

Spring 2007 Professor Laude

CH 302

INFORMATION PACKET

<i>Topic</i>	<i>Description</i>	<i>page #</i>
CH302: A Capsule Summary	One page listing of important facts about this course.	2
CH 302 Course Outline	Day-by-day schedule of lectures, homework and exams.	3
Grading Policy for CH302	How letter grades will be assigned in this course.	4,5
Makeup Exam and Quiz Procedure	What happens when you oversleep.	6
Registering with the Homework Server to Access Your Grades	A Web site where you must register in order to see your grades for the course.	6
Random Musings	How we have our poetry corner.	7
A Calendar Brought to you by the Chemistry Lower Division Offices	Where and when to go about course registration issues like dropping a class.	7
Prerequisites	Can you stay in here if you aren't supposed to be in here? No.	7
Q drops	Will I give Q drops to just anybody? No.	7
Electronic World of CH302: Web Pages	The five URLs you will most want to bookmark.	8
Electronic World of CH302: On-line Lectures Notes	Why not just get Dr. Laude to take your notes for you?	8
Electronic World of CH302: Videos of Dr. Laude's Lectures	In case you have a great desire to download me or to take the course without ever getting up.	8
Sending e-mail and e-mail etiquette	How to get your e-mail answered.	9
Textbook and Supplemental Materials for CH302	Suggested books and course notes for CH302.	10
Regrade Procedure	You know that you bubbled a B and not an E!!!	10
Students with Disabilities	Information on special accommodations.	10
Religious Observances and Make-up Exams	What it says, but let me know by the 12 th class day	10
Suggestions for Studying in CH302	An a la carte approach to how to study in CH302	11,12
A Fable: Active vs Passive Learning	How to get an A in every class.	13
Coming to See your Professor	A final fervent plea to not be afraid to visit me.	13

CH302: A CAPSULE SUMMARY

Course name and number: CH 302: Principles of Chemistry I, Unique 53015

Class meeting time and location: TTh 2 to 3:15 p.m. in WEL 2.224

Instructor information:

<i>Instructor name</i>	Professor David Laude
<i>Office location</i>	W. C. Hogg 2.222A (W.C. Hogg is between Welch Hall and the Tower)
<i>Office phone</i>	471-6176 (You'll get my assistant Judy)
<i>e-mail</i>	dalaude@mail.utexas.edu
<i>Office hours</i>	See below for daily discussion sessions or e-mail me for an individual appointment

Teaching assistant information:

<i>name</i>	<i>e-mail</i>	<i>Principal duty</i>	<i>Office hour</i>	<i>room</i>
Vanessa Williams	vanessa.m.williams@mail.utexas.edu	academic comm.	Tues & Thurs 1 to 2 pm	ESB 238
Neal Miller	w.miller@mail.utexas.edu	worksheets	Monday 11 am to noon	ESB 238
Keren Hilgendorf	kerenhilgendorf@mail.utexas.edu	quizzes and exams	Tuesday 11 am to noon	ESB 238
Mazen Hariri	mazenfh@mail.utexas.edu	grading	Tues & Thurs 3:15 to 4:15 pm	ESB 238

Where to go for information:

<i>location</i>	<i>information provided</i>
General chemistry office, WEL 2.212	course registration information, lost and found
Web: http://courses.cm.utexas.edu/dlaude/	grades, answer key, course notes, handouts

Where to go for help (choose a couple of these to do every week):

