HOUSTON COMMUNITY COLLEGE SOUTHWEST
CHEM 1305 – INTRODUCTORY CHEMISTRY I
***SPECIAL KINDLE PILOT SECTION*, CRN 23194**
Spring, 2010

Time and location
11:00 AM - 2:00 PM Monday (lecture, room B125), Alief Center.

Instructor
Dr. Steven E. Dessens
Office Hours: Room S107 (Stafford Campus) 1:00 – 4:30 PM Friday or by arrangement.
Office Phone: 713-718-6710
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Kindle Downloads: http://swc2.hccs.edu/kindle

☞ **Important Dates** ☜

January 19	Tuesday	Classes Begin
January 25	Monday	Last Day for Student Drop/Add/Swap
February 15	Monday	Presidents Day Holiday
March 15-21		Spring Break, No Classes
April 2-4		Offices Closed – Easter Holiday
April 15	Thursday	Last Day for Administrative/ Student Withdrawals with a grade of "W" 4:30 PM **After the withdrawal date no W can be given,** ***you must receive a regular grade (A-F) in the course*.**
May 9	Sunday	Instruction Ends
May 10	Monday	**Final Exam** (No deviation from the printed schedule is permitted.)
May 21	Friday	Grades Available to Students

Textbook – eBook
This is a special section of CHEM 1305 offered this semester as a part of an HCC project to evaluate the effectiveness of "electronic" textbooks, or "eBooks," compared to regular printed textbooks. The anticipated advantages of eBooks include 1) reduced cost, and 2) the advantage of being able to carry and use multiple textbooks on a single lightweight eBook reader.

There are now a growing number of eBook readers available. For this study, the very popular **Kindle DX** reader from Amazon was chosen. On the first day of class, the project director, Dr. Doug Rowlett, will supervise assigning a Kindle DX reader to each student in the class to use for the semester. Note that the Kindles must be returned when the semester is over, or if a student withdraws from the class.

The textbook by Zumdahl and DeCoste was made available in Kindle format for this project by Cengage Learning:

Introductory Chemistry, 6th Edition, by Steven Zumdahl and Donald DeCoste. Houghton Mifflin: 2008.
Kindle Version is available from Amazon.com
ASIN: B00309SD16
ISBN: 0618803270 (Hardcover Edition)

To accompany the textbook, the publisher is also making available for free the materials on the Student Companion Website: http://college.cengage.com/chemistry/intro/zumdahl/intro_chemistry/6e/student_home.html The site includes practice exams, tutorials, lecture videos, and flashcards.

A login passcode will be given to each student to access these materials.

Course Catalog Description

"General introduction to fundamental principles of chemistry includes atomic structure, chemical formulas, molecules, reactions, and elementary thermodynamics. This course is intended to be preparatory to CHEM 1411 for science majors who have no prior knowledge of chemistry. Core Curriculum course. 3 credit (3 lecture, 0 lab)." **Recommended Prerequisite: MATH 0312 (Intermediate Algebra).**

Course Prerequisites

These are stated in the course description in the HCC catalog (quoted just above) and they are stressed again here for emphasis. *Lack of satisfactory completion of the course prerequisites are one of the main reasons that cause students to do poorly in chemistry*. Basic math and problem solving skills at the level of college algebra are *essential*. If you are not sure if your prior coursework meets these prerequisites, come and talk to me or to the department chair for advice. With the prerequisites satisfactorily completed, you can be confident that you are well-prepared for this course.

Course Intent

This course is intended to introduce the student to the fundamental principles of chemistry and to acquaint the student with the role chemistry plays in our everyday lives. CHEM 1305 is also intended to serve as a preparatory course for students who are intending to major in a science but have no prior knowledge of chemistry. After taking this course, the student should have a good grasp of atomic structure and the periodic table, naming and writing formulas of ionic and binary molecular compounds, empirical and molecular formulas, chemical bonding, dot structures and molecular geometry, calculations involving unit conversion and stoichiometry, energy changes in reactions, gas laws, and interactions between molecules.

Course Content

See the course schedule below for the topics (listed by chapter title) that will be covered in this class. College level general chemistry is very similar to a good high school course, but will usually cover the topics in greater detail and will place a greater emphasis on problem solving.

