

**Bossier Parish Community College**  
**Master Syllabus**

**Course Prefix and Number:** CHEM 107L

**Credit Hours:** 1

**Course Title:** Introductory Chemistry Laboratory

**Course Prerequisites:** credit for or enrollment in CHEM 107 or equivalent

**Textbook:** Neidig H., Gillette M.; Modular Laboratory Program in Chemistry, 2<sup>nd</sup> edition

**Course Description:**

Reinforcing laboratory exercises related to topics in Introductory Chemistry I to include laboratory safety, basic laboratory techniques, including data collection and interpretation, and an introduction to laboratory reporting/record keeping. Withdrawal from lecture mandates withdrawal from laboratory.

**Learning Outcomes:**

At the end of this course, the student will

- A. demonstrate acceptable and appropriate safety techniques in the chemistry laboratory;
- B. collect, report, analyze, and interpret experimental data in the solution of chemical laboratory problems;
- C. apply chemical concepts and use appropriate equipment to perform wet and dry experiments in the chemistry laboratory.

To achieve the learning outcomes, the student will

- 1. identify laboratory safety practices in the chemical laboratory. (A)
- 2. using mathematical concepts to represent numbers in scientific notation. (B,C)
- 3. determine the number of significant figures in measurements and round properly, based on the mathematical operation. (B,C)
- 4. using mathematical formulas and quotations, recall the units used in the laboratory to measure mass and volume and to express measurements to the proper uncertainty based on the instrument used. (B,C)
- 5. determine the density of substances using measurement and instruments of mass and volume. (B,C)
- 6. name and write the formulas for inorganic compounds classified as ionic compounds, molecules, and acids. (C)
- 7. recognize whether or not a chemical reaction has taken place. (B,C)
- 8. write and balance chemical equations. (C)
- 9. recognize and write a balanced equation for a double replacement reaction. (C)

10. use the displacement method of collecting gas over water and the gas laws to calculate the number of moles of a gas produced in a single replacement reaction between magnesium and hydrochloric acid. (B,C)
11. determine the molar concentration of a sodium hydroxide solution by titration techniques. (B,C)
12. determine the molarity of an unknown concentration of an acetic acid solution by using a standardized solution of sodium hydroxide through the technique of titration. (B,C)
13. prepare laboratory reports. (B)

### **Course Requirements**

To earn a grade of “C” or higher the student must earn 70% of the total points for the course and meet all of the following course requirements.

- minimum of 80% on safety quiz
- demonstrate safe practices in lab
- minimum average of 60% on pre-lab and post-lab tests
- minimum 70% on final practical lab exercise

### **Course Grading Scale:**

- A- 90% or more of total possible points and a minimum of 80% on the safety quiz and the demonstration of safe practices in the laboratory and minimum average of 70% on pre-lab and post-lab tests or minimum of 70% on final lab exercise.
- B- 80% or more of total possible points and a minimum of 80% on the safety quiz and the demonstration of safe practices in the laboratory and minimum average of 70% on pre-lab and post-lab tests or minimum of 70% on final lab exercise.
- C- 70% or more of total possible points and a minimum of 80% on the safety quiz and the demonstration of safe practices in the laboratory and minimum average of 70% on pre-lab and post-lab tests or minimum of 70% on final lab exercise.
- D- 60% or more of total possible points and a minimum of 80% on the safety quiz and the demonstration of safe practices in the laboratory and minimum average of 70% on pre-lab and post-lab tests or minimum of 70% on final lab exercise.
- F- less than 60% of total possible points or less than 80% on the safety quiz or failure to demonstrate safe practices in the laboratory and minimum average of 70% on pre-lab and post-lab tests or minimum of 70% on final lab exercise.

**Attendance Policy:** The college attendance policy is available at <http://www.bpsc.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

Disability Services, F254, 6220 East Texas Street, Bossier City, LA 71111

318-678-6511

[acao@bpcc.edu](mailto:acao@bpcc.edu)

Hours: 8:00 a.m.-4:30 p.m. Monday - Friday, excluding holidays and weekends.

Equity/Compliance Coordinator

Teri Bashara, Director of Human Resources

Human Resources Office, A-105

6220 East Texas Street

Bossier City, LA 71111

Phone: 318-678-6056

Hours: 8:00 a.m.-4:30 p.m. Monday - Friday, excluding holidays and weekends.

Reviewed by K. McNamara, April 2022