<i>day and time</i>	<i>location</i>	<i>activity</i>	<i>usual presider</i>
Sunday 6 to 6:30 pm	Jester Dining Hall	Peer to peer dinner w/ TA	Neal Miller
Sunday 6:30 to 7:30 pm.	Jester A121A	Discussion section	Neal Miller
Sunday 7:30 to 9:30 pm	Jester Dining Hall	Academic community	Neal Miller
Monday 11 am to noon	ESB 238	Office hour	Neal Miller
Monday 2 to 3 pm	WCH 2.222 or WEL 2.304	Discussion section	Dr. Laude
Monday 6:30 to 7 pm.	Kinsolving dining	Peer to peer dinner w/ TA	Mazen Hariri
Monday 7 to 8 pm	LLB 103	Discussion section	Mazen Hariri
Monday 8 to 10 pm	Kinsolving dining hall	Academic community	Mazen Hariri
Thursday 11 am to noon	ESB 238	Office hour	Keren Hilgendorf
Tuesday 12:30 to 1:15 pm	WCH 2.222 or WCH1.120	Discussion section	Dr. Laude
Tuesday 1 to 2 pm	ESB 238	Office hour	Vanessa Williams
Tuesday 3:15 to 4:15 pm	ESB 238	Office hour	Mazen Hariri
Tuesday 6:30 to 7 pm.	Kinsolving dining	Discussion section	Vanessa Williams
Tuesday 7 to 8 pm	LLB 103	Discussion section	Vanessa Williams
Tuesday 8 to 10 pm	Kinsolving dining	Academic community	Vanessa Williams
Wednesday 1 to 2 pm	WCH 2.222 or WAG 214	Discussion section	Dr. Laude
Wednesday 6 to 6:30 pm	Jester Dining Hall	Peer to peer dinner w/ TA	Keren Hilgendorf
Wednesday 6:30 to 7:30 pm.	Jester A305A	Discussion section	Keren Hilgendorf
Wednesday 7:30 to 9:30 pm	Jester Dining Hall	Academic community	Keren Hilgendorf
Thursday 11 a.m. to noon	WCH 2.222 or ESB 333	Discussion Section	Dr. Laude
Thursday 1 to 2 pm	ESB 238	Office hour	Vanessa Williams
Thursday 3:15 to 4:15 pm	ESB 238	Office hour	Mazen Hariri

CH302 COURSE OUTLINE

Lecture	Day	Date	Topic	Chapter	Quizzes and Exams
Physical, Chemical Equilibria and Introduction to Acids and Bases					
1	T	1/16	canceled		
2	H	1/18	Phases and Phase Transitions	8.1 – 8.8	
3	T	1/23	Solubility	8.9 – 8.15	
4	H	1/25	Colligative Properties, Binary Mixtures	8.16 – 8.22	
5	T	1/30	Reactions at Equilibrium	9.1 – 9.6	Quiz 1
6	H	2/1	Equilibrium and Stress	9.7 – 9.11	
7	T	2/6	A/B Theory, pH, Autoprotolysis	10.1 – 10.5, 10.12 – 10.13	Quiz 2
8	H	2/8	Weak Acids and Bases	10.6 – 10.11	
	T	2/13		Chapters 6 - 9	Exam 1, Lectures 2 - 8
Complex Equilibria and Electrochemistry					
9	H	2/15	Polyprotic acids	10.14 – 10.15	
10	T	2/20	Dilute Solutions	10.16 – 10.19	
11	H	2/21	Buffers	11.1 – 11.4	
12	T	2/27	Titrations	11.5 – 11.9	Quiz 3
13	H	3/1	Solubility Equilibria	11.10 – 11.12	
14	T	3/6	Complexation Equilibria	11.13 – 11.16	
15	H	3/8	Redox reactions	12.1 – 12.2	Quiz 4
16	T	3/20	Galvanic Cells	12.3 – 12.6	
17	H	3/22	Standard potentials	12.7 – 12.13	
18	T	3/27	Electrolysis	12.14 – 12.17	
19	H	3/29	Reaction rates	13.1 – 13.3	
	T	4/3		Chapters 10 -11	Exam 2, Lectures 9 - 18
Kinetics, inorganic chemistry and organic chemistry					
20	H	4/5	Integrated Rate Laws	13.4 – 13.6	
21	T	4/10	Kinetic Theory	13.7 – 13.9	
22	H	4/12	Reaction Mechanisms and Catalysis	13.10 – 13.15	
23	T	4/17	Main group Chemistry	14	Quiz 5
24	H	4/19	Main group Chemistry	15	
25	T	4/24	Transition metal Chemistry	16	
26	H	4/26	Organic Chemistry Nomenclature	18	Quiz 6
27	T	5/1	Organic and Biochemistry	19	
	H	5/3		Chapters 13 – 19	Exam 3, Lectures 19-27
	T	5/15		Chapters 6 – 19	Final Exam 9 to noon

GRADING POLICY FOR CH302

Let me make it clear that I view grading as a necessary evil. Personally I'd like to believe you are all here because you can't wait to learn chemistry. Then, after a semester of good solid effort on everyone's part, we'd shake hands and go our separate ways. Maybe a few years from now, you could take some cut-throat exam to see if you knew enough chemistry to go to medical school, and you'd smile as you paused between questions to reminisce about good ol' Dr. Laude: "Gee", you'd think, "I wonder if he's still alive..."

