Chemistry 1411 - General Chemistry I
Fall 2015 RT CRN 73447
Monday and Wednesday 11:00 A.M. – 2:00 P.M.
Instructor: Dr. Phillip Dahlstrom
Phone: 281-693-2038 E-mail: PLDahl@msn.com

Please keep this Syllabus available, it contains the Class Schedule and other important information.

Important: Class normally meets in room 310 Mondays and in room 320 Wednesdays. Labs will be in Room 310. Watch Eagle Online for changes.

Chemistry 1411 is a 4 credit Core Curriculum class for science and engineering majors. The class covers atomic structure, chemical reactions, thermodynamics, electronic configuration, chemical bonding, molecular structure, gases, states of matter, and properties of solutions. Laboratory experiments complement the lectures. Prerequisites for Chemistry 1411 are high school chemistry and Math 1314 (College Algebra). An understanding of basic algebra, manipulating equations, and exponential notation is essential for this class.

Textbook: *Chemistry*, Steven S. Zumdahl and Susan A. Zumdahl, Ninth Edition, Brooks/Cole, Cengage Learning. *Chemistry*, Raymond Chang and Kenneth A. Goldsby, Eleventh Edition, McGraw Hill Higher Education. Editions 9, 10, and 11 are not current but are acceptable for student use.
Lab Manual: *Laboratory Manual for CHEM 1411, General Chemistry I*, Houston Community College, Pahlavan, Bai, and Askew.

The content of the lectures and labs addresses the Basic Competencies in the HCCS Core Curriculum: Reading, Writing, Listening, Critical Thinking Skills, and Computer Skills. Critical thinking skills are emphasized in this class. In accordance with the ADA, reasonable accommodations will be made to allow students with disabilities the opportunity to participate in this class so long as the fundamental goals of the class are met. *"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."*

$EGLS_3$-Student feedback is necessary to improve teaching and learning. During a designated time, you will be asked to answer a short online survey of research-based questions related to instruction. The anonymous results of the survey will be made available to your professors and division chairs for continual improvement of instruction. Look for the survey as part of the Houston Community College Student System online near the end of the term.

Internet resources for this course include Eagle Online 2.0 (mandatory) and OWLv2 from the textbook publisher Cengage Learning. All course materials and announcements will be posted on Eagle Online. Users can access Eagle Online for this class through the HCC Northwest College web site using *Students*, *Student Sign-Ins*, *Eagle Online 2.0 Login*. Students are responsible for checking Eagle Online often to view important course announcements and obtain course handouts. Most handouts will be in Adobe Acrobat (.pdf) format. You will need the free Adobe Acrobat Reader in order to open these files. I can be contacted by e-mail (preferable) or by telephone. I am usually available before or after class or by appointment. Askonline tutoring can be accessed at http://hccs.askonline.net/.

Class meets Monday and Wednesday, 11:00 A.M. – 2:00 P.M. Class attendance is mandatory. Class starts promptly at 11:00 A.M. There will be a 15-minute break at 12:30 or as appropriate for the class. Please turn cell phones off in class. Students are expected to prepare for lectures and labs before class. Working and studying together is encouraged; however, students are required to do their own work. Maturity, responsibility, and honesty are expected of all students. Cheating will result in a minimum of an automatic zero for the assignment or test. Students considering dropping the course are encouraged to discuss this decision with me before hand. Students must withdraw by 4:30 P.M. of the last day for administrative/student withdrawals, Friday, October 30.

There will be four chapter tests. The lowest test grade will be dropped. No make-up tests will be given. A missed test will be dropped as the lowest test grade. Tests must be returned after they are discussed in class. The required final is a Houston Community College System exam. Tests are "closed book". Leaving the class during an exam is not allowed. A basic calculator with exponents and logarithms is required. Absolutely no cell phones or PCs are allowed. Tests include multiple choice and word problems. Scantron cards are used for multiple choice questions. Only one Scantron card is allowed per student. Word problems emphasize critical thinking skills. Word problems are graded for partial credit. Proper use of dimensional analysis is required for full credit.

Assigned homework will count 10 % of your lab grade. Assigned homework must be turned in on the due date for credit. Homework solutions will be posted on the due date and late homework will not be accepted.

