CHEMISTRY 101 SECTIONS 503 & 507 **Fall 2009**
Instructor: Dr. Vickie M. Williamson **Office**: HELD 123B
Phone: 845-4634; You can leave a message at the first year chemistry office- 845-2356
Lecture Time: M, W, & F 10:20 AM to 11:10 AM **for 503** AND 12:40 PM to 1:30 PM **for 507**
Lecture Room: Heldenfels Room 100 **for 503** AND Heldenfels Room 200 **for 507**
Office Hours: _____ or by appointment (other times to be announced later)
E-Mail: williamson@tamu.edu **Please put "Chem 101" in the subject line.**
Instructor Assistant: _____
Supplement Instruction Leader: Mandie Bauer

Welcome to **CHEM 101**. As the science that describes matter, chemistry is central to our understanding of many fields from health to the environment to the evaluation of materials. Rapid new developments in very diverse areas virtually guarantee that chemistry will become even more important in the years to come. Knowledge of chemistry will surely be a vital ingredient in your liberal arts education and an essential foundation for your technical education. As educated citizens, it is likely that it will be important for you to be able to understand, interpret, and evaluate information that involves the molecular world. Check with your advisor if you have any doubts concerning the suitability of this course for your degree.

CHEM 101 and 102 are the first-year chemistry sequence in the core curriculum. These are 3-credit courses. This lecture is a part of a much larger program. Those of us in the First Year Chemistry Program and the Chemistry Department at Texas A&M University are committed to providing a meaningful and stimulating course. Each section of this course is independent of the other instructors' sections, but we strive to cover common content, etc.

This handout outlines the course policies for my sections. Other instructors' policies may differ slightly. You should read this material carefully to familiarize yourself with the various rules and procedures, especially those which govern examinations and grades. The objectives of this course are to develop your:

(1) problem-solving skills and critical thinking abilities,
(2) knowledge of general concepts in chemistry,
(3) understanding of chemical terminology used in society,
(4) ability to perform basic chemistry calculations,
(5) appreciation of the importance of chemistry in society, and
(6) positive attitudes towards chemistry.

Learning objectives (what you should be able to do) will be given at each lecture. I expect you to have the following prerequisites:

(1) basic math and chemistry skills,
(2) curiosity about the world around you
(3) willingness to learn (even though your friends say chemistry is yucky)
(4) commitment to attend each class (Chemistry "builds" on itself, thus you are lost if you miss earlier steps)
(5) commitment for regular study (starting the first day!) **6-10 hours per week** is average for reading and problem solving, preferably some time every day. NOTE: We will MOVE FAST!

At the end of this handout, you will find a calendar, which contains exam dates, reading assignments, and a schedule for lecture. In order to get the most out of lectures in this course, it is beneficial that you come to class prepared.

In the First Year Chemistry Program, we try to make ourselves approachable both in and outside the classroom. Feel free to call upon me whenever you have a question. Subsequent sections will give the details concerning the Exam Reviews and Web pages for this course. I look forward to a good semester.

Vickie M. Williamson 8/24/09

PHILOSOPHY BEHIND MY TEACHING

The philosophy of how students learn that is held by an instructor should directly impact his/her philosophy of teaching. As a teacher, my job is to facilitate student learning. I believe that learning is an active process in which the individual builds or constructs meaning from experiences and events, which must be integrated into their existing conceptual frameworks. This is constructivism to some, but I had rather explain my philosophy than to use a "buzz word" that might convey misconceptions. I believe that students learn best from direct experience, when they are active in the educational process. At primary grades, direct experience with concrete objects is required. As we mature, this direct experience can take more abstract forms. Methods to actively involve students can be incorporated even into a large lecture class. These include the use of questioning skills, 'wait time', analogy, visual aids, practice, the type of problems assigned, etc. Equally important to the process is drawing meaning from this direct experience through discussion and reflection. Last is the integration of the new idea or meaning with our existing understandings. These ideas are well-represented by a learning cycle approach, in which students gather data about a phenomenon, draw generalizations, and apply or extend the generalizations in other contexts.