But this isn't the world we've made and consequently I have to have a grading procedure for this class. Here is the general policy:

The grades for the course will be determined by the following rules:

1. Grading will be on a 1000 point scale. Letter grades will then be given on the basis of total points, using the following scale:

900 or more = A; 800-899 = B; 700-799 = C; 600-699 = D; less than 600 = F

2. You may earn your points in the following ways:

- You will take three 180 point in-class exams on new material worth a combined total of 540 points;
- You will take a final exam worth 300 points;
- You will take six 40-point quizzes (with the top four scores counting toward a 160 point quiz total.)

NOTE WELL: I give fair quizzes and exams and people who learn the material do very well on them—average grades are in the high 70s. Therefore, do not expect this scale to be lowered--in common terminology, there will be no curve!!!

Look on the next page to find a couple of options in the grading procedure just to spice things up a bit.

Tabulated summary of examinations times and maximum point scores:

<i>Assignment</i>	<i>Date</i>	<i>maximum points</i>
Exam 1 (Chapters 8-10.13)	Tuesday, February 13	180
Exam 2 (Chapters 10.14 -12)	Tuesday, April 2	180
Exam 3 (Chapters 13-19)	Thursday, May 3	180
4 best scores out of 6 quizzes	fortnightly	160
Cumulative Final Exam (Chapters 6-19)	Tuesday, May 15, 9am to noon	300
Total course points		1000

*****More grading info on the next page*****

DETAILS OF THE INDIVIDUAL COMPONENTS OF THE GRADING PROCEDURE:

EXAMS. Three examinations will be given during the semester on CH302 material. These will be given about once a month during the scheduled class time. Each examination will consist of 30 six-point multiple choice questions that will be machine graded. These exams will look remarkably like your quizzes and worksheets in content.

QUIZZES. Quizzes emphasizing problem solving will be given six times during the semester. The quizzes will occur fortnightly during the last 20 minutes of class. Quizzes will consist of 8 questions worth five points each. The questions will be drawn from the same data bank as the exams and will give you a flavor for what the exams will look like. The quizzes will also offer you the opportunity to keep up with the material so you won't have to cram before exams or the cumulative final. Only your four best of six quizzes will count.

HOMEWORK SETS, WORKSHEETS AND OLD EXAMS. Unlike some of the other CH302 courses, I do not have graded homework—I use in-class quizzes instead. However during the semester I will post on-line a variety of materials including weekly worksheets to assist in preparing for the quizzes and exams.

GRADING OPTIONS IF YOU DIDN'T CARE FOR THE APPROACH DESCRIBED ABOVE:

And now, grading options, because life would be boring if we didn't have the opportunity for a few extra challenges.

OPTION 1 FOR THE HOPELESS OPTIMIST. A grading scheme based on the question, “if I ace the cumulative final can I get an A for the course?” In determining your course grade I will automatically determine whether your score on the final exam is higher than your cumulative average and if it is, I will substitute the exam score. If you score 90% or above on the final, you get an A for the course even if your cumulative course average is below 90%. If you score 80% or above on the final, you get a B for the course even if your cumulative course average is below 80%, etc. This is an excellent option for the student who bombs more than one test, or, believes that he or she has really started to learn the material over the course of the semester but has scores that make an A unattainable. To be eligible for this option, you have to participate in the course by taking at least two of the three exams and at least three of the six quizzes. So don't just wander into the final after a semester in Europe and expect this opportunity.

OPTION 2 FOR THE STUDENT WHO KNOWS TOO MUCH TO BE IN HERE ANYWAY. So you ace the tests and quizzes and really wish you could be home a little earlier for the summer. Is it possible? Yes. Very simply, if you score 90% (630 out of 700 possible points) on the three exams and four of six quizzes, you will not have to take the final. Each year about 20 to 25% of the class achieves this goal.

MAKE-UP EXAM AND QUIZ PROCEDURE

I will offer make-up exams and quizzes only under the following circumstances:

1. You are away from UT as part of a UT-sponsored activity including athletics and UT-sponsored organizations. Check with me if you are uncertain whether your absence qualifies.
2. The quiz or exam is in conflict with a religious observance—notify me by the 12th class day of the conflict.
3. You suffer from a chronic, documented non-academic illness or emergency that results in your missing multiple exams and quizzes. Under these circumstances you should contact me as soon as possible to discuss a course of action.

