COURSE NUMBER: CHEM 1405

COURSE TITLE: Introduction to Chemistry I Laboratory

CREDIT HRS: 4 LECTURE HRS: 3 LAB HRS: 3 CLN/REC HRS: 1

PRE-REQUISITE: High School algebra or equivalent

CO-REQUISITE: Concurrent enrollment in CHEM 1405 (lecture). You may repeat this course only once after receiving a grade, including W.

COURSE DESCRIPTION:
Survey of chemistry for non-science majors including scientific calculations, chemical equations, theory of atoms and bonding, states of matter, nuclear chemistry, elementary thermodynamics and acid-base chemistry.

TEXTBOOK: All experiments for this course are available for download at http://www.collin.edu/chemistry. Choose your term (fall, spring, or summer) from the course information tab and then select the link for the Chem 1405 lab schedule. Click on an experiment title to access the file.

SUPPLIES:
Students must supply their own goggles, gloves, aprons that meet department safety standards. (Goggles are not the same as safety glasses; glasses are not sufficient protection. Faculty members will not permit their use).

EXPECTED STUDENT LEARNING OUTCOMES:
Upon successful completion of this course, students should be able to do the following:
1. Using critical thinking, describe various aspects of atomic structure including isotopes and nuclear properties and periodic trends. (Critical Thinking and Empirical/Quantitative)

2. Understand and determine types of bonding and the resultant compounds, including formulas and names. (Empirical/Quantitative)

3. Classify and determine qualitatively and quantitatively various aspects of chemical and nuclear reactions, including mass relationships, energy, rates, half-life, and equilibrium. (Critical Thinking and Empirical/Quantitative)
4. Qualitatively and quantitatively describe properties associated with the states of matter and solutions, including acids and bases. (Critical Thinking and Empirical/Quantitative)

5. Safely work in the laboratory to collect data (both electronically and manually), make measurements, make observations and conduct reactions; analyze lab data (both electronically and manually) and report results in written form. (Critical Thinking, Communication Skills, Empirical/Quantitative, and Teamwork)

**COURSE FORMAT:**
May include but not limited to lectures, transparencies, videos, computer software, demonstrations, hand-on exercises, and student presentations.

**METHOD OF EVALUATION:**
Lecture average = 70% final grade  
Lab average = 20% final grade  
Recitation = 10% final grade  
100% course grade for 4 college credits

Your laboratory instructor will advise, by written addendum, of the specific aspects of the grading policy that apply to your lab section. The policy of the Chemistry Department mandates that **20% of your final grade in the CHEM 1405 block** (lecture, lab, and recitation, giving you 4 college credits in a lab science) will be based upon your final lab grade. Components of the lab average may include, but are not restricted to lab reports, prelab assignments, lab quizzes, lab practicum or safety presentations.

**RECITATION:**
Recitation is a component of this course that enhances critical thinking and problem solving. This component will include, but is not limited to, some hands-on activities as well as group activities/discussions, and writing.

**ATTENDANCE POLICY:**
Students should attend all laboratory classes. There are **NO** make-up labs. Absences will be averaged as a zero. The lowest grade will be dropped. **IF FOUR OR MORE LABS ARE MISSED, THE FINAL LAB AVERAGE WILL BE 0.00% AT THE END OF THE SEMESTER.** Students who miss the prelab lecture, or who are not properly prepared to perform a lab may be barred by the instructor from performing the lab in question. Students who elect to stop attending lab should officially drop this course. Please see the schedule of classes for the last day to withdraw. Religious Holy Days: refer to Chapter 6 Procedures, section 23 in the current CCCCD Student Handbook.

**ADA STATEMENT:**
It is the policy of Collin County Community College to provide reasonable and appropriate accommodations for individuals with documented disabilities. This College will adhere to all applicable Federal and State laws, regulations and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the
student’s responsibility to contact the ACCESS Office (room G-200, Spring Creek Campus) or 972.881.5898, in a timely manner if he/she desires to arrange for accommodations.

**ACADEMIC ETHICS:**

The college may initiate disciplinary proceedings against a student accused of scholastic dishonesty. Scholastic dishonesty includes, but is not limited to, statements, acts, or omissions related to applications for enrollment or the award of a degree, and/or the submission of material as one’s own work that is not one’s own. Scholastic dishonesty may involve one or more of the following acts: cheating, plagiarism, collusion, and/or falsifying academic records.

Cheating is willful giving or receiving of information in an unauthorized manner during an examination, illicitly obtaining examination questions in advance, using someone else’s work for assignments as if it were one’s own, copying computer or Internet files, and any other dishonest means of attempting to fulfill the requirements of a course. Plagiarism is the use of an author’s words or ideas as if they were one’s own without giving credit to the source, including, but not limited to, failure to acknowledge a direct quotation.

Collusion is intentionally aiding or attempting to aid another in an act of scholastic dishonesty, including but not limited to, providing a paper or project to another student; providing an inappropriate level of assistance; communicating answers to a classmate during an examination; removing tests or answer sheets from a test site, and allowing a classmate to copy answers. Contact the Dean of Students at 972.881.5604 for the student disciplinary process and procedures or consult the CCCCD Student Handbook.