COURSE POLICIES

REQUIRED MATERIALS:

(1) Calculator suitable to use on lecture exams. Calculators may not have multi-line screen or extensive memory. (See later discussion.)

(2)Electronic Textbook and OWL homework combined. You can purchase the combo for $45.00 for a semester at: http://www.cengage.com/gateway/tamuchem ISBN-10: 0-324-59837-8

(3) CPS RF (clicker). You can purchase your CPS RF Fall 2006 clicker at the Texas A&M Bookstore. It costs $24.00 for the device and a one-time $39.00 registration fee, or a $13 registration fee per semester with a limit of $39.00 for life. You'll find them at the counter. Once you buy the clicker, you can use it for all your courses that require CPS integration for the remainder of your time at Texas A&M. You can also resell it to other students (but not the bookstore). You will receive a separate handout about clickers.

OPTIONAL MATERIALS:

You can purchase a hardback textbook ("Chemistry & Chemical Reactivity" by J.C. Kotz, P.M. Treichel, & J.R. Townsend, 7th edition, 2009) ISBN-10: 0-495-38703-7. This will be big bucks.

LECTURE READING ASSIGNMENTS:

Lectures are designed to help you in developing an understanding of the material being emphasized. To get the most out of lecture, one should always keep up with the assigned reading. Specific reading assignments will be given in lecture. With some chapters, you will be asked to read ahead of lecture, with others behind lecture. Tentative chapters are shown in the Calendar.

LECTURE SCHEDULE:

You will be given a tentative schedule. Topics and chapter references are subject to change. **Special announcements and schedule changes will be announced at the beginning of the lectures and posted on our homepage** (look below for the web address).

LECTURE ATTENDANCE:

I will not be taking attendance as such throughout the semester. However, to encourage you to attend class, there will be periodic in-class quizzes that will account for part of your lecture grade (See grades below). YOU SHOULD ATTEND ALL CLASSES.

SPECIAL ASSIGNMENTS:

During the semester, you be given a number of special assignments that will total 15 points. These could involve take-home worksheets, written lecture summaries, on-line assignments, or short essays.

CLICKER POLLING/PARTICIPATION:

During the semester, you have polling during lecture. These will be both individual and in groups during class. Some may be quiz like, in that there is a 'correct' answer, others may be opinion based. There are NO makeup clicker assignments, as the lower percent required should take care of necessary absences, forgotten clickers (bring your clicker to each class), or bad batteries.

Percentage of assignments correctly completed	<40%	40-44%	45-49%	50-54%	55-59%	60-64%	65-69%	≥70%
Number added to your course points	0	8	9	10	11	12	13	14

QUIZZES:

During the semester, you will have UNANNOUNCED quizzes during the semester. Each quiz will be worth 4 points. You may count the best 9 quizzes. There will be at least 14-15 quizzes totally (as many as 16-17 in the past). There are no make-up quizzes; if you miss one, it will be one you drop. I prefer to quiz often; quizzes may be in various formats (written, clicker, on-line). Quizzes may be individual or group. Quiz problems may be taken from the assigned problems, demonstrations, material covered in lecture, etc. Quizzes have two purposes: 1) to set deadlines to encourage you to keep up, and 2) to give me an idea of your understanding of the concepts.

LECTURE HOMEWORK ASSIGNMENTS:

Homework problems will be assigned for each topic of study from On-line Web Learning (OWL). The textbook problems are for your practice. Approximately 7 sets of homework will be assigned for credit from OWL. Each set of homework will be worth 10 points, for a total of 84 points for the semester. Homework MUST be turned in on time. The purpose of homework is to prepare you for exams. Additional details will be given in class. See the section on using OWL from an off-campus computer.

Percentage of instructional units correctly completed and turned in on time **for each of the 7 sets**	<40%	40-49%	50-59%	60-69%	70-79%	80-89%	90-94%	≥95%
Number added to your course points	0	4	5	6	7	8	9	10

LECTURE EXAMS AND FINAL:

There will be 4 lecture exams (Exams 1, 2, 3 and 4) given on the days indicated on the Calendar. Additionally, there will be a Final Exam. These exams may include combination of multiple choice questions that will be machine graded and non-multiple choice questions that will be hand graded.