If you do miss an exam or quiz for any reason other than the three described above, you cannot take a make-up. However you won't be penalized either. The following grading procedure will be implemented for missed quizzes and exams:

- Your lowest two quiz grades are dropped, so whether you are ill or believe that Spring Break should last a solid month, I will only count your highest four scores. Bad scores and missed quizzes for good excuses all mean the same to me, they all count toward the two quizzes you can drop.
- If you miss an exam during the semester, it will be replaced by the equivalent percentage of your score on the final exam applied to the 180-point exam scale. For example, if you miss exam two and get a 66% on the final exam, then you will have a score of 120 points (out of 180) inserted for the your exam 2 grade. Note: this substitution will only be allowed for a single exam. There is no need to inform me of your absence. This will happen automatically.

REGISTERING WITH THE HOMEWORK SERVICE TO ACCESS YOUR GRADES

We will try to have grades for quizzes and exams posted within an hour after the exam. To access your grades you will need to register with the UT Homework Service. Use the instructions below to gain access. Be aware that unless you register with the server, I will never have a record of your having participated in the class. So here is what you need to do:

- Go to the Homework Service URL <https://hw.utexas.edu/> (Please note the 's' on https and the trailing /)
- After the UT EID login, you should be directed to your personalized 'chooseClass' page:
- Use the **'Register as a student'** link to register in your class, with the unique number 53015 (no password)
- When you return to the URL <https://hw.utexas.edu/> you should now see the unique number of your class: 53015 with instructor David Laude
- Click on the unique number of your course and use button **"5.3 manage info (name, phone number, etc.)"** to check your information. Make any necessary corrections

RANDOM MUSINGS

Once a week I will generate my Random Musings—think of them as an updated syllabus. This is the way I keep you up to date on all the details for class administration. It is also the way I perform a poetry corner for the culturally challenged. The musings are posted on the Web site should you miss class or need to look something up. Please read your musings before asking questions I went over with you in class.

A CALENDAR BROUGHT TO YOU BY THE LOWER DIVISION OFFICES

date	significance
Tuesday, January 16	Classes begin. Department adds and drops for lower division courses will occur in WEL 2.212. Any questions regarding your registration should be brought to this office Monday through Friday between 7:30 am and 4 pm.
Friday, January 19	Last day of Official Add/Drop and Late Registration period. Last day to add electronically.
Wednesday, January 31	Twelfth Class Day. Official enrollment count is taken. Last day to drop a course for possible refund.
Monday, February 12	Last day to drop a course without possible academic penalty. (Q drop deadline). In my class I am extending this period by a few days to February 15 so that you can evaluate your results from the first exam.
Monday, March 26	Last day an undergraduate may, with Dean's permission, withdraw from the university or drop a course for academic reasons. Last day to change registration in a course between a letter grade and P/F.
Friday, May 4	Last day of classes.
Monday, Tuesday, May 7,8	No class days.
Tuesday, May 15 9 am to noon	Final exam for CH302.

PREREQUISITES FOR CH302

To enroll in this class you must have received a grade of C or better for CH301 (whether earned through the UT course, transfer credit or placement credit.) If you do not meet this requirements the general chemistry office will drop you from the class on the 4th class day. E-mail me if you think there might be complications that need to be cleared up.

Q DROPS

I am extending the Q-drop deadline in my class and will rubber stamp a Q drop through February 15. After February 15, I will assign a Q only if you are: **actually passing the course with a grade of C or better** or have **a substantiated non-academic reason**. In other words, I will be doing my job according to the rules. If you have friends who are able to extract a Q drop on February 15 in another course even with failing grades, that is between your friend and his or her professor.

ELECTRONIC WORLD OF CH302: WEB PAGES

I have tired of killing trees and have gone paperless in every aspect of my life, including this course. The syllabus you receive the first day of class is the last piece of paper, other than for testing, you will get from me this semester. I will expect you to access the web routinely where you will find my web page, which though kind of drab, is incredibly useful. For example it contains videos of my lectures, detailed notes from the lectures, all quizzes and exams with answer keys, various worksheets and supplements to assist you in learning the material and my random musings, which are posted weekly and detail important course updates. It makes you wonder why you should bother coming to class.

