

CLARENDON COLLEGE

Chemistry Department  
P.O. Box 968, Clarendon, TX 79226

Fall 2009

Course: General College Chemistry, CHEM 1311, a 3-hour credit course

Adjunct Instructor for Wellington High School: Pamela D. Hill, M.SEd

Purpose: The objective of this course is to prepare the student for future studies in chemistry and related scientific disciplines. This course meets the core requirements of a laboratory science for the Associate of Arts or the Associate in Science degree.

Scope: This will provide students with an introduction to chemistry. Areas of study are intended to provide understanding of fundamental concepts of chemistry including: specific vocabulary and nomenclature, theoretical development of current understanding of concepts, and mathematical calculations. Topics covered include the development of modern atomic theory, atomic structure, chemical bonding and chemical reactions.

Exemplary Objectives: the learner shall:

- understand and apply method and appropriate technology to the study of natural sciences,
- recognize scientific and quantitative methods and the differences between these approaches and other methods of inquiry and to communicate findings, analyses and interpretation both orally and in writing,
- identify and recognize the differences among competing scientific theories,
- demonstrate knowledge of the major issues and problems facing modern science, including issues that touch upon ethics, values, and public policy,
- demonstrate knowledge of the interdependence of science and technology and their influence upon, and contribution to, modern culture.

Student Learning Outcomes: the learner shall:

- formulate processes for the calculation of chemistry-related mathematical problems,
- relate knowledge of chemical vocabulary covered during the course,
- construct electron arrangements of various elements,
- predict the coefficients necessary to balance and predict the product(s) of a chemical equation,
- formulate stoichiometric calculations involving molar relationships of substances.

Prerequisite: Credit or concurrent enrollment in college algebra or a similar math.

Corequisite: Concurrent enrollment in CHEM 1111.

Text: **General Chemistry**, tenth edition by Robinson, Odom, and Holtzclaw.  
An associated solutions manual is recommended but not required.

Materials: A scientific calculator (nonprogrammable) is required for each student. Sharing of calculators during exams is prohibited.

Attendance: Clarendon College believes strongly that the greatest single predictor of student success is attendance. Class attendance is the responsibility of the student. A student who has 6 clock hours of unexcused absences will be, upon the discretion of the instructor, dropped from the class with an F. If an absence is unavoidable, notify the instructor as soon as possible.

Final Exam Policy: Final exams will be given only at scheduled times during Finals Week.

Classroom Etiquette:

- arrive in a timely manner, prepared for class.
- during an exam, no one will be allowed to leave the room until after his/her test is handed in.

Academic Honesty: Cheating or plagiarizing on assignments or exams will not be tolerated. Such conduct will result in the student being dropped from the class with an F.

Tests: Four to six major exams will be given throughout the semester. Each major exam will cover the material presented since the previous major test, and the last major test will be given during finals week. Expect each major test to cover approximately two chapters from the text. Each major exam will consist of multiple choice questions which comprise 40% of the test and selected mathematical calculations which comprise 60% of the total major test grade. If a student is absent due to participation in school activities, he or she must take the test before the absence. No make-up tests will be given.

Grading: For this course, two grades must be assigned. One grade will be the grade for the college-credit aspect of the course, and will be calculated from the numeric average of the major exams. The other grade will be the grade for the high school aspect of the course, and will be calculated with 75% of the grade obtained from the numeric average of the major exams, 12.5% from homework grades and 12.5% from lab report grades. Furthermore, for the college-credit aspect, averages between 88 and 100 will receive a letter grade of "A", averages from 75 to 87 will be receive a letter grade of "B", averages from 60 to 74 will be assigned a letter grade of "C", averages between 50 and 59 will be assigned a letter grade of "D" and averages below 50 will receive a letter grade of "F". With respect to high school extracurricular eligibility, students should note that, although no extra points are added to the earned average grade, eligibility is maintained for averages of 60% and above.

Withdrawal: If a student decides that he or she is unable to complete this course or that it will be impossible to complete the course with a passing grade, that student may drop the course and receive a "W" on the college transcript instead of a failing grade. Withdrawal from a course is a formal procedure that must be initiated by the student. Failure to complete the withdrawal procedure will result in a grade of "F" on the official college transcript. A student will be permitted to drop a course by notifying the instructor and reporting to the high school counselor to complete the official procedure.

It is important for students to know that a class may only be dropped twice before extra charges will be levied for the course for that student. Also important is the fact that students in Texas may only drop a total of 6 courses throughout their entire undergraduate career.

Main Classroom: Room 222---this is where the instructor can be found during tutorial and/or conference periods.

Lecture Classroom---Room 112---this is where students will meet on lecture days.

Schedule: Monday, Wednesday and Thursday of each week will be designated lecture days with Tuesdays and Fridays reserved for lab and work days.

Tutorials will be held beginning at 7:45 a.m. each school day. Students may also make arrangements with the instructor to obtain individual help during 2nd period and/or during 8th period.

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#### Course Outline:

- General chemistry concepts
  - the metric system and measurement
- Development of Modern Atomic Theory
  - electron arrangement
  - chemical bonding
- Molecular Structure
- Chemical Nomenclature
- Chemical Reactions and Equations
- Chemical Stoichiometric Calculations
- Thermochemistry