Course Syllabus
Chemistry 111L
Introductory Laboratory I

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.

General Education Core Curriculum Objectives:
- To understand and apply method and appropriate technology to the study of natural sciences.
- To 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.
- To demonstrate knowledge of the major issues and problems facing modern science, including issues that touch upon ethics, values, and public policies.
- To demonstrate knowledge of the interdependence of science and technology and their influence on, and contribution to, modern culture.

Course Objective: To provide students with an explanation of the basic principles of chemistry as illustrated through laboratory experiments and to apply these principles to laboratory work involving critical thinking.

Student Learning Outcomes: The student is expected to recognize and apply the following concepts to problem solving in a laboratory setting.
- Units of measure and significant figures, unit conversion, density and definitions of matter.
- Basics of atomic theory applied to the atom, basics of the periodic table, correct use of terms.
- Writing correct formulas of compounds and inorganic nomenclature as well as Lewis structure and VSEPR theory.
- Determination of mass calculations in chemical formulas and chemical reactions, writing balanced chemical reactions
- Principles of the gaseous state, gas laws (Boyles, Charles, Gay-Lussac, Ideal, Dalton’s) as well as intermolecular forces in liquids and properties of solutions.
- Principles of acid/base theories, pH, buffers, acid-base indicators, and titration
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)
Class Syllabus
Fall 2010
CHE 111L
Introductory Chemistry I Laboratory
Sections 023, 024 & 025

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Lab Time: W, 3.00 - 4.50 p.m. in Chemistry Building

- A non-programmable scientific calculator is required for all experiments, quizzes and exams in this course.

COURSE REQUIREMENTS:
The course evaluation consists of weekly experiments with or without assignments, pre-lab assignments, quizzes, a mid-term and a final exam. Attendance is mandatory. The quizzes will cover materials from previous and current labs. Experiment Report sheets are due the day that each laboratory experiment is performed. No data sheets will be accepted after the date the actual experiment was performed. Grade of “0” will be given for any experiment for which a data sheet is not submitted on the actual experiment date.

METHOD OF EVALUATION:
The grade is a percent of a total point composed of labs, pre-lab assignments, quizzes and two exams. The grade composition is as follows:

<table>
<thead>
<tr>
<th>Labs (10 equally weighted)</th>
<th>100 points</th>
<th>33.33 % of Total Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quizzes and pre-lab assignments (10 equally weighted)</td>
<td>100 points</td>
<td>33.33 % of Grade</td>
</tr>
<tr>
<td>Exams (1 Midterm &amp; 1 Final Exam)</td>
<td>100 points</td>
<td>33.33 % of grade</td>
</tr>
<tr>
<td>TOTAL</td>
<td>300 points</td>
<td>100 % points</td>
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Grading scale as a % - A= 100 – 90, B= 89 – 80, C= 79 – 70; D= 69 – 60; F= 59 and below

[A ≥ 270; B ≥ 240; C ≥ 210; D ≥ 180; F< 179]

Tentative Course Calendar

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<table>
<thead>
<tr>
<th>Dates</th>
<th>Assignment/Laboratory</th>
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<tbody>
<tr>
<td>Sept 1</td>
<td>Help session with professor</td>
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<tr>
<td>Sept 8</td>
<td>Laboratory Introduction, Lab Safety Video, 1\textsuperscript{st} 20 elements (attendance required)</td>
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<tr>
<td>Sept 15</td>
<td>Significant Figures, Scientific Notation, Density – laboratory manual (p. 5)</td>
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<td>Sept 22</td>
<td>Check-in and Separation of Food Coloring (handout)</td>
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<tr>
<td>Sept. 29</td>
<td>Purification of Water – laboratory manual (p. 25)</td>
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<tr>
<td>Oct. 6</td>
<td>Chemical Reactions – laboratory manual (p. 37)</td>
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<tr>
<td>Oct. 13</td>
<td>Nomenclature/Lewis/VSEPR – laboratory manual (p. 32)</td>
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<tr>
<td>Oct. 20</td>
<td>MIDTERM EXAM</td>
</tr>
<tr>
<td>Oct. 27</td>
<td>Concentration &amp; Dilution – laboratory manual (p. 44)</td>
</tr>
<tr>
<td>Nov. 3</td>
<td>pH of Household substances – laboratory manual (p.51)</td>
</tr>
<tr>
<td>Nov. 10</td>
<td>Solutions, Concentrations, and Buffers – laboratory manual (p. 56)</td>
</tr>
<tr>
<td>Nov. 17</td>
<td>Titration of an Antacid – laboratory manual(p. 63)</td>
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<tr>
<td>Nov. 24</td>
<td>THANKSGIVING BREAK</td>
</tr>
<tr>
<td>Dec. 1</td>
<td>Chemical Reactions and Calculation – laboratory manual (p. 69)</td>
</tr>
<tr>
<td>Dec. 8</td>
<td>FINAL EXAM</td>
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Laboratory quizzes and pre-lab assignments: (100 points)
- Quizzes will be given every week; each laboratory quiz is worth 10 points.
- The laboratory quiz will be given at the beginning of lab. Anyone coming in late (after the quizzes have been taken up) will not be allowed to take the quiz. The grade will be a ZERO for that quiz.
- The laboratory quiz will cover the laboratory from the previous week as well as the lab that will be done that day.

Experiments/Assignments (100 points)
- Each report sheet for the experiment or the assignment is worth ten points.
- 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 at the first day.

Mid term and Final Exam (100 points)
- A Mid term exam will be given the week of October 20 during the laboratory period.
- Mid-term exam will cover material from the first week of the semester through the week of Oct 13.
- The final exam will be given the week of December 08 during the laboratory period.
- Final Exam will cover material from the week of October 20 through the end of the semester.
- The mid-term and Final Exams are worth 50 points each.

MAKE-UP POLICY: There will be no make-up quizzes or labs; however the lowest quiz and lab grades will be dropped.

WITHHELD GRADES SEMESTER GRADES POLICY (A-54):
Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average. The circumstances precipitating the request must have occurred after the last day in which a student could withdraw from a course. Students requesting a WH must be passing the course with a minimum projected grade of C.

ATTENDANCE POLICY:
- Attendance of class is mandatory. One unexcused absence is allowed. Any other absence will result in a zero for the lab.
- Three or more absences will result in an F for the semester.
ACADEMIC HONESTY POLICY (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.

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 or laboratory experiment, expulsion from the class or expulsion from the University. Please read the complete policy at http://www.sfasu.edu/policies/academic_integrity.asp.

ACADEMIC DISABILITIES POLICY: Students with Disabilities – To obtain disability – related accommodations and/or auxiliary aids, students with disabilities must contact the Office of Disability Services, Human Services Building, Room 325, 468-3004/ 468-1004 (TDD) as early as possible in the semester. Once verified, DS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided.

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.

Note: This syllabus is subject to change.
Odunuga OO
August 25, 2010