Bossier Parish Community College
Master Syllabus

Course Prefix and Number: CHEM 101L **Credit Hours:** 1

Course Title: General Chemistry I Lab

Course Prerequisites: Previous credit or current enrollment in Chemistry 101

Textbook: Chemical Education Resources Laboratory Handbook
Chemical Education Resources Modular Lab Program in Chemistry

Course Description:
This course is designed to provide the students with the laboratory skills and knowledge required for a continued study of chemistry and related sciences. Content supports topics in CHEM 101 (Science majors), including safety and basic laboratory techniques to include data collection and interpretation and introduction to laboratory reporting and record keeping. Withdrawal from lecture mandates withdrawal from laboratory.

Learning Outcomes:

At the end of this course, the student will:

A. demonstrate and practice acceptable and appropriate safety measures in the laboratory;
B. collect, analyze, and report laboratory data and show proficiency in implementing such data into useful forms in the solution of laboratory problems; and
C. utilize knowledge of chemical principles and laboratory skills and techniques to perform assigned laboratory experiments.

To achieve the learning outcomes, the student will

1. demonstrate lab skills in performing chemical experiments, making observations, analysis, and conclusions. (A)
2. apply laboratory safety rules in the lab when carrying out procedures and handling basic laboratory equipment. (A)
3. perform scientific measurements using basic and derived units, calculate experimental errors, and use significant figures with calculations. (B)
4. use metric units of mass, length, and volume and be able to determine the density of solids and liquids. (B)
5. identify substances using physical properties. (C)
6. determine the empirical formula of a compound and understand the difference between empirical and molecular formulas. (C)
7. write chemical equations and identify unknown solutions base on solubility guidelines. (C)
8. calculate the stoichiometry of a reaction. (C)

9. perform a series of chemical transformations, starting and ending with metallic copper, and determining the percent copper recovered. (B,C)
10. produce oxygen in the laboratory and understand its reactions with metal and nonmetal elements. (B,C)
11. determine electron transfers occurring during specific redox reactions based on general rules. (C)
12. prepare and standardize a NaOH solution to use for the titration of an unknown weak acid. (B,C)
13. determine the concentration of a vinegar sample by titration. (B)
14. completion of laboratory reports. (B)

Course Requirements

In order to receive a grade of "C" the student must earn 70% of the total possible points for the courses and achieve all of the following course requirements.

- minimum 80% on safety quiz
- minimum 70% average on lab reports and pre- lab quizzes
- minimum 70% on mid-term and final tests
- safely perform a minimum of 10 assigned laboratory experiments

Course Grading Scale:

A- 90% or more of total possible points on pre-lab quizzes, mid-term test and final practical test and lab reports and a minimum of 80% on the safety quiz and completion of at least 10 assigned laboratory experiments

B- 80% or more of total possible points on pre-lab quizzes, mid-term test and final practical test and lab reports and a minimum of 80% on the safety quiz and completion of at least 10 assigned laboratory experiments

C- 70% or more of total possible points on pre-lab quizzes, mid-term test and final practical test and lab reports and a minimum of 80% on the safety quiz and completion of at least 10 assigned laboratory experiments

D- 60% or more of total possible points on pre-lab quizzes, mid-term test and final practical test and lab reports and a minimum of 80% on the safety quiz and completion of at least 10 assigned laboratory experiments

F- less than 60% of total possible points or less than 80% on the safety quiz or failure to complete 10 assigned laboratory experiments

Attendance Policy: The college attendance policy is available at http://www.bpcc.edu/catalog/current/academicpolicies.html

Course Fees: This course is accompanied with an additional non-refundable fee for supplemental materials, laboratory supplies, certification exams and/or clinical fees.

Nondiscrimination Statement

Bossier Parish Community College does not discriminate on the basis of race, color, national origin, gender, age, religion, qualified disability, marital status, veteran's status, or sexual orientation in admission to its programs, services, or activities, in access to them, in treatment of individuals, or in any aspect of its operations. Bossier Parish Community College does not discriminate in its hiring or employment practices.

COORDINATOR FOR SECTION 504 AND ADA
Angie Cao, Student and Disability Services Specialist
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acao@bpcc.edu
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Equity/Compliance Coordinator
Teri Bashara, Director of Human Resources
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Reviewed by D. Hoston 06/21