**General Chemistry Lab 1AL**

Sci 218 MW 8:30am – 11:30am

 (CRN 31792)

Sci 211 TTH 8:30am – 11:30am

 (CRN 31848)

**Instructor: Michelle Hagerman (Davidson)**

**Email:** **mhagerman@vcccd.edu**

**Class Website: [www.michelledavidsonchemistry.weebly.com](http://www.michelledavidsonchemistry.weebly.com)**

**Office Hours (Sci 334):**

M 12:45 – 2pm (Stem Harbor Sci 223)

M 2-3pm (office)

W 12:45 – 1:30pm (office)

TH 12:45 – 2:45pm (office)

**Description:**

The laboratory provides the student with experience in applying the principles developed in General Chemistry I lecture. Quantitative experiments that illustrate the fundamental laws of chemistry are emphasized.

**Prerequisites:**

CHEM V01A with grade of C or better or concurrent enrollment

**Required Materials EVERYDAY:**

**Goggles/Lab Glasses ( you must wear over existing glasses too!)**

**Closed-Toe Shoes**

**1AL Lab Manual purchased from the bookstore.**

**SOAP – small bottle**

**SLOS:**

* CSLO-1 Understand laboratory procedures, safety, scientific method, and lab notebook recording.
* CSLO-2 Understand the concepts of random error, systematic error, precision and accuracy, and their relationship to significant figures.
* CSLO-3 Master chemical laboratory techniques such as measurement, determination of density, pipetting, titration, and spectroscopy.

**Course Objectives:**

Upon successful completion of this course, the student will be able to demonstrate the following measurable skills and abilities:

* Apply the scientific method to chemistry problems, including developing, testing, and evaluating hypotheses.
* Use various mass, volume, and length measuring devices, and correctly state the relative precision of the resulting measurements.
* Safely conduct experiments using potentially hazardous chemicals.
* Perform both qualitative and quantitative experiments, including analysis of data and error propagation.
* Employ standard laboratory techniques such as titration.
* Use a scientific calculator to solve chemical calculations involving dimensional analysis, scientific notation, and multi-variable equations.

**Attendance:**

Attendance is mandatory. **Students are required to complete full labs – if you miss one day of an experiment, you will not receive any credit for that lab.** Students will be dropped for missing 4 classes. If you are absent, you can still turn in your previous lab when you return.

**Tardiness:**

You are legally required to attend the lab lecture in order to perform the experiment. If you are late (more than 15min), you will NOT be allowed to perform the experiment. No extensions are given for quizzes if you arrive late.

**Academic Integrity**:

Be careful! Receiving an unfair advantage is considered academic dishonesty. It is easy in a lab setting to get used to working with other students to complete lab work, but the bulk of your grade is quizzes – therefore, you need to be independently focused and learning as well.

**Grading:**

**Prelabs 15%**

**Postlabs 30%**

**Quizzes 45%**

**\*Optional Quiz Final 10%**

\*In addition, students will lose points (up to a full letter grade for the lab) for the following:

 Dirty workspace

 Continuous breaking/missing of equipment/glassware

 Unsafe behavior

**Prelabs**: Due immediately at the start of class for every experiment!

**Postlabs:** For a completed experiment, the data, calculations, and postlab questions are DUE ON THE DAY YOU BEGIN A NEW LAB.

**Quizzes:** You will take a quiz every two experiments. For example, a quiz on Expt 1 and Expt 2 will be taken on the day we start Expt 3. It is VERY IMPORTANT that you keep a lab notebook – we lecture and go over important concepts, calculations, and safety for each experiment and you will be quizzed on this material; you will not have your graded postlab back yet so it is imperative to take notes! Photocopy your postlab before turning in if you want. Those students that take good notes and study 8-10 hours per week with lecture & lab, do well.

**Optional Final Quiz:** Cumulative of all your previous quizzes & the last lab.

**\*One prelab, postlab, and quiz will be dropped for whatever reason – absence, low score, etc. Therefore, THERE ARE NO MAKE-UPS OF ANY KIND.**

A final note: lab can be a very intimidating setting for many students. Common courtesy, respect, and a high regard of safety is expected towards all people, equipment, and chemicals. \* BE PROACTIVE: get help in advance! If you wait till the last minute, it’s too late!