors on laboratory reports, or cheating on exams will result in an immediate dismissal from the class with a failing grade.

Tentative Lecture Outline

Date	Lecture Topic	Comments
T 1/15 Th 1/17	Course Introduction (Syllabus on website) Ch 2: Properties of Gases	Review Chpt 1&2 Material Freshman Chemistry Review
T 1/22 Th 1/24	Ch 3: The 1 st Law Ch 3: The 1 st Law	Conservation of Energy, work and heat Calorimetry & Thermochemistry
T 1/29 Th 1/31	Ch 3: The 1 st Law Ch 4: The 2 nd Law	Energy and Enthalpy Entropy & 3 rd law
T 2/5 Th 2/7	Ch 4: The 2 nd Law Ch 4: The 2 nd Law	Gibbs Energy & Chemical Reactions Gibbs Energy & Phase Equilibria
T 2/12 Th 2/14	Exam #1 Ch 5: Solutions	PS-H153, Chpts 2-4 Partial Molar Quantities & Mixtures
T 2/19 Th 2/21	Ch 5: Solutions Ch 5: Solutions	Real Solutions & Colligative Properties Electrolyte Solutions & Ionic Activity
T 2/26 Th 2/28	Ch 6: Chemical Equilibria Ch 6: Chemical Equilibria	Gas and Liquid Systems Heterogeneous Equilibrium
T 3/4 Th 3/6	Ch 6: Chemical Equilibria Exam #2	Bioenergetics PS-H153, Chpts 5-6
T 3/11 Th 3/13	Spring Break Spring Break	No class No class
T 3/18 Th 3/20	Ch 7: Electrochemistry Ch 7: Electrochemistry	Electrochemical Cells Electrochemical Thermodynamics
T 3/25 Th 3/27	Ch 7: Electrochemistry Ch 8: Acids & Bases	Biological Electrochemistry General Acid & Bases
T 4/3 Th 4/1	Ch 8: Acids & Bases Ch 8: Acids & Bases	Buffer Solutions Titrations & Amino Acids
T 4/8 Th 4/10	Exam #3 Ch.9: Chemical Kinetics	PS-H153, Chpts 7-8 Reaction Order and Rates
T 4/15 Th 4/17	Ch.9: Chemical Kinetics Ch.9: Chemical Kinetics	Complex Reactions Reaction Rate Theory
T 4/22 Th 4/24	Ch.10: Enzyme Kinetics Ch.10: Enzyme Kinetics	Catalysis Michaelis-Menton
T 4/29 Th 5/1	Ch.10: Enzyme Kinetics FINAL EXAM	Enzyme Inhibition PS-H153 - 7:40 - 9:30 AM, Chpts 9-10