(1) Lecture Exams: These are 45-minute exams given during the regular lecture times. Each carries a value of 100 points with 15-25 questions. You MUST have a **Photo I.D.** in order to take exams.

*At the end of the semester, the **lowest of the four regular exams will be dropped and will be replaced** by the average of the remaining three exams.

(2) Final Lecture Exam: The Final Exam will be a 2-hour, 165-point exam covering all the chapters taught during the semester. The final may contain standardized and professor-written portions. The final will be COMPREHENSIVE. The final is scheduled for **Tuesday, Dec. 15, 2009 from 8:00-10:00 AM for the 503 section** in room 100 HELD **and Monday, Dec. 14, 2009 from 10:30AM-12:30 PM for the 507 section** in Room 200 HELD. **Please do not expect to take the final exam at any time other than the scheduled time FOR YOUR SECTION**, unless you have made arrangements with me. **You must bring a PHOTO I.D. to the Final Exam.** Do not be LATE; as soon as the first person has left the final, no one will be allowed to begin the final.

(3) Make-up Lecture Exam: For students who have university-excused absences (or very good ones) and who also notify me (the instructor) within 2 academic days (M, T, W, R, & F), a make-up test will be arranged. I require a written statement about the excuse for the absence. The make-up exams will be at least as difficult as the regular exams. The time for the makeup exam will be set after the 2-day signup period, from student schedules. Makeup exams are scheduled within a week of the regular exam.

LECTURE EXAM ADMINISTRATION:

(1) Check the exam seating assignment on the bulletin board outside Room 100 Held one day in advance. **Each exam has a different seating assignment.**

(2) Arrive at the exam on time. Cheating or bringing in material with intent to cheat will result in a zero for the exam or a more severe penalty.

(3) Bring to the exam at least two sharpened #2 pencils, an eraser, and a PHOTO I.D. (your TAMU I.D. card or a driver's license will work). Pencil sharpeners and calculators (with certain restrictions) may also be brought. There must be **NO** "sharing" of calculators during an exam. Any other items must be "enclosed" out of sight in a briefcase, pack, purse, or sack, **and** stored under your assigned seat.

(4) Students cannot use calculators that are programmable or have alpha-numeric capabilities for the exams. Some of the acceptable and unacceptable calculators are listed on the bulletin board outside Room 100 Heldenfels. **Any student attempting to use an unacceptable calculator will receive a zero for the exam plus other penalties.**

(5) Follow the directions given to you as you enter the exam room. **Do not write on the back of the scanner sheet. Failure to follow these directions may result in a withheld or zero grade.** In addition, note that the answers have to be recorded on the standard gray scanning sheet to be graded.

(6) During the exam, keep all work covered as much as possible. Talking or looking around the room will result in a withheld grade for the exam.

(7) Work carefully, but you must finish in the allotted time; exams handed in late will not be graded. Please remain seated quietly until asked to leave. You will be able to see your grades on the World Wide Web. Details in the web are below.

(8) For special seating requests such as a left-handed seat, a table, or an oversized seat, get a form from Room 412, fill it out, and turn in to room 412. You only need to turn in one request for the semester. It will take about two weeks to process a request.

(9) If you believe that your exam is misgraded, you need to fill out a regrade form. These are available in room 412. Fill the form out and turn it in in room 412.

REVIEW SCHEDULE:

A Review Session will be posted on line. These will be in the form of screencasts that you can play over as needed with Quicktime or on an ipod. All links will be on Williamson's 101/102 Bulletin Board (see the section below). I will also hold additional office hours near the exams for extra questions.

