CHM 113 – Syllabus
Professor Yarger - Fall 2008
Lecture 70772: TTH 7:30 – 8:45 AM in PS H-150 (ASU-Tempe)

Instructor: Professor Jeff Yarger
Office: Interdisciplinary Science & Technology Building I (ISTB1), Room 470
Skype Phone: (623) 623-9913 (Adm. Assistant, Nita – 480-965-0673)
Email: jeff.yarger@asu.edu (Adm. Assistant, Nita - Waunita.Parrill@asu.edu)
Web Site: **http://myasucourses.asu.edu** (CHM 113: General Chemistry I (2008 Fall) – Prof. Yarger)
http://yarger.asu.edu (Prof. Yarger's general website)
Office Hours: M 10:30-11:30 AM and TTH 8:45-9:30 AM.

Course Description
CHM 113 is a 1st semester general chemistry course covering chapters 1-11 and 13 in *Chemistry, The Central Science 11th Edition* by Brown, LeMay, and Bursten. This course will cover the nature of atoms and elemental substances, the combination of atoms to form molecules and compounds, the interactions between atoms and molecules, chemical bonding models, relationships between chemical and physical properties, thermochemistry, and solutions. More importantly, you will have the opportunity to practice your critical thinking skills and learn how the macroscopic world around you can be explained by the microscopic world underneath.

If you are enrolled in this course, I will assume that you have had at least a year of high school chemistry or a semester of college chemistry (like CHM 101). If not, you may be better off in CHM 101 before trying the CHM 113/116 sequence.

Required Materials:
- Custom Package *(available in the ASU bookstore)* which contains:
  - *Chemistry, The Central Science, 11th Edition*, Brown, LeMay, and Bursten, 2008.
  - Access code to the Mastering Chemistry Online Homework Center
  - Student Study Guide
  - Solutions Manual (for end-of-chapter exercises)
  - A blank, carbonless lab notebook
- *Laboratory Inquiry in Chemistry*, 3nd Ed. Bauer, Birk, & Sawyer, 2008, Brooks/Cole
- Lab safety goggles
- Scientific Calculator - A good calculator capable of basic math and exponential functions will be needed on homework, quizzes, and exams.

All students are required to be enrolled in three course components: Lecture, Recitation, and Lab. All of these components are slightly different in format, but all three are crucial to mastery in the course. Instructors and TAs are responsible for the Recitation and Lab Periods during the meeting times below:

Course Grading

Course letter grades will be assigned according to your percentage out of 950 possible points:

Assignment	Points
Midterm Exams (3), drop lowest	400
Final Exam	200
Laboratory Work	130
Recitation Work	120
Online Homework	100
TOTAL	950

% of Total Points	Point Total	Letter Grade*
96-100	912+	A+
92-95.9	874-911	A
88-91.9	836-910	A-
84-87.9	798-835	B+
80-83.9	760-797	B
76-79.9	722-759	B-
72-75.9	684-721	C+
64-71.9	608-683	C
52-63.9	494-607	D
below 52	<494	E

Course Assignments are described below in more detail:

- ***Midterm Exams (400 points):*** Three 200-point exams will be given during the regular semester. Midterm exams will consist of multiple-choice questions. Scantron forms will be provided. The lowest exam score will be dropped. In general, only material covered since the last exam will be included. However, because the course content builds throughout the semester, you shouldn't forget what you've learned.

- ***Final Exam (200 points):*** The final exam will consist of 50 multiple choice questions worth 4 points each. The final exam is cumulative and will cover material from all Midterm Exams.

- ***Laboratory Work (130 points):*** Lab grades are described later in this syllabus.

- ***Recitation Work (120 points):*** These group activities will be performed in the new Chemistry Collaborative Learning Center (CCLC) in PS H-135. Your recitation instructors will describe the format of this class component at your first meeting.

- ***Online Homework (100 points):*** Homework has been assigned through the online *Mastering Chemistry* package. Your license to use the system is included with your textbook. There will be an online homework set for each chapter covered. The lowest two homework scores will be dropped. For additional practice, it is strongly recommended that you complete all the in-chapter exercises and sample problems as well as some additional problems at the end of each chapter. Solutions to many of these exercises can be found in your textbook and the bundled solutions manual.
  The dates the materials are available and the due dates for the online assignments are shown below:

Tentative Online Homework Availability and Due Dates: (MasteringChemistry Book Website)

Assignment	Available starting (8:00 AM)	Due (11:59 PM)
Introduction to Mastering	Wed, 8/27	Wed, 9/3
Chapter 1	Thurs, 8/28	Wed, 9/3
Chapter 2	Wed, 9/3	Fri, 9/12
Chapter 3	Fri, 9/12	Tue, 9/23
Chapter 4	Tue, 9/23	Fri, 10/3
Chapter 5	Fri, 10/3	Wed, 10/8
Chapter 6	Wed, 10/8	Thurs, 10/16
Chapter 7	Thurs, 10/16	Mon, 10/27
Chapter 8	Mon, 10/27	Mon, 11/3
Chapter 9	Mon, 11/3	Thurs, 11/13
Chapter 10	Thurs, 11/13	Fri, 11/21
Chapter 11	Fri, 11/21	Thurs, 12/4
Chapter 13	Thurs, 12/4	Thurs, 12/11

