

CHE 111L 020, 021, 022, 23, 24, 25
Introductory Chemistry Laboratory, Spring 2013
(students must be enrolled in CHE 111 class as well)

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Office Hours	M 9:30-11:30, T 4:00-5:00, W 9:30-11:30 & 1:30-2:30, R 8:00-11:00, F 9:30-10:30

Class location & time:

<i>lab section</i>	<i>pre-lab lecture location</i>	<i>lab location</i>	<i>lab time</i>
20	C-106	C-101	12:00-1:50 M
21	C-106	C-105	12:00-1:50 M
22	C-106	C-102	12:00-1:50 M
23	C-106	C-101	2:30-4:20 M
24	C-106	C-105	2:30-4:20 M
25	C-106	C-102	2:30-4:20 M

Text and Materials: *Introductory Chemistry Lab (CHE 111 L) Laboratory Manual* for Fall 2012, Spring 2013, & Summer 2013 for Drs. Duben, Harris, Odunuga, Onchoke. This manual is available at local bookstores. A non-programmable, scientific calculator is required for all exams and quizzes. Students will need to check their SFA email accounts each week before coming to lab.

COURSE CALENDAR: ON SEPARATE PAGE

GRADING POLICY: The point total for the requirements shown in the Course Requirements is **600**. Grades are based on the total number of points earned out of **600**.

The grading scale for the lab is:

[A≥540; B≥480; C≥420; D≥360; F<360].

Laboratory quizzes will be given each week as shown in the laboratory calendar. The lowest quiz grade will be dropped. The 10 best quiz grades will be kept. Each laboratory quiz is worth **20 points**. *A total of 200 points from laboratory quizzes is possible.* The laboratory quiz will be given at the beginning of lab. The laboratory quiz will cover the laboratory from the previous week as well as the laboratory that will be done the day of the quiz. **STUDENTS WHO COME IN LATE AND MISS THE QUIZ WILL NOT BE ALLOWED TO TAKE THE QUIZ.**

Experiments/Assignments will be done. Each report sheet for the experiment or the assignment is worth **20 points**. *A total of 160 points from experiments and assignments is possible.* The report sheets will be turned in at the end of the laboratory period, unless otherwise stated by the instructor. Any assignment

turned in after the announced time will have 10% deducted per day beginning with the first day. The lowest experiment/assignment grade will be dropped.

Pre-laboratory assignments are in the laboratory manual and are to be completed before lab. Pre-labs are worth **five points** each. *Pre-lab assignments will count a total of 40 points.* The lowest pre-lab grade will be dropped.

Midterm and Final Exam:

- A **midterm** exam will be given **March 4** during the laboratory period. It will cover material from the first week of the semester through Lab #5.
- The **final exam** will be given **April 29** during the laboratory period. It will cover material from Labs 6-9
- The midterm and the final are worth **100 points each** for a *total of 200 points*.

Make-up Policy: NO make-up labs or quizzes will be given since the lowest quiz grade and the lowest experiment/assignment, and pre-lab grade will be dropped.

ATTENDANCE POLICY:

Attendance of class is mandatory. Three (3) or more absences will result in an 'F' for the course. Absences may be assigned to anyone that disrupts class, sleeps in class, or consistently comes in late or leaves early.

ACADEMIC INTEGRITY (A-9.1):

Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

Definition of Academic Dishonesty: Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit.

Please read the complete policy at http://www.sfasu.edu/policies/academic_integrity.asp
Any student found cheating will be subject to the penalties as stated in the Student Code of Conduct handbook; including but not limited to a score of zero on exam, expulsion from the class or expulsion from the University. **Misrepresenting attendance or quiz answers by using another persons' clicker is cheating.**

STUDENTS WITH DISABILITIES:

To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building,

and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to <http://www.sfasu.edu/disabilityservices/>.

CLASSROOM BEHAVIOR POLICY:

Acceptable Student Behavior: Classroom behavior should not interfere with the instructor's ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, policy D-34.1). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the Early Alert Program. This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.

- Come to lab prepared (spend at least **ONE HOUR** reading over *entire* lab before lab period **AND** reviewing the previous week's lab) and on time.
- Bring a **NON-programmable**, scientific calculator. Cell phones and programmable calculators may **NOT** be used on quizzes.
- Turn off and put away cell phones; **NO** text messaging during lab.
- Come dressed as described in the safety rules that will be given: (Clothes to the ankles, no mid-drift shirts, close-toe shoes. Anyone not dressed appropriately for **lab will be sent home.**)
- Follow **all** safety rules and good laboratory practices at all time:
- Wear safety glasses/goggles when **anyone** in the lab is working on an experiment.
- One warning concerning safety glasses/goggles will be given. A person will be sent home for a second offense and be will earn a zero that may **NOT** be dropped.
- **NO** horseplay in laboratory
- Be courteous and respectful of other students, laboratory assistants, and stockroom personnel.
- Learn your section number and your laboratory assistant's name.
- Work with assigned lab partner unless otherwise instructed by the lab assistant.
- Students are responsible for any answer they report on a lab, assignment, or quiz. Laboratory teaching assistants are students and sometimes may make an error or misunderstand a question. You can **NOT** claim the lab assistant told you the wrong answer and get points back.
- Significant figures are required on **all** answers given in lab on laboratory report sheets, assignments, quizzes, and exams.
- No make up quizzes will be given if a student comes in late and misses the quiz.
- Missing a pre-lab lecture will result in a 10% deduction from the lab for and a zero will be recorded for the quiz. Absences may be assigned to anyone that disrupts class, sleeps in class, or consistently comes in late or leaves early. Any assigned absence will result in a zero for the day which can **NOT** be dropped.