The URL for Laude's 301 and 302 web pages is: <http://courses.cm.utexas.edu/dlaude/>

Other useful URLs include:

Basic chemistry review website:	http://basics.cm.utexas.edu
Textbook web site:	http://bcs.whfreeman.com/chemicalprinciples3e/
HW Service website:	https://hw.utexas.edu/
Academic Communities website:	http://cns.utexas.edu/acp/
Lecture video website:	http://cns.utexas.edu/lectures/

ELECTRONIC LECTURE NOTES

It pains me to watch students copying furiously during a time they should be trying to understand the material, so I will make my lecture notes from class, retyped and organized, available on the web after class each day. In other words, you really can just sit back and try to understand.

VIDEOS OF DR. LAUDE'S LECTURES

There are cameras in the room recording my every move so that a video of each of my lectures can be made available to the class. This will be handy for those of you who have to miss a class or want to revisit a difficult concept that I have eloquently explained. I guess it is also a way to take the course without ever leaving your bedroom.

To access the lectures, go to

<http://cns.utexas.edu/lectures/>

and click on my course. You will be prompted for a user name is the course number: **ch302tth** and a password, which is the unique number: **53015**. To view the lecture you will have to download the EnvivioTV™ Viewer Application plugin that has a link on the home page. There is a simple tutorial that you should follow. If you do, it will be easy to manipulate the video file. If you don't, you will end up like me, clicking randomly on various buttons to fast forward and cursing because you don't know what you are doing.

E-MAIL

There are many ways to communicate with Dr. Laude and the TAs when you have routine questions about course administration and grades. The one that makes us happiest is electronic mail. That way we have a hard copy of our communication. It also frees up office hours for weightier matters. Best of all, we promise a 24 hour turn-around time for your messages. Oh, one thing we do not do by e-mail is answer complicated science questions better suited for the chalk board during any of a dozen help sessions and office hours each week. Please use a little common sense about when to e-mail us.

To contact	Dr. Laude,	use the following address:	dalaude@mail.utexas.edu
To contact	Mazen Hariri	use the following address:	mazenfh@mail.utexas.edu
To contact	Keren Hilgendorf	use the following address:	kerenhilgendorf@mail.utexas.edu
To contact	Neal Miller	use the following address:	w.miller@mail.utexas.edu
To contact	Vanessa William	use the following address:	vanessa.m.williams@mail.utexas.edu

SOME TIPS ON E-MAIL ETIQUETTE

Sorry, I can't take it anymore and have to start sounding like your father. You may have noticed there are now two ways of saying the same thing in an e-mail. Note the first form is used in presumptuously cool TV commercials from people trying to sell you small electronic gadgets.

hey laudemán :::?"
i want my five points for extra credit @ @#?::"))(:J

I know you have your own way of doing e-mail and I am unlikely to change it, but understand that there is a difference between using Instant Messenger with your girl friends and e-mailing your professor with a request. In my old-fashioned opinion, e-mail is no different than a letter, a phone call or an office visit. Each of these forms of communication includes:

- a salutation with appropriate title (for example, I am Professor Laude or Dr. Laude—I am not Mr. Laude or dave or hey loudman:::/) or undeserving of any greeting at all.
- a decent stab at identifying who you are (including your uteid if it is something to do with grades in the class) so that when I e-mail you back I can include my own correct salutation
- a succinct but thorough description of why you e-mailed me.

Also desired but non-essential courtesies include:

- A friendly farewell (like "Have a good weekend" or "Thank you")
- Punctuation reflecting the possibility you were educated in a school system.

Using these suggestions, an e-mail to me might look like this:

Professor Laude,
I am e-mailing to request an appointment time with you to discuss some non-academic concerns that are making it difficult to ace your exams.
Thanks for the opportunity,
Harold Carmichael
hc1234

Now I don't particularly care if you want to ignore my suggestions, but there will come a day when your lack of attention to these courtesies will have an undesired consequence, like ignoring your e-mail.

TEXTBOOK AND SUPPLEMENTAL MATERIALS FOR CH302

Text: The text book for this class is Atkins and Jones **Chemical Principles: The Quest for Insight**, 3rd edition. ISBN 0-7167-5701-X. All old texts for this course and all old materials for this course are relatively useless. Get this text as soon as possible and begin reading it.