Attendance Policy/Late Assignments

Attendance at scheduled class lectures, labs, and recitation sections is expected. If you miss three or more laboratory or recitation sessions, you may be assigned a failing grade for the course. There will be no make-up work allowed for any assignment. This means exams, lab work, recitation activities, and homework will not be accepted late. Excused absences for assignments will only be given in the case of a documented, university-sanctioned event, if you are ill enough to see a physician, or if you must leave classes to be with an ailing family member. We are required to ask you to provide written documentation for each of these situations, so please don't feel insulted when we do.

There are NO make-up exams. Therefore, it is imperative that you be present for every exam, and plan travel and other events accordingly. An alternate exam may be administered prior to (this means BEFORE) the scheduled time *only* in cases where travel for university sanctioned business or a function, which cannot be rescheduled, interferes with an exam date. *If such plans do interfere with an exam date, then it is your responsibility to schedule an alternate exam date prior to the scheduled date. This alternate date must be finalized at least three days prior to the scheduled exam date.* An alternate exam will not be administered after the original exam date. In cases of sudden illness or an unanticipated emergency that prevents you from attending a scheduled exam, the missed exam will serve as your one dropped exam score. *This option*

can only be exercised once, because there is only one dropped exam score in this course. Hence, a second missed exam will be scored as a zero. Because all exam dates are scheduled at the beginning of the semester, personal travel, work schedules, traffic, etc. do not constitute grounds for an early exam. Keep in mind that if you end up taking an early exam, you will not benefit from the lecture material, discussion sections, and review sessions that have been planned to help you with the material.

Other Sources of Help

In addition to the office hours listed above, we are available at other times if there are conflicts with your schedule. The Chemistry Learning Resource Center (LRC) located in PS H-137, is staffed Monday through Friday (check their schedule for hours). Teaching assistants and LRC staff members will always be available in the room and can be a valuable resource. CHM 113 students are also eligible to participate in Supplemental Instruction. Supplemental Instruction (SI) is a series of weekly review sessions for students taking historically difficult courses. SI is provided for all students who want to improve their grades.

Attendance at sessions is voluntary. For you the student, it's a chance to get together with people in your class to compare notes, to discuss important concepts, to develop strategies for studying the subject, and to test yourselves before the professor does, so that when he/she does test you, you'll be ready. At each session, you will be guided through this material by your SI leader, a competent student who has previously taken the course and earned an A.

If you attend SI sessions regularly, chances are you will earn at least one letter grade higher than those who did not participate. You will also develop a better understanding of course content and more effective ways of studying.

Your SI Leader will introduce themselves as well as the time, date, and location of SI sessions during the first week of class. The Fall SI schedule for CHM 113 is as follows:

COURSE/PROF	Line #	SI LEADER	SESSION 1	LOCATION	SESSION 2	LOCATION	SESSION 3	LOCATION
CHM 113 A - Yarger	70772	Yuwen, Weichao	T 3-4	PSH 152	T 4-5	PSH 152	TH 3-4	PSH 152
CHM 113 B - Briggs	70781	TBD						
CHM 113 C - Briggs	70790	Cortes, Nisa	M 5-6	LL 2	W 5-6	LL 2	TH 5-6	LL 2
CHM 113 D -Scruggs	70763	Yuwen, Weichao	T 5-6	PSF 101	W 7-8	PSF 101	TH 4-5	PSF 101
CHM 113 E - Scruggs	70798	Conner, Darcie	M 4-5	CDN 68	T 4-5	PSF 101	TH 3-4	PSF 101
CHM 113 F - Magee	70807	Mapes, Kristen	M 4-5	PSH 153	W 4-5	PSH 153	TH 4-5	PSF 166
CHM 113 G - Magee	82080	TBD						

This schedule may change slightly in the next few weeks. Revisions will be announced in lecture. For more information, see: http://studentsuccess.asu.edu/supplementalinstruction

Blackboard Course Site/Course Bulletin Board

There will be several Blackboard sites for this course. The LECTURE site will be used to post exam and recitation scores. The LAB site will be used to post all other scores. The online homework system has its own website and gradebook. All information (announcements, handouts, exam and quiz keys, etc.) will be posted on the course blackboard web site listed on the first page of this syllabus. You should check this site regularly.

STUDENT OBLIGATIONS

Please review the following obligations as set forth in the ASU Student Academic Integrity Policy. All CHM 113 students are expected to abide by these rules and your TA and Instructor will be following a zero tolerance policy. Failure to comply will result in appropriate sanctions up to and including a grade of XE (failure through academic dishonesty). Each student must act with honesty and integrity, and must respect the rights of others in carrying out all academic assignments.