ACADEMIC DISHONESTY:

Students are expected to be the sole source for any work submitted in their name. The utilization or submission of work of others is a violation of Texas A&M University scholastic dishonesty policies and disciplinary steps will be taken. Only **authorized** electronic or printed materials or equipment may be used in or near the classroom. As commonly defined, plagiarism consists of passing off as one's own the ideas, words, writings, etc., which belong to another. In accordance with this definition, you are committing plagiarism if you copy the work of another person and turn it in as your own, even if you should have the permission of that person. Plagiarism is one of the worst academic sins, for the plagiarist destroys the trust among colleagues without which research and knowledge cannot be safely communicated.

Study groups can be a valuable aid to learning. Within the group you should discuss your answers to homework problems. Your group can discuss questions with other groups. Quizzes, exams and the final must be done on your own, unless otherwise specified by the instructor.

Academic dishonesty will not be tolerated in any form and will be reported to the proper university officials. Expulsion for academic dishonesty does not look good on one's permanent record and is not worth the points you are trying to gain by cheating. If you have questions regarding plagiarism, please consult the latest issue of the *Texas A&M University Student Rules*, under the section "Scholastic Dishonesty."

The Aggie Honor Code is that "**An Aggie does not lie, cheat, or steal or tolerate those who do**."
Please review the Honor Council Rules and Procedures on the web:
http://www.tamu.edu/aggiehonor
Reports of academic dishonesty will be filed for those who fail to follow the code.

TEXAS A&M SERVICES FOR STUDENTS WITH DISABILITIES:

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, either temporary (e.g. broken arm) or permanent (including a learning disability), please contact the Department of Student Life, Services for Students with disabilities in Rm. B118 in Cain Hall or call 845-1637. (Hours: 8 AM to 5:30 PM). If you have any questions, see me.

COPYRIGHT:

The handouts used in this course are copyrighted. By "handouts," I mean all materials generated for this class, which include but are not limited to syllabi, quizzes, exams, lab problems or study sheets, in-class materials, review sheets, and additional problem sets, notes, etc. Because these materials are copyrighted, you do not have the right to copy the handouts, unless I expressly grant permission.

GRADE CALCULATIONS: Grades will be calculated on a point basis.

Lecture Points Possible:		**% of course grade**
Special Assignments	15	2.1
Clicker Polling (tentative)	14	2.0
Homework (7 @ 10 pts each)	70	10.0
Quizzes (best 9@ 4 points each)	36	5.1
Exams (4 @ 100 points each)*	400	57.1
Comprehensive Final	165	23.6
TOTAL POINTS FOR THE COURSE	**700**	**100.0%**

Final Grade Cut-Off:		
	A	700-630
	B	629-560
	C	559-490
	D	489-420
	F	419-- 0

You can be assured of the letter grade that is indicated if you fall in the above ranges. The final grade cut-off may be slightly lowered at the end of the semester. **Each semester's ranges and each lecture sections' ranges are independent of each other.**

Students missing a small portion of the course will receive a grade of "I" (Incomplete) if they request this grade and meet the University criteria for this temporary grade.

*At the end of the semester, the **lowest of the four regular exams will be dropped and will be replaced** by the average of the remaining three exams.

BULLETIN BOARDS:

Solutions to quizzes will be posted for this class in the glass bulletin board near room 122 and Heldenfels. We also have an electronic bulletin board described below.

COURSE INFO VIA THE WEB AT WILLIAMSON'S 101/102 BULLETIN BOARD: (http://chemed.tamu.edu/bb.htm)

You can find the latest news, objective list, frequently asked questions, etc. on my personal webpages. BOOKMARK AND CHECK THIS SITE FREQUENTLY.

GENERAL 101/102 INFO VIA THE WEB AT THE GENERAL FYP WEBSITE: (http://www.chem.tamu.edu/class/fyp)

The First Year Chemistry Program's homepage is listed above. You can get to my website from this page. When you are in the First Year Chemistry Program's home page, choose 'what we teach', the course (CHEM 101), followed by our section.

GRADE INFORMATION VIA THE WEB:

You can check your grades confidentially on the web. Details will be discussed in class.

YOUR GRADES:

PLEASE KEEP A RECORD OF YOUR LECTURE POINTS ON THE TABLE BELOW.