Attendance Policy

The HCCS attendance policy is stated as follows: "Students are expected to attend classes regularly. Students are responsible for materials covered during their absences, and it is the student's responsibility to consult with instructors for make-up assignments. Class attendance is checked daily by instructors. *Although it is the responsibility of the student to drop a course for non-attendance, the instructor has full authority to drop a student for excessive absences. A student may be dropped from a course for excessive absences after the student has accumulated absences in excess of 12.5% of the hours of instruction (including lecture and laboratory time).*"

Note that 12.5% is only 2 classes for a 3 semester hour course, such as this one, which meets one time per week in a normal 16 week semester. If circumstances significantly prevent you from attending classes, please inform me. I realize that sometimes outside circumstances can interfere with school, and I will try to be as accommodating as possible, but please be aware of the attendance policy.

Last Day for Administrative and Student Withdrawals

For 16-week Spring '10 classes, this date is April 15. I urge any student who is contemplating withdrawing from the class to see me first! You may be doing better than you think. Either way, I want to be accessible and supportive. I do not believe in "weed out" classes, and I consider you to be much more than just a name or number! Note my office hours above; if you need assistance, I'm here to help.

☞ **Policy Regarding Withdrawals** ☜

Students desiring to withdraw from a class must do so by the above withdrawal date by filling out a **withdrawal form** at the registrar's office. *After this date, instructors can no longer enter a grade of "W" for the course for any reason*.

☞ **Policy Regarding Multiple Repeats of a Course** ☜

"NOTICE: Students who repeat a course three or more times may soon face significant tuition/fee increases at HCC and other Texas public colleges and universities. If you are considering course withdrawal because you are not earning passing grades, confer with your instructor/counselor as early as possible about your study habits, reading and writing homework, test-taking skills, attendance, course participation, and opportunities for tutoring or other assistance that might be available."

Disability Support Services (DSS)
"Any student with a documented disability (e.g. physical, learning, psychiatric, vision, hearing, etc.) who needs to arrange reasonable accommodations must contact the Disability Services Office at the respective college at the beginning of each semester. Faculty are authorized to provide only the accommodations requested by the Disability Support Services Office."

If you have any special needs or disabilities which may affect your ability to succeed in college classes or participate in any college programs or activities, please contact the DSS office for assistance. At Southwest College, contact Dr. Becky Hauri, 713-718-7909. Contact numbers for the other HCC colleges are found in the Annual Schedule of Classes, and more information is posted at the HCC web site at Disability Support.

Academic Honesty
"Students are responsible for conducting themselves with honor and integrity in fulfilling course requirements. Disciplinary proceedings may be initiated by the college system against a student accused of scholastic dishonesty. Penalties can include a grade of "0" or "F" on the particular assignment, failure in the course, academic probation, or even dismissal from the college. Scholastic dishonesty includes, but is not limited to, cheating on a test, plagiarism, and collusion." In **this class**, the penalty for willful cheating on exams is a **grade of F in the course**. This is the standard policy of the Physical Sciences department at Southwest College.

HCCS Sexual Harassment Policy
HCC shall provide an educational, employment, and business environment free of sexual harassment. Sexual harassment is a form of sex discrimination that is not tolerated at HCC. Any student who feels that he or she is the victim of sexual harassment has the right to seek redress of the grievance. HCC provides procedures for reviewing and resolving such complaints through its Grievance Policy. Substantiated accusations may result in disciplinary action against the offender, up to and including termination of the employee or suspension of the student. In addition, complainants who make accusations of sexual harassment in bad faith may be subject to equivalent disciplinary action.

Exams and Make-up Policy
Examinations will consist of three non-cumulative regular exams plus a comprehensive final. Programmable calculators, such as the TI 83 Plus, are not allowed during exams! The department has calculators that you can use on test days if you do not have a "regular" calculator. Make-up exams will not normally be given, so make every effort to take the exams on their scheduled dates. In the event that you *must* miss a regular exam, I will count the grade made on the final exam as the grade for the missed exam (for one missed exam only), and calculate the final course grade accordingly. If you do not miss any of the regular exams, I will replace your lowest exam score with your final exam score if the final exam grade is higher. This is intended to provide you a "second chance" if you do not do well on a particular exam. Remember that the final exam will be *comprehensive* (meaning that it will cover *all* of the material from the whole semester, not just the last part). Please note that all students are required to take the final (no student can be exempted).

Assignments
Outside of laboratory reports, special assignments are normally not required. I may periodically give out practice problems but these are not graded. The end-of-chapter-problems are highly beneficial, indeed essential, to learning chemistry. I recommend that you work as many of the even-numbered end of chapter problems as you can (these have answers in the back of your textbook). Get a spiral leaf notebook just for working chemistry problems. That will keep your work more organized and you (or I) can easily review your work.