CHM 113 Schedule (Tentative Lecture Days/Topics are approximate)

Week 1	Monday (8/25)	Tuesday (8/26)	Wednesday (8/27)	Thursday (8/28)	Friday (8/29)
Lecture		Course Intro – Ch. 1		Ch. 1	
Recitation	Check-In, Intensive/Extensive Properties				
Lab	Check into lab, Investigation 1 – What are the Safety Concerns in the Lab?				

Week 2	Monday (9/1)	Tuesday (9/2)	Wednesday (9/3)	Thursday (9/4)	Friday (9/5)
Lecture		Ch. 2		Ch. 2	
Recitation	**Labor Day**	Intensive/Extensive Properties (cont.)			
Lab	**Labor Day**	Handout Investigation – How Are Patterns Organized?			

Week 3	Monday (9/8)	Tuesday (9/9)	Wednesday (9/10)	Thursday (9/11)	Friday (9/12)
Lecture		Ch. 2		Ch. 3	
Recitation	←	Indirect Counting			
Lab	←	*Investigation 7 – How Can the Waste be Made Useful?			

Week 4	Monday (9/15)	Tuesday (9/16)	Wednesday (9/17)	Thursday (9/18)	Friday (9/19)
Lecture		Ch. 3		Ch. 3	
Recitation	←	The Limiting Reactant			
Lab	←	*Investigation 14 – How Much Sodium Bicarbonate is in the Mixture?			

Week 5	Monday (9/22)	Tuesday (9/23)	Wednesday (9/24)	Thursday (9/25)	Friday (9/26)
Lecture		**EXAM 1**		Ch. 4	
Recitation	←	Types of Chemical Reactions			
Lab	←	*Investigation 14 (cont.)			

Week 6	Monday (9/29)	Tuesday (9/30)	Wednesday (10/1)	Thursday (10/2)	Friday (10/3)
Lecture		Ch. 4		Ch. 5	
Recitation	←	Energy and Heat Transfer			
Lab	←	*Investigation 9 – How Hot is the Water?			

Week 7	Monday (10/6)	Tuesday (10/7)	Wednesday (10/8)	Thursday (10/9)	Friday (10/10)
Lecture		Ch. 5		Ch. 6	
Recitation	←	Spectroscopy			
Lab	←	*Investigation 19 - What Factors Affect the Intensity of Color?			

Week 8	Monday (10/13)	Tuesday (10/14)	Wednesday (10/15)	Thursday (10/16)	Friday (10/17)
Lecture		Ch. 6		**EXAM 2**	
Recitation	←	Spectroscopy (cont.)			
Lab	←	*Investigation 19 (cont.)			

Week 9	Monday (10/20)	Tuesday (10/21)	Wednesday (10/22)	Thursday (10/23)	Friday (10/24)
Lecture		Ch. 7		Ch. 7	
Recitation	←	Periodic Trends			
Lab	←	*Investigation 23 – Should We Mine This Ore?			

Week 10	Monday (10/27)	Tuesday (10/28)	Wednesday (10/29)	Thursday (10/30)	Friday (10/31)
Lecture		Ch. 8		Ch. 8	
Recitation	←	Bonding			
Lab	←	*Investigation 23 (cont.)			

Week 11	Monday (11/3)	Tuesday (11/4)	Wednesday (11/5)	Thursday (11/6)	Friday (11/7)
Lecture		Ch. 9		Ch. 9	
Recitation	←	The VSEPR Model			
Lab	←	*Investigation 28 – How Much Gas is Produced?			

Week 12	Monday (11/10)	Tuesday (11/11)	Wednesday (11/12)	Thursday (11/13)	Friday (11/14)
Lecture		No Class		**EXAM 3**	
Recitation	←	**Veterans Day Holiday**	Kinetic Molecular Theory (KMT)		
Lab	←	**Veterans Day Holiday**	*Investigation 28 (cont.)		

Week 13	Monday (11/17)	Tuesday (11/18)	Wednesday (11/19)	Thursday (11/20)	Friday (11/21)
Lecture		Ch. 10		Ch. 10	
Recitation	←		Intermolecular (IM) Forces		
Lab	←		*Investigation 24 – Why Do Liquids Evaporate at Different Rates?		

Week 14	Monday (11/24)	Tuesday (11/25)	Wednesday (11/26)	Thursday (11/27)	Friday (11/28)
Lecture		Ch. 11		No Class	
Recitation	←		**Thanksgiving Holiday**		
Lab	←		**Thanksgiving Holiday**		

Week 15	Monday (12/1)	Tuesday (12/2)	Wednesday (12/3)	Thursday (12/4)	Friday (12/5)
Lecture		Ch. 11		Ch. 13	
Recitation	Survey/Check Out				
Lab	Posters/Presentations and Check-Out				

Week 16 / Finals Week	Monday (12/8)	Tuesday (12/9)	Wednesday (12/10)	Thursday (12/11)	Friday (12/12)
Lecture		Ch. 13	Reading Day	No Class	
Recitation	No Recitations				
Lab	No Labs				

Finals Week (cont.)	Tuesday (12/16)
Lecture	**A SECTION FINAL EXAM 7:30-9:20 AM**

**** YOU MUST ATTEND THE FINAL EXAM TIME FOR YOUR SECTION**