Laboratory experiments complement class lectures. Only labs performed in class under my supervision are accepted. Each student must record the name of their lab partner and have their data report sheet initialed by me before leaving class in order to earn full credit for the lab. Missed labs cannot be made up. Pre-lab quizzes will be given before each lab. Pre-lab quizzes count as one lab grade extra credit toward your total lab grade. Lab reports are to be completed individually. You are encouraged to work with your lab partner, but your lab report must be your own work. Lab reports will be graded for accuracy and completeness. Appropriate use of dimensional analysis and significant figures is required for full credit. Lab reports are due one week after the completion of the lab. Labs are worth 20 points. There will be two formal lab reports required in this class worth 30 points each. Late lab reports lose a minimum of 5 points. Students are responsible for keeping track of their lab reports and other assignments.

Most labs have special instructions and data report sheets posted on Eagle Online that supplement the lab manual. These supplements are required for the experiment and students are responsible for printing this information before class. Students are expected to read and understand the laboratory procedure before class. Lab experiments will be conducted in pairs or individually. Safety goggles/glasses must be worn during labs. Community safety goggles/glasses are available in class. Student purchased safety goggles/glasses must have full side shields and be of comparable quality to those supplied by HCCS. Students wearing contact lenses in lab should wear safety goggles not safety glasses. Students may bring their own gloves and lab coat for use during experiments if they wish. Clean up after a lab is the responsibility of each student. Lack of clean up may result in a loss of points for that experiment. All lab waste must be disposed of in the appropriate labeled waste container, inorganic or organic, not in the sink.

You should expect to spend 2-3 hours per credit hour per week, outside of class, studying for each of your classes. This means studying 8-12 hours a week for this class. Working homework problems individually is the most effective learning tool. Students are strongly encouraged to ask questions in class about anything they do not understand.

Grading:

Tests (3/4) –	300 points	A	90 – 100%
Laboratory –	100 points	B	80 – 89%
Final Exam –	100 points	C	70 – 79%
Total –	500 points	D	60 – 69%
		F	<60%

Important Dates:

Friday, October 30, last day to withdraw from class – 4:30 P.M.
Wednesday, December 9, Final Exam, normal class hours

Class Schedule Fall 2015
Chem 1411 Monday and Wednesday 11:00 A.M. – 2:00 P.M.

While we will try to follow the class schedule as presented, some changes are inevitable. Changes will be announced in advance and posted on Eagle Online. It is the student's responsibility to keep track of any changes to the class schedule.

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Week One

August 24	Course introduction, Laboratory introduction, Chapter 1
August 26	Chapter 1, Chapter 2 Individual Internet Research Activity (due September 9)

Week Two

August 31	Chapter 2 Experiment 1: Basic Laboratory Techniques (1 ½ hours)
September 2	Chapter 3

Week Three

September 7	**Labor Day Holiday**
September 9	Chapter 3. Individual Internet Research Activity due.

Week Four

September 14	Review for Test 1
September 16	**Test 1, Chapters 1, 2, 3**

Week Five

September 21	Chapter 4 Experiment 3: Separation of the Components of a Mixture (2 hours)
September 23	Chapter 4

Week Six

September 28	Chapter 4 Experiment 6: Formula and Composition of a Hydrate (1½ hours) Formal lab report to be written for this experiment.
September 30	Chapter 5

Week Seven

October 5	Chapter 5 Experiment 8: Reactions in Aqueous solutions: Metathesis Reactions and Net Ionic Equations (2 hours)
October 7	Review for Test 2

Week Eight

October 12	**Test 2: Chapters 4, 5**
October 14	Chapter 6

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Week Nine

October 19	Chapter 6 Experiment 7: The Iron-Copper Molar Ratio – Single Replacement Reaction and Limiting Reagent. (2 hours)
October 21	Chapter 6, 7

Week Ten

October 26	Chapter 7 Experiment 13: Ideal Gas Law: Molar Mass of a Volatile Compound (2 hours). Formal lab report to be written for this experiment.
October 28	Chapter 7

Week Eleven

November 2	Review for Test 3
November 4	**Test 3, Chapters 6, 7**

Week Twelve

November 9	Chapter 8 Experiment 11: Heat of Acid-Base Neutralization (2 hours)
November 11	Chapter 8

Week Thirteen

November 16	Chapter 8, 9 Experiment 22: Acid-Base Titration (2 hours)
November 18	Chapter 9

Week Fourteen

November 23	Chapter 9 Experiment 14: The VSEPR Theory of Molecular Geometry From the Lab Manual, you will have class time to work on this exercise.
November 25	Chapter 10

Week Fifteen

November 30	Review for Test 4, Review for Final Exam
December 2	**TEST 4: Chapters 8, 9, 10**

Week Sixteen

December 7	No Class (optional review for Final Exam)
December 9	**Final Exam, 11:00 A.M. – 2:00 P.M., Room 320**