Quizzes:	**Points Received:**	**Exams:**	**Points Received:**
#1	_____	#1	_____
#2	_____	#2	_____
#3	_____	#3	_____
#4	_____	#4	_____
#5	_____	**Final:**	_____
#6	_____		
#7	_____		
#8	_____		
#9	_____	**Homework** #1 points:	_____
#10	_____	**Homework** #2 points:	_____
#11	_____	**Homework** #3 points:	_____
#12	_____	**Homework** #4 points:	_____
#13	_____	**Homework** #5 points:	_____
#14	_____	**Homework** #6 points:	_____
#15	_____	**Homework** #7 points:	_____
#16	_____		
#17	_____		

Quiz best 9:_____

HELP: You can do eight things to improve your grade:

(1) Attend **all class periods**.
(2) **Keep up** with your assigned **reading** and do the **homework problems**.
(3) Come to class **prepared** (ask questions if you don't understand).
(4) Take **all tests and quizzes**.
(5) See me during **office hours or make an appointment** with me to discuss anything you don't understand or can't work.
(6) Use **Supplemental Instruction**. These is a free service.

SI Schedule:_____
_____

(7) Try a **study group**. I will help organize these. Some will work, while others will not.
(8) As a last resort, engage a **tutor** for hire. Tutors who can give you individualized help are best.
(9) Follow Williamson's Study Rules

WILLIAMSON'S STUDY RULES:

(1) **The 15 minute rule**
Don't spend over 15 minutes on any one problem unless you are making progress. Seek help, you are missing a point, and you don't want to become frustrated.

(2) **The 2 lecture rule**
Don't let any more than 2 lectures pass when you don't understand something. Seek help. (This rule means that if you attend one lecture and a topic is fuzzy, go home, read about it, and try problems, remembering the 15-minute rule. Go to the 2nd lecture. If all is not clear by the second lecture, seek help.)

(3) **Order of Study Rule**
- Hear the lecture
- Read the text and try the practice problems from the book (remember the 2 rules above). Consider rewriting your notes to better organize the material.
- Do assigned homework.
- As an exam nears, do old exams that are on-line. Take at least one of them under 'exam conditions' (set the timer, use only the tables and equations you will have on the exam).

(4) **After an Exam Rule**
- Score your exam with the key
- Ck the class average (compare your score to the average)
- Go over the exam for 2 things
  1) Can you work it now, easily getting the correct answer? Practice till you can.
  2) Why did you miss each question in the first place? Look for patterns so you can correct this error for the next exam (the same reason why you missed multiple questions). In the past students have told me that possible patterns are:
     - Misreading the problem. The problem asked for least electronegative, and the student answered it for most electronegative. In this case, marking the exam question with circles, boxes, etc. to help focus on the question BEFORE reading the possible answers will help.
     - Choosing the wrong equation or method to use. In this case you need practice planning your problem solving strategy. Go to homework or sample exam problems you have already done. Reread the problem and make a plan for solving it. Then ck your plan by looking at your previous work. Do NOT simply recalculate the problem. Don't use a calculator to practice planning.
     - Missing a relationship between variables. This may be a conceptual type problem. You missed it because you didn't know the trends, etc. You can help this by using the objective list to write out every relationship. For example, if the objective says to ID the trend in electronegativity, you could write out on an index card the relationship between position in the periodic table and electronegtativity (electronegativity increases as you go up a family and across a period, with F being the most electronegative).

- Miscalculation: You read the problem correctly; you chose the correct equation, but you got the wrong answer. In this case you need practice with your calculator. Go to the sample problems in the textbook, find the place where all values have been substituted in, and use your calculator until you can get the same number solution as the text.

(5) **Study Group Rules**

- Groups MUST
  1) Have regular meetings 2) Meet at a place conducive to study 3) Have 3-5 members
- Use your meetings to go over:
  1) assigned problems 2) old quizzes 3) objectives 4) sample exam questions
- Keep your meeting on task. Socialization is great, but remember the purpose is to improve your understanding of chemistry (your grade too).
- If you are the brightest in a group, you benefit by verbalizing and defending your answers to others.
- If you catch on more slowly than others in a group, you benefit hearing and seeing the concepts explained by someone other than me.
- You DO NOT have to stay in the first group you try. Please try a group for a couple of meetings.
- Every study group will not be successful for you. If you feel you want to try another group, see me for the names of students in another group or students with your major.