Supplemental materials: People will try to sell you just about anything. If you are independently wealthy, go ahead and buy it all. Otherwise I think that you should follow my recommendations about how to do well in this course rather than someone who has no idea what or how I will be teaching and testing.

REGRADE PROCEDURE

To request a regrade, download a regrade form from my web site and write down what you want done. Turn it in before or after class or bring it to a TA during his or her office hour. Make sure you provide adequate information including full name and version number so she has a chance to find an answer to your question.

There will be a two-week limit with respect to regrades on quizzes. So if you do not submit a regrade request to your TA in person or by e-mail within two weeks of the quiz date, you get the grade that is recorded. This means it is your responsibility to stay in touch with the grading service.

STUDENTS WITH DISABILITIES

The Services for Students with Disabilities (SSD) office of the Student Dean's Office is charged with assisting disabled students. They estimate that about 2000 students suffer from disabilities including mobility impairments, learning disabilities, visual impairments, hearing impairments, ADD and ADHD, and others. By law, all of these students are guaranteed a learning environment that provides reasonable accommodation of their disability.

As an instructor I am required to provide reasonable accommodation for students with disabilities and I am happy to do so. However it is your responsibility to inform me at the beginning of the semester (by the 12th class day) if you have a disability. I must know this information as soon as possible so that I can make appropriate arrangements.

RELIGIOUS OBSERVANCES AND MAKE-UP EXAMS

It is a University policy that a student may make-up work missed due to observance of a religious holiday. Please notify me by the 12th class day to insure that you can make up the exam—a make up exam will be provided to those who request it.

SUGGESTIONS FOR STUDY IN CH302

Each of you will want to identify an efficient and effective approach to getting an A. I will speak occasionally about techniques for learning the material but in the end you will have to decide what is best for you. Understand that learning to study successfully at the college level is an ongoing effort and that if you find yourself performing poorly, then this is an indication that you need to change study habits—it is up to you to figure out which combination works best.

Listed below are examples of resources and study techniques for my course. Mix and match them to come up with what makes you a successful student.

Lecture. I give pretty good lectures. However they are not intended to be all encompassing in nature. Often the lecture's purpose is motivational regarding a topic's importance or interest. Other times I focus on problems solving. Still other times I try to introduce you to the underlying models and principles for the topic. (You will rarely find that what I discuss follows the outline of the book. If you want that, simply buy a tape recorder, speak the words from my notes or the chapter into the tape recorder, and then play the tape back.) Downloads of my lectures are available at <http://uttechnologyclassroom.com>.

Discussion sections, office hours, study groups. Everyone needs a secondary learning environment where they can go to have questions answered and, in general, to engage in intellectual discussion about the subject matter. Make sure you provide yourself this opportunity by finding yourself a discussion section, office hour or study group each week that fits your schedule and going every week. By the way, there is no more wasted time than time spent in a discussion section or study group unprepared, so go in knowing what it is you want to learn and ready to be an active learner.

Academic Communities Study Groups. I have arranged for the class to form study group tables four nights a week in the residence hall dining rooms as part of the CNS Academic Communities. For more information on how to use these communities to help you with all of your math and science classes, please check out the Academic Communities website: <http://cns.utexas.edu/acp/student.php>.

The way it works is that there will be TA and peer-to-peer supported study groups on Sunday through Wednesday evenings in the two dining halls. Each of these study group sessions is preceded by a discussion session where you can pick up a copy of worksheets and get questions answered by the TAs.

Academic Community Study Groups Times and Locations:

<i>day and time</i>	<i>location</i>	<i>activity</i>	<i>usual presider</i>
Sunday 6:30 to 7:30 pm.	Jester A121A	Discussion section	Neal Miller
Sunday 7:30 to 9:30 pm	Jester Dining Hall	Academic community	Neal Miller
Monday 7 to 8 pm	LLB 103	Discussion section	Keren Hilgendorf
Monday 8 to 10 pm	Kinsolving dining hall	Academic community	Keren Hilgendorf
Tuesday 7 to 8 pm	LLB 103	Discussion section	Vanessa Williams
Tuesday 8 to 10 pm	Kinsolving dining	Academic community	Vanessa Williams
Wednesday 6:30 to 7:30 pm.	Jester A305A	Discussion section	Mazen Hariri
Wednesday 7:30 to 9:30 pm	Jester Dining Hall	Academic community	Mazen Hariri

Lecture Notes. I will not test on material I do not cover in class. I will type up my lecture notes right after class and post them—they will be a lot better than yours—and you can use them to direct your study.