Grading

The ***overall score*** is based on the following:

Three regular exams	Attendance, Participation	Final Exam
55%	20%	25%

Overall Score = 0.55(Average of three regular exams) + 0.20(Participation grade) + 0.25(Final Exam)

The ***course grade*** is then obtained from the overall score:

Final Average	90 – 100	80 – 89	70 – 79	60 – 69	< 60
Letter Grade	A	B	C	D	F

Other Information

Free chemistry tutoring is available. A tutoring schedule will be posted in the classroom and lab and will also be placed on the departmental web site (http://learning.swc.hccs.edu/courses/chemistry).

In addition to "face to face" tutoring, HCC also offers online tutoring from AskOnline. It is also free and is available for chemistry and many other subjects. The login page is at http://www.hccs.askonline.net.

There are also many interesting chemistry resources on the Internet which can be found by using keyword searches. But your best immediate source of information is your *textbook* - make thorough use of it!

General Suggestions

Chemistry is a vast field, ranging from the study of simple inorganic salts to enormously complex molecules such as enzymes and nucleic acids in living organisms. In this course, the major topics we will be covering are chemical formulas, reactions and stoichiometry, chemical thermodynamics, electron configuration, chemical bonding, gas laws, and structures of solids. A professional chemist may devote his or her entire career to only one of these general disciplines; we have a semester to touch on all of them! Here are some general suggestions:

- Learning chemistry takes time. A reasonable guide is to plan for two hours of study for each hour of lecture. Heavy work and/or class loads are not compatible with learning chemistry!
- Attend class regularly (!) and take generous notes during class. Ask questions.
- When beginning a new chapter, I recommend that you read through it quickly the first time, just to give yourself a good feel for what it is about. I you are really on the job you will have done this before the class lecture on the chapter! You will understand what's going on in class much better if you do this.
- Next, start tackling the end of chapter problems or other available problem sets. Often, working problems facilitates understanding much better than just reading and rereading the chapter itself. Chemistry is a "hands on" course - working problems is essential. However, do not spend an inordinate amount of time on a single problem - skip it for the time being and go on to another. Try working some of the in-chapter "self-check" exercises. They are worked out in the chapter and are very helpful.
- You should have a good, scientific calculator that has scientific notation ("EE" or "EXP" key), log, ln, x^2, $\sqrt{}$, etc. Business calculators usually do not have all of these features. As noted above, the use of programmable calculators is not allowed when taking exams.
- Review basic math operations if you are rusty.
- Study groups can be very helpful. Keep the group small though, no more than three or four people.
- Finally, keep a positive outlook! Chemistry can be hard, but with a good approach, you will succeed in mastering it!

I hope you find chemistry to be an interesting and rewarding subject which will not only be useful in your academic major, but will give you a better insight into the many scientific challenges we are facing today. I look forward to working with you this semester!

Steve Dessens
January, 2010

Course Schedule

Jan	**18**	☞ **Holiday – Martin Luther King Day** ☜
Jan	20	
Jan	25	Check out Kindle Readers, Chapter 1 – Chemistry: An Introduction
Jan	27	
Feb	1	Chapter 2 – Measurements and Calculations
Feb	3	
Feb	8	Conclude Chapter 2, Chapter 3 – Matter
Feb	10	
Feb	15	☞ **Holiday – Presidents Day** ☜
Feb	17	
Feb	**22**	**EXAM 1 – Chapters 1–3**
Feb	24	
Mar	1	Chapter 4 – Chemical Foundations: Elements, Atoms, and Ions Chapter 5 – Nomenclature
Mar	3	
Mar	8	Chapter 6 – Chemical Reactions: An Introduction Chapter 7 – Reactions in Aqueous Solutions
Mar	10	
Mar	**15**	☞ **Spring Break – No Classes** ☜
Mar	**17**	☞ **Spring Break – No Classes** ☜
Mar	22	Chapter 8 – Chemical Composition
Mar	24	
Mar	**29**	**EXAM 2 – Chapters 4–7**
Mar	31	
Apr	5	Chapter 9 – Chemical Quantities
Apr	7	
Apr	12	Chapter 10 – Energy (Introduction) Chapter 11 – Modern Atomic Theory
Apr	14	
Apr	**15**	☞ **Last Day for Withdrawals (for grade of W)** ☜
Apr	19	Chapter 12 – Chemical Bonding
Apr	21	
Apr	**26**	**EXAM 3 – Chapters 8–11**
Apr	28	
May	3	Chapter 13 – Gases
May	5	
May	**10**	**FINAL EXAM – Chapters 1–13, Monday, 11:00 AM – 1:00 PM**
May	12