POINTS WILL BE DEDUCTED FROM YOUR GRADE FOR NOT FOLLOWING THE COURSE REQUIREMENTS OR THE LABORATORY BEHAVIOR POLICY. During the semester the instructor will notify the class of any changes needed in the syllabus in writing.

Course Description: Introductory laboratory experiments.

Number of Credit Hours: 1 semester hour – 2 hours lab per week

Course Prerequisites and Corequisites: Co-requisite: CHE 111. Lab fee required.

Program Learning Outcomes: There are no specific program learning outcomes for this major addressed in this course. This course is a general education core curriculum course and a service course.

Course Objective: To provide students with an explanation of the basic concepts of chemistry and to apply these concepts to problem solving involving critical thinking.

General Education Core Curriculum Objectives: At the end of the course, the student will have attained and met the following key core skills: Critical Thinking, Communication, Empirical and Quantitative, and Teamwork.

Student Learning Outcomes:

- The student is expected to recognize and apply the following concepts to problem solving : (*critical thinking*)
 1. Units of measure and significant figures, unit conversion, density and definitions of matter.
 2. Basics of atomic theory applied to the atom, basics of the periodic table, correct use of terms, and the basics of nuclear chemistry.
 3. Writing correct formulas of compounds and inorganic nomenclature as well as electron configuration, Lewis structure, and VSEPR theory.
 4. Determination of atomic and molecular masses, mole calculations, Avogadro's number, mole and mass calculations in chemical formulas and chemical reactions, writing balanced chemical reactions.
 5. Principles of the gaseous state, gas laws (Boyles, Charles, Gay-Lussac, Ideal, Dalton's) as well as intermolecular forces in liquids and solids and properties of solutions.
 6. Principles of acid/base theories, pH, buffers, acid-base indicators, and titration
- Student will communicate effectively scientific concepts through written and visual techniques. (*communication*)
- Students will correctly assemble laboratory equipment, collect appropriate data, and analyze and interpret the results. (*empirical and quantitative*)
- Students will cooperate and communicate orally with each other in achieving successful completion of group experiments. (*teamwork*)

Outline of Topics (approximate course time):

- Safety (1 lab day)
- Metric System, Significant Figures, Scientific Notation (1 lab day)
- Density (1 lab day)
- Separation of a Mixture (1/2 lab day)
- Purification of Water (1/2 lab day)
- Molecular Motion (1 lab day)
- Chemical Reactions (1 lab day)
- Nomenclature / VSEPR (1 lab day)
- Concentration and Dilution (1 lab day)
- pH of Household Substances (1 lab day)
- Titration of Antacid (1 lab day)
- Solutions, Concentration, and Buffers (1 lab day)

CHE 111 Lab Schedule Spring 2013

Date	Assigned Laboratory
1/14	Lab Intro/safety/1 st 42 elements
1/21	MLK holiday
1/28	Lab #1 Significant Figures, Scientific Notation, Density (p.5) Pre-lab p. 10 Quiz 1
2/04	Lab #2 Density (p. 15) Pre-lab p. 17 Quiz 2
2/11	Lab #3 Purification of Water Pre-lab p. 34 Quiz 3
2/18	Labs #4 & #5 Polarity & Nomenclature Pre-labs p. 43 & 50 <i>PRE-LABS COUNT as Quizzes #4 & #5 AND pre-lab for this week</i>
2/25	Lab #6 Chemical Reaction Lab Pre-lab p. 59 Quiz #6
3/4	Lab Midterm EXAM (safety, 1st 42 elements, labs 1-5)
3/11	Spring Break
3/18	Pre-lab lecture Concentration/dilution Pre-lab p. 68 Quiz 7
3/25	Lab #7 Concentration and Dilution Quiz 8
4/1	Easter Break
4/8	Pre-lab lecture for (a) % CaCO ₃ by titration and (b) Weak Acids, Bases and Buffers Pre-labs p.92 & p.81 Quiz 9
4/15	Lab #8 % CaCO ₃ by Titration Quiz 10
4/22	Lab #9 Weak Acids Bases and Buffers Quiz 11
4/29	Lab Final EXAM (labs 6-9)