Worksheets. In my course notes I provide my personal contribution to review sheets, study guides, and learning techniques. I think some of them are very good and will employ many directly in the discussion sessions and in the Academic Communities evening sessions. I will make the worksheets available to download every Sunday just in time for the Sunday discussion session. All of the worksheets are designed with the specific purpose of preparing you for the material I think is important. If you hear me tell you it is a good idea to learn what is on a worksheet, it probably is.

Textbook. Your text book provides an eloquent description of general chemistry. Understand, though, that the material in this text is perhaps not the most accessible at first pass. However you should not let an initial inability to understand a particular section of the text keep you from coming back for more. When you can read a chapter and it makes sense, that is when you know you are really learning something.

Textbook problems. There are plenty of problems in the book to work. Since these questions approximate the content and difficulty of exam questions (albeit in a different format), they are a useful way to study and test your knowledge.

Textbook support materials. You can purchase supplemental materials with the book, such as answer keys and textbook outlines and study guides. You can also use the CDs provided with the text to engage you in computer-assisted exercises to test whether you have learned the material. However unless you are independently wealthy I rarely see the reason to make these purchases.

Internet. Type “General Chemistry” into Google and you will retrieve 1,010,000 million web sites (including mine) that are constructed to assist with your general chemistry education. You can even type in the specific topic area and surf millions of sites (like the 989,000 sites on chemical kinetics material from Chapter 13.) One site to consider book marking is the one associated with your text book: <http://bcs.whfreeman.com/chemicalprinciples3e/> It offers an array of materials from outlines to sample problems to multimedia downloads that can be more useful and easier to navigate than the text itself.

Write your own problems. Be an active learner. If you can learn to write your own questions, then you will really know that you have learned the material. It is actually not that hard once you put yourself in the position of thinking about what should go into a question. This is the number one way you will know that you know the material. If you come to me for help, I will end up making you go to my white board and do so. You’ll love it.

A thought on tutoring. Some people think they can buy a grade. So they shell out \$30 an hour to observe someone else prove they know the material. You’ve already heard me give a lecture on the subject that is a lot better than the tutor, and you can go (for free) to scores of chemistry discussion sections. So the only real reason to pay a tutor is to have someone act like your mom or dad and force you to sit in your room and study. So pay your roommate \$10 an hour to do the same and save. (This isn’t funny, this is true.)

A FABLE: THE ACTIVE LEARNER AND THE PASSIVE LEARNER

Methuselah the Passive Learner. **Methuselah** has never missed a lecture. **Methuselah** goes to two discussion sections a week. **Methuselah** reads and rereads the chapters in the text. **Methuselah** has hired a tutor. **Methuselah** has worked and reworked all of the questions from last year's exams one hundred times. On the day of the test I ask **Methuselah** if he can name the seven strong acids. He only knows three. **Methuselah** gets a 65 on the exam.

Kali the Active Learner. **Kali** sleeps until 4 each day and has never come to lecture. **Kali** never bought the text book. On the day before the test **Kali** gets on the Web and finds out what the 30 questions are on the exam. One of them is to name the strong acids. **Kali** memorizes all seven acids. She also stays up all night and learns how to answer the other 29 questions. On the day of the test I ask **Kali** if she can name the seven strong acids. She does. **Kali** gets a 92 on the exam.

The Moral of the Story. The moral is not that you should skip class and stay up all night before the test. The moral is that you have to be able to prove to yourself that you are learning the material that is on the exam. How you do it I don't care. But be aware that there is no guarantee that being a good little boy or girl will get you an A like it did in high school. Learn and I will give you an A. Don't and I will be happy to console you before explaining what it means to be an active learner.

COMING TO SEE YOUR PROFESSOR

I know that I am a professor and a dean and older and that all of that may make me seem intimidating. But actually I am very nice to children and students (I am only so-so with small animals). Please do not be afraid to contact me about your academic or non-academic problems with this course. The last thing you need is to end up with a bad grade for this course when there is something that could have been done about it if you had contacted me in time. So just send me an e-mail and I will tell you how easy it is to schedule a private discussion with me.