OWL AND E-BOOK AT TAMU FALL 2009

BUYING OWL AT TAMU:
Electronic Textbook and OWL homework are needed for the course. You can purchase the combo, plus the solution manual for $45.00 for **1 semester** at: http://www.cengage.com/gateway/tamuchem OWL is a Cengage product.

Go to http://www.cengage.com/gateway/tamuchem and buy the OWL code for the version that is specifically for TAMU students. THIS IS IMPORTANT! You will need to log into the iChapters website first. If you already used iChapters for another class, use that same login ID. You will be prompted for your credit card info. When you get the code, email it to yourself if you can. Better yet, immediately access OWL on the TAMU server and get registered right away by copying/pasting the code directly, if you are using a campus computer or have done the preparation needed for your connection.

PREPARATION BEFORE YOU REGISTER OR USE OWL AT TAMU:
You have three choices about how you use TAMU's On-line Web Learning (OWL).

1) TO USE OWL ON AN OFF CAMPUS COMPUTER With a Cable Modem, DSL or Dial-Up
If you need to connect to OWL via a cable modem or via dial-up use VPN. VPN stands for virtual private network and is accessed using special software and your NetID. VPN software authorizes you to use the campus resources from off campus. From your computer, you must download, install, and configure the VPN Software. This software is free to students and downloadable from CIS. VPN software must be running and connected to the TAMU VPN server before you can connect to OWL. If you are using the campus modems or any computer on campus, you do not need the VPN software.
For VPN instructions for Windows, see
https://hdc.tamu.edu/reference/documentation/index.php?section_id=156
For VPN instructions for Mac, see
https://hdc.tamu.edu/reference/documentation/index.php?section_id=163
For Windows Vista
https://hdc.tamu.edu/reference/documentation/index.php?section_id=774
For VPN instructions for Vista 64 bit
https://hdc.tamu.edu/reference/documentation/index.php?section_id=892
For VPN instructions for Linux
https://hdc.tamu.edu/reference/documentation/index.php?section_id=164
VPN MUST BE INSTALLED, CONFIGURED, RUNNING, AND CONNECTED, WHEN YOU REGISTER or USE OWL FROM AN OFF-CAMPUS COMPUTER. PLEASE NOTE THAT YOU WILL NOT BE ABLE TO DO OWL ON AN OFF-CAMPUS COMPUTER WITHOUT PREVIOUS SET-UP. CIS 24 HOUR HELP LINE = 845-8300

2) TO USE OWL ON AN OFF-CAMPUS COMPUTER BUT DIALING INTO THE TAMU MODEM BANK
Dial-Up Modem access is a free service for students using your NetID. Point your browser to https://net.tamu.edu/network/dialup.html and follow the directions under Dialup Bank. Once connected to the modem banks you will use the same instructions as for on-campus computers (choosing between Student Registration and User Login). All of these services are free.

3) TO USE OWL ON AN ON-CAMPUS COMPUTER
You can use a computer on-campus (from an open access lab, dorm, or anywhere within the TAMU firewall) without any set up.

REGISTERING ON OWL: Access Owl from on campus at http://owl.chem.tamu.edu
At this point, you can choose which course (general, liberal arts, or organic), then choose *Chemistry & Chemical Reactivity, 7th Edition; Kotz, Treichel, & Towsend; e-Book* , and finally TAMU-College Station. Next you choose between "User Login" or "Student Registration". All of these will work on an on-campus computer, but they will NOT work from an off-campus computer unless you have the computer configured correctly with the correct VPN software installed as explained above

- "Student Registration" You will click on your lecture section. Do this the first time you log on. This will set up your OWL account.
- "User Login" This is the spot you will bookmark and enter OWL after you are registered. You are now